

LEARNING MADE EASY



11th Edition

iMac®

for
dummies®
A Wiley Brand



Get to know your M1 iMac
and exciting updates to macOS

Navigate the Control Center, send
Messages, and create Guides

Be productive with Pages,
Numbers, and Keynote

Mark L. Chambers

Author of *MacBook For Dummies*,
9th Edition



iMac[®]

11th Edition

by Mark L. Chambers

**for
dummies[®]**
A Wiley Brand

iMac® For Dummies®, 11th Edition

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Contents at a Glance

Introduction	1
Part 1: Getting Started with Your iMac	5
CHAPTER 1: Okay, This Machine Looks Really, Really Weird	7
CHAPTER 2: Life! Give My iMac Life!	25
CHAPTER 3: The Basics Behind macOS Monterey	33
Part 2: Shaking Hands with macOS	77
CHAPTER 4: What's New in Monterey?	79
CHAPTER 5: A Nerd's Guide to System Preferences	85
CHAPTER 6: Searching Amidst iMac Chaos	107
CHAPTER 7: Putting Common Apps to Work	117
Part 3: Connecting and Communicating	135
CHAPTER 8: Let's Go on Safari!	137
CHAPTER 9: Expanding Your Horizons with iCloud	159
CHAPTER 10: Creating a Multiuser iMac	167
CHAPTER 11: Working Well with Networks	187
CHAPTER 12: Hooking Up with Handy Helpers	207
Part 4: Living the Digital Life	219
CHAPTER 13: The Multimedia Joys of Music and TV	221
CHAPTER 14: Focusing on Photos	245
CHAPTER 15: Making Film History with iMovie	265
CHAPTER 16: Recording Your Hits with GarageBand	285
Part 5: Getting Productive with Your iMac	303
CHAPTER 17: Desktop Publishing with Pages	305
CHAPTER 18: Creating Spreadsheets with Numbers	319
CHAPTER 19: Building Presentations with Keynote	335
Part 6: The Necessary Evils: Troubleshooting, Upgrading, and Maintaining	349
CHAPTER 20: It Just . . . Sits . . . There	351
CHAPTER 21: I Want to Add Stuff	365
CHAPTER 22: Tackling the Housekeeping	377

Part 7: The Part of Tens	393
CHAPTER 23: Ten Ways to Speed Up Your iMac	395
CHAPTER 24: Ten Things to Avoid Like the Plague	401
Index	409

Table of Contents

INTRODUCTION	1
Foolish Assumptions	1
About This Book	2
Icons Used in This Book	3
Beyond the Book	4
Where to Go from Here	4
PART 1: GETTING STARTED WITH YOUR iMac	5
CHAPTER 1: Okay, This Machine Looks Really, Really Weird	7
Intel iMac or M1 iMac — That Is the Question	8
An Introduction to the Beast	9
Major parts of your major appliance	9
Important hidden stuff	14
Choosing a Home for Your New Pet	15
Picking the right location	15
Considering the convenience factor	16
Unpacking and Connecting	17
Unpacking your iMac For Dummies	17
Connecting cables like a true nerd	18
Discovering All the Cool Things You Can Do	19
What software do I get?	19
Looking forward to fun on the Internet	20
Applications that rock	21
Would you like to play a game?	22
Stuff You Oughta Buy Right Now	22
CHAPTER 2: Life! Give My iMac Life!	25
Throwing the Big Leaf Switch	25
Mark's Favorite Signs of a Healthy iMac	26
Harriet, It's Already Asking Me Questions!	27
Setting up macOS Monterey	28
Registering your iMac	29
Importing Documents and Data from Your Old Mac	29
Manually Importing Documents and Data from Windows	31
CHAPTER 3: The Basics Behind macOS Monterey	33
Your Own Personal Operating System	34
The Monterey Desktop	34
Check out that Control Center	36
Wait a Second: Where the Heck Are the Mouse Buttons?	39

Launching and Quitting Applications with Aplomb	42
Performing Tricks with Finder Windows	45
Viewing your stuff	45
Scrolling in and resizing windows	46
Minimizing and restoring windows	47
Moving and zooming windows	48
Closing windows	49
Juggling Folders and Icons	50
A field observer's guide to icons	50
Selecting items	52
Copying items	54
Moving things from place to place	54
Duplicating in a jiffy	55
Using Finder Tabs	56
Keystrokes to Fame and Fortune	57
Special keys on the keyboard	57
Using the Finder and application keyboard shortcuts	58
Speeding Things Up with Shortcuts	59
Home, Sweet Home Folder	60
Working with Mission Control	62
Switching Desktops with Spaces	63
Personalizing Your Desktop	64
Taking Control of Your iMac	66
Customizing the Dock	67
Adding applications and extras to the Dock	68
Keeping track with Stacks	69
Using Desktop Stacks	69
Using Dock Stacks	69
Resizing the Dock	71
What's with the Trash?	71
All You Really Need to Know about Printing	72
And Just in Case You Need Help	74
The Monterey built-in Help system	74
The Apple web-based support center	75
Magazines	75
Local Mac user groups	75

PART 2: SHAKING HANDS WITH macOS 77

CHAPTER 4: What's New in Monterey? 79

Shortcuts Hit Your iMac	80
Let's Get Focused	81
Putting Tags to Work	82
Hiding Email the iCloud Way	83
FaceTime . . . Over the Web?	83

CHAPTER 5:	A Nerd's Guide to System Preferences	85
	An Explanation — without Jargon, No Less	86
	Locating That Certain Special Setting	88
	Popular Preferences Panes Explained	89
	The Displays pane	90
	The Desktop & Screen Saver pane	91
	Mission Control preferences	93
	The General pane	95
	The Energy Saver pane	97
	The Dock & Menu Bar pane	98
	The Sharing pane	100
	The Time Machine pane	101
	Apple ID preferences	102
	Notifications & Focus preferences	104
CHAPTER 6:	Searching Amidst iMac Chaos	107
	Doing a Basic Search	108
	How Cool Is That? Discovering What Spotlight Can Do	111
	Expanding Your Search Horizons	112
	Customizing Spotlight to Your Taste	114
CHAPTER 7:	Putting Common Apps to Work	117
	Remind Me to Use Reminders	118
	Taking Notes the Monterey Way	121
	Staying Current with Notification Center	123
	Introducing the Maps Application	126
	Switching Views in Maps	128
	Getting Directions Over Yonder	129
	Creating and Using Guides	130
	Catching Up on News	132
	Using Favorites and Channels	133
	PART 3: CONNECTING AND COMMUNICATING	135
CHAPTER 8:	Let's Go on Safari!	137
	Pretend You've Never Used This Thing	137
	Visiting Websites	139
	Navigating the Web	141
	Configuring Your Home Page and Start Page	144
	Adding and Using Bookmarks	145
	Working with the Reading List	148
	Downloading Files	149
	Using History	150
	Tabs Are Your Browsing Friends	151
	Printing Web Pages	153

Protecting Your Privacy.....	154
Yes, there are such things as bad cookies.....	154
Banishing pesky iCloud Keychain passwords.....	156
Handling ancient history.....	156
Setting notifications.....	157
Avoiding those @*!^%\$ pop-up ads.....	157
CHAPTER 9: Expanding Your Horizons with iCloud.....	159
So How Does iCloud Work, Anyway?.....	160
Moving, Saving, and Opening iCloud Documents.....	161
Putting Handoff to Work.....	162
Expanding Your Horizons with Sidecar.....	163
Configuring iCloud.....	163
Managing Your iCloud Storage.....	165
CHAPTER 10: Creating a Multiuser iMac.....	167
Once Upon a Time (an Access Fairy Tale).....	168
Big-Shot Administrator Stuff.....	169
Deciding who needs what access.....	169
Adding users.....	170
Modifying user accounts.....	172
I banish thee, mischievous user!.....	174
Setting up login items and managing access.....	176
Tackling Mundane Chores for the Multiuser iMac.....	181
Logging in and out of Monterey For Dummies.....	181
Interesting stuff about sharing stuff.....	184
Encrypting your Home folder can be fun.....	185
CHAPTER 11: Working Well with Networks.....	187
What Exactly Is the Network Advantage?.....	188
Should You Go Wired or Wireless?.....	189
Be a Pal: Share Your Internet!.....	191
Using your iMac as a sharing device.....	191
Using a dedicated Internet-sharing device.....	191
What Do I Need to Connect?.....	192
Wireless connections.....	192
Wired connections.....	197
Connecting to the Network.....	200
Sharing stuff nicely with others.....	201
Use Your Firewall!.....	203
CHAPTER 12: Hooking Up with Handy Helpers.....	207
Connecting Printers.....	207
USB printers.....	208
Network printers.....	210

Connecting Scanners	211
Using Photo Booth	212
Conversing with FaceTime	214
Sending Instant Messages Across the Network	216
PART 4: LIVING THE DIGITAL LIFE	219
CHAPTER 13: The Multimedia Joys of Music and TV	221
What Can I Play in Music?	222
Playing Digital Audio Files.	223
Finding songs in your Music library	227
Removing old music from the library	227
Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists.	228
Know Your Songs.	230
Setting the song information automatically	231
Setting or changing the song information manually	231
Ripping Audio Files	232
Tweaking the Audio for Your Ears	233
A New Kind of Radio Station	234
Tuning in your own stations	235
Radio stations in your playlists	235
Creating a custom Music Radio station	236
iSending iStuff to iPhone and iPad	237
Burning Music to Shiny Plastic Circles	238
Feasting on Music Visuals.	239
Exercising Parental Authority	239
Watching Video with TV	241
Buying Digital Media the Apple Way	242
CHAPTER 14: Focusing on Photos	245
Delving into Photos	245
Working with Images in Photos	248
Import images 101	248
Organize mode: Organizing and sorting your images	250
Edit mode: Removing and fixing stuff the right way	257
Exploring iCloud Photos	262
Putting My Photo Stream and iCloud Shared Albums to Work	263
CHAPTER 15: Making Film History with iMovie	265
Shaking Hands with the iMovie Window	266
A Bird's-Eye View of Moviemaking	269
Importing the Building Blocks	270
Pulling in video clips	270
Making use of still images	272
Importing and adding audio from all sorts of places	272

Building the Cinematic Basics	275
Adding clips to your movie.....	275
Marking clips	276
Removing clips from your movie.....	277
Reordering clips in your movie	277
Editing clips in iMovie	278
Transitions for the masses.....	279
Even <i>Gone with the Wind</i> had titles	280
Adding maps and backgrounds.....	281
Creating an Honest-to-Goodness Movie Trailer	281
Browsing Your Video Library	283
Sharing Your Finished Classic	284
 CHAPTER 16: Recording Your Hits with GarageBand	285
Shaking Hands with Your Band.....	286
Composing Made Easy	288
Adding tracks	289
Choosing loops	291
Resizing, repeating, and moving loops.....	294
Using the Arrangement track.....	296
Tweaking the settings for a track	297
Sharing Your Songs	299
Creating song files in Music	300
Exporting a project	301
Burning an audio CD.....	301
 PART 5: GETTING PRODUCTIVE WITH YOUR iMac	303
 CHAPTER 17: Desktop Publishing with Pages	305
Creating a New Pages Document	306
Opening an Existing Pages Document.....	307
Saving Your Work	308
Touring the Pages Window	309
Entering and Editing Text.....	310
Using Text, Shapes, and Graphics Boxes.....	310
The Three Amigos: Cut, Copy, and Paste	310
Cutting stuff	311
Copying text and images	311
Pasting from the Clipboard	311
Formatting Text the Easy Way.....	311
Adding a Spiffy Table	312
Adding Alluring Photos.....	314
Adding a Background Shape	315
Are You Sure about That Spelling?	316

Setting Your Font Defaults to Speed Things Up	316
Printing Your Pages Documents	317
Sharing That Poster with Others	318
CHAPTER 18: Creating Spreadsheets with Numbers	319
Before You Launch Numbers	320
Creating a New Numbers Document	320
Opening an Existing Spreadsheet File	321
Save Those Spreadsheets!	322
Exploring the Numbers Window	323
Navigating and Selecting Cells in a Spreadsheet	324
Entering and Editing Data in a Spreadsheet	325
Selecting the Correct Number Format	326
Aligning Cell Text Just So	327
Formatting with Shading	328
Inserting and Deleting Rows and Columns	329
The Formula Is Your Friend	330
Adding Visual Punch with a Chart	332
Printing Your Spreadsheet	333
CHAPTER 19: Building Presentations with Keynote	335
Creating a New Keynote Project	336
Opening a Keynote Presentation	337
Saving Your Presentation	338
Putting Keynote to Work	338
Adding Slides	340
Working with Text, Shapes, and Graphics Boxes	340
Adding and Editing Slide Text	341
Formatting Slide Text for the Perfect Look	342
Using Presenter's Notes in Your Project	342
Every Good Presentation Needs Media	343
Adding a Background Shape	344
Creating Your Keynote Slideshow	344
Printing Your Slides and Notes	346
PART 6: THE NECESSARY EVILS: TROUBLESHOOTING, UPGRADING, AND MAINTAINING	349
CHAPTER 20: It Just . . . Sits . . . There	351
Repeat after Me: Yes, I Am a Tech!	352
Step-by-Step iMac Troubleshooting	352
The number-one rule: Reboot!	353
Special keys that can come in handy	354
All hail Disk Utility, the troubleshooter's friend	356
Disk repair made easy	358
Mark's iMac Troubleshooting Tree	359

Okay, I Kicked It, and It Still Won't Work	364
Local service, at your service	364
The macOS Help Center	364
Apple Help Online	364
CHAPTER 21: I Want to Add Stuff	365
More Memory Will Help	366
Figuring out how much memory you have	366
Installing memory modules	367
Can I Upgrade My Internal Drive?	371
Consider your external options.	372
Gotta have internal	373
Weighing Attractive Add-Ons.	374
Game controllers.	374
External drive arrays.	374
Video controllers	375
Audio hardware and MIDI controllers	375
CHAPTER 22: Tackling the Housekeeping	377
Cleaning Unseemly Data Deposits	377
Managing your storage in macOS (or cleaning things	
the elegant way).	378
Getting dirty (or cleaning things the manual way)	379
Using a commercial cleanup tool	382
Backing Up Your Treasure	383
Saving Files	384
Backing up to an external drive.	384
Backing up to DVD.	384
Putting Things Right with Time Machine	386
Maintaining Drive Health	388
Automating Those Mundane Chores	388
Creating an application in Automator	389
Creating an Automator login item	390
Updating macOS Automatically.	391
PART 7: THE PART OF TENS	393
CHAPTER 23: Ten Ways to Speed Up Your iMac	395
Nothing Works Like a Shot of Memory	396
Hold a Conversation with Your iMac	396
What's Up, Siri?.	397
Keep Your Desktop Background Simple	397
Column Mode Is for Power Users.	398
Make the Dock Do Your Bidding	398
It All Started with Keyboard Shortcuts	399

Hey, You Tweaked Your Finder!	399
Keep in Touch with Your Recent Past.	400
Go Where the Going Is Good.	400
CHAPTER 24: Ten Things to Avoid Like the Plague	401
Keep Things Cool.	402
Phishing Is No Phun	402
Don't Rely on a Single Password	403
Do You Really Want a Submerged Keyboard?	404
Don't Use Antiquated Utility Software	404
Don't Endorse Software Piracy	405
Call It the Forbidden Account	405
Don't Settle for a Surge Suppressor	406
Refurbished Hardware Is No Deal at All.	406
iMacs Appreciate iCleanliness	407
INDEX	409

Introduction

Skeptical about your new anodized aluminum iMac, with that supercharged Apple M1 processor? Perhaps you're thinking it's too doggone thin, or you're wondering where all the buttons are. Shouldn't there be places to plug in cables?

Ladies and gentlemen, I have great news for you: Not only did you make The Right Decision about which computer to buy, but you also shot a hole in one! Today's iMacs have everything a computer power user could want: speed, the latest in hardware and standards, a top-of-the-line LED screen, and the expandability you need to add just about any device meant for today's computers.

I wrote this book especially for the proud iMac owner who wants to make the most of this stunning new aluminum computer, so this book is a guide to the iMac, *Monterey* (the latest version of Apple's superb macOS operating system), and the digital lifestyle and productivity applications that Apple provides. I start by describing the basics that every iMac owner should know. Then I move on to chapters devoted to the software that comes with your iMac. Along the way, you come across a generous sprinkling of power-user tips and tricks that save you time, effort, and money.

Foolish Assumptions

So who is the target audience for this book? As in past editions, I make no assumptions about your previous knowledge of computers and software. I figure you've either just bought a brand-new iMac, or you're considering buying one. Perhaps you've found a great bargain on a gently used older iMac model, and you'd like guidance as you learn the ropes. Those are the *only* assumptions I make . . . and unlike other books that require all sorts of technical experience and know-how, the only requirement between these covers is your desire to become an iMac *power user* (someone who produces the best work in the least amount of time and has the most fun doing it)!

By the way, if your friends and family told you that you're going to spend half your life savings on software — or that no “decent” software is available for Mac computers — just smile quietly to yourself. Today's iMac models come complete with about a ton more software than any Windows box, and those applications are better than anything available on a PC.

This book was written using the latest iMac computer, so owners of older iMac computers might not be able to follow along with everything I cover. However, if you've upgraded an older Intel iMac with macOS Monterey (and the latest Apple applications), you should be able to use most of the book with no problem.

About This Book

In writing about the iMac, I've kept one precept firmly in mind: macOS Monterey, the operating system you'll run, is just as important as the actual iMac computer itself. Therefore, you'll find that *iMac For Dummies*, 11th Edition, is just as much about familiarizing you with all the software you get as it is about introducing you to hardware features like your keyboard and mouse. After all, it's relatively easy to connect an entire forest of cables and turn on any new computer. What comes *next* is the challenging part!

As in my other *For Dummies* titles, I respect and use the same English language you do, avoiding jargon, ridiculous computer acronyms, and confusing techno-babble whenever possible.

If you're upgrading from a PC running the Windows operating system, I've got tips, tricks, and entire sections devoted to those hardy pioneers called *Switchers!* You'll discover both the similarities and differences between the iMac running Monterey and the PC running Windows. I also show you how to make the switch as easy and quick as possible.

A word about the conventions I use: Even with an absolute minimum of techno-speak, this book needs to cover the special keys that you have to press or menu commands that you have to choose to make things work. Therefore, please keep this short list of conventions in mind as you read:

» **Stuff you type:** If I ask you to type (or enter) something, such as in a text box or field, that text appears in bold, like this:

Type me.

If I ask you to type a command within an application, that text appears like this (and note that you usually have to press the Return key before anything happens):

```
Type me .
```

- » **Menu commands:** I list menu paths and commands using another format. For example, this instruction indicates that you should click the Edit menu and then choose the Copy menu item:

Edit ⇨ Copy

- » **Web addresses:** No up-to-date book on a computer would be complete without a bag full of web addresses for you to check out. When you see these in the text, they look like this: `www.m1cbooks.com`.

Icons Used in This Book

Like other technology authors, I firmly believe that important nuggets of wisdom should *stand out on the page!* With that in mind, this *For Dummies* book includes margin icons for certain situations:



TIP

This is the most popular icon in the book, and you find it parked next to suggestions that I make to save you time and effort (and sometimes even cash!).



TECHNICAL
STUFF

You don't have to know this stuff, but the technologically curious love high-tech details. (Of course, we're great fun at parties, too.)



WARNING

Always read the information before you take action! I'm discussing something that could actually harm your hardware or throw a plumber's helper into your software.



REMEMBER

Consider these nuggets to be highlighter stuff — not quite as universally accepted (or as important to the author) as a Mark's Maxim (described next), but good reminders nonetheless. I use these icons to reinforce what you should remember.



MARK'S
MAXIM

Mark's Maxims: These are *MFRs* (short for My Favorite Recommendations). In fact, I'll bet just about any iMac power user would tell you the same. Follow my Maxims to avoid the quicksand and pitfalls that I've encountered with all sorts of Macs for more than three decades!

Beyond the Book

Thanks to my good friends at Wiley, there's some extra content to accompany this book that you won't find between the covers! Fire up your Safari browser and go online to find the following:

- » **Cheat Sheet:** I've created several Cheat Sheet pages that cover things like common keystrokes and maintenance procedures that every iMac owner should follow on a regular basis. To get this Cheat Sheet, simply go to www.dummies.com and enter **iMac For Dummies Cheat Sheet** in the Search box.
- » **Bonus Chapter:** If you're dying to find out how to share data among wireless devices via Bluetooth technology, check out the handy Bluetooth bonus chapter at the Wiley website (www.dummies.com) as well as at my website (www.m1cbooks.com).

Where to Go from Here

Each chapter in this book is written as a reference on a specific hardware or software topic. You can begin reading anywhere you like because each chapter is self-contained. However, I recommend that you read the book from front to back because the order of this book makes a great deal of sense. (I hope!)

1

Getting Started with Your iMac

IN THIS PART . . .

Tour the features of your iMac.

Unpack and set up your iMac.

Familiarize yourself with the basics of macOS Monterey.

- » Identifying the important parts of your iMac
- » Locating the right home for your computer
- » Plugging stuff in and getting hooked up
- » Playing with your bundled software
- » Buying additional stuff that you might need

Chapter **1**

Okay, This Machine Looks Really, Really Weird

You bought a brand-new iMac, and there it sits, in the box. Waiting. Waiting for you.

If you're a little nervous about unpacking that shiny aluminum and glass rectangle, I completely understand. Face it: The latest iMacs follow in the footsteps of many revolutionary iMac designs that have come before. In other words, it doesn't *look* like a computer at all, and that can be a bit disconcerting. And if you're switching from a Windows PC to the Apple universe, you might find yourself floating weightlessly in your office or your living room without a familiar bulky black PC case to anchor yourself — hence, the reluctance you might be feeling.

However, dear reader, let me assure you that you've indeed made the right choice. I commend you! Today's line of Intel iMacs are the fastest, leanest, and easiest-to-use self-contained all-in-one computer ever built. Practically everything's in

one shining panel (except for your keyboard and mouse). You have one of the best backlit LED screens on the planet, a super-fast processor, plenty of RAM (memory), and a regular laundry list of the latest technology. Best of all, you don't have to be a techno-nerd to use all that power — it even comes in your choice of colors!

In this chapter, I introduce you to your new dream machine — whether you choose an Intel iMac or its powerful big brother, the iMac with an Apple M1 processor — and give you an overview of the most important locations within iMac City. I show you how to unpack your new computer, what wires go where, and where your iMac should set up housekeeping. I preview the awesome software that's waiting within that powerful panel. Finally, I list the accessories that help keep both you and your new iMac computing smoothly.

Intel iMac or M1 iMac — That Is the Question

Until recently, the iMac was offered with an Intel processor, identified by the year it was produced and the size of the screen. With the arrival of the M1 processor (often called *Apple Silicon*), our venerable computer is now available in two models:

- » The Intel iMac is the standard home and small-office version, offering enough power for all the Apple applications I cover in this book — as well as gaming, entry-level photography, music production, and video editing work. This is “the iMac for Most Of Us,” as I call it, with the right mix of performance and affordability. The Intel iMac currently offers two display sizes: 21.5" and 27".
- » The M1 iMac is the equivalent of a sports car, suitable for high-end, expensive applications that demand the best performance possible: professional-level video editing, 3D modeling, image editing, and other processor-intensive programs. The downside? You're going to pay more for an M1 iMac, of course, and I would recommend that you opt for the 16GB of RAM for the best performance.

Because both iMac models can run the applications I present later in the book, I won't be differentiating much between the two processor families (except when I'm describing hardware features in this chapter). If you haven't purchased your iMac yet, remember that the standard iMac model offers plenty of performance for the average Mac owner.

Here's a good yardstick for comparing the Intel iMac to the M1 iMac, presented as a Mark's Maxim:



MARK'S
MAXIM

If you need the power of an M1 iMac, you're likely to know that already.

An Introduction to the Beast

The iMac might look like a sculpture straight out of a museum of modern art, but it still sports everything that it needs to function as a computer. In this section, I identify the important stuff that you need to live your life — you know, write a term paper in Pages, hear the music you downloaded in Music, or manage the affairs of those lazy Sims.

Major parts of your major appliance

Every computer requires some of the same gizmos. Figure 1-1 helps you track them down. Of course, as you'd expect, a computer has a “body” of sorts in which all the innards and brains are stored (the body, in the case of your iMac), a display screen, a keyboard, a mouse or trackpad, and ports for powering and exchanging data with peripherals.

That magnificent screen

What a view you have! The standard Intel iMac is graced with either a 21.5" LED or a 27" 5K Retina display; the M1 iMac uses a 24" 4.5K Retina display. All models feature display backlighting for outstanding color and brightness.



TECHNICAL
STUFF

LED and Retina screens use far less electricity than their antique CRT ancestors, and they emit practically no radiation (less, in fact, than even the LCD screens that Apple once used).

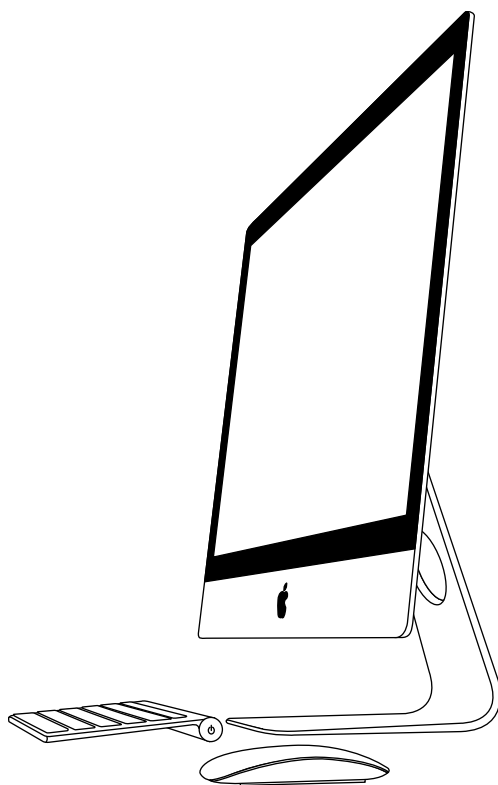
All these displays offer a *widescreen* aspect ratio (the screen is considerably wider than it is tall), which augurs well for those who enjoy watching movies. (A favorite editor of mine loves it when I use the antique word *augur*, meaning *to predict or foretell*.) For example, the 27" iMac boasts a whopping 5120 × 2880 resolution.



TIP

That reminds me: Throw away your printed dictionary! You won't need it because macOS Monterey includes a fantastic Dictionary application, which uses the Internet to retrieve definitions. More on launching applications in Chapter 3 . . . and yes, the Dictionary app does contain the word *augur*.

FIGURE 1-1:
The charismatic
form of your
aluminum iMac.



The keyboard and mouse

Hey, here's something novel for our favorite all-in-one computer — something *external* (outside the computer's case). Gotta have a keyboard and mouse (or trackpad), right? And you gotta love the options with iMac: You'll go nomadic . . . um, that is, wireless and free.

The iMac comes standard with a truly 21st-century combo of an Apple wireless Magic keyboard and a Magic Mouse 2. The M1 iMac can also be ordered with a Touch ID keyboard, which can read your fingerprint for security. You can also configure your new iMac with an expanded keyboard that includes a numeric keypad. (If you eschew the mouse as a pointing device, the Magic Trackpad 2 is also available when ordering a new iMac for \$50 more.)

The Magic input duo lets you sit back and relax with your keyboard in your lap and without being tied down by a cord. (Say it with me: “Death to cords, death to cords.”) Just stay within about 30 feet of your iMac screen, and sweet freedom is yours. You can also feel safe using these wireless peripherals because they offer secure, 128-bit, over-the-air encryption, which helps keep sensitive information

safe while you type and click away. One downside of the wireless keyboard, though: Unlike older wired keyboards, the wireless model doesn't include any USB ports, and you will need a supply of batteries. (Go rechargeable!)



TIP

If you prefer using a wired keyboard and mouse, they'll work fine with your iMac (and you can forget batteries altogether). Don't forget, however, that your keyboard needs to be Mac-compatible.

The keyboard layout is a particular favorite of mine because from here:

- » You can either control the sound volume (using the volume control buttons F11 and F12) or mute all that noise (using the Mute button F10).
- » Mission Control and Launchpad — two outstanding features of Monterey that you find out about later in the book — are each available with a single keystroke.
- » A handy-dandy Media Eject key lets you eject a CD or DVD (if you have an external optical drive).



REMEMBER

Today's iMac models don't have a built-in optical drive. If you have one of these machines, don't drive yourself batty looking for a disc slot!



TECHNICAL
STUFF

Both the wireless Magic Mouse 2 and Magic Trackpad 2 need a flat surface to rest upon, but that's what TV trays are for, right?

Yes, your computer has a foot . . . just one

You and I — normal human beings — would say that the iMac is supported by a sturdy aluminum *stand*, but Apple calls it a *foot*. The foot lets you tilt the iMac panel up and down for the best viewing angle. Most important, though, the foot minimizes the computer's desk space requirements (or its *footprint*). (Engineers . . . sheesh.) And yes, that foot is perfectly balanced and quite stable, so there's no danger of your treasured aluminum supercomputer taking a dive.

If you decide to get really snazzy and mount your older iMac Pro to the wall, you can remove the foot and install the VESA mounting adapter (available separately for about \$80). You can use any VESA standard mounting bracket on your wall, too. You can be positioned within 30 feet or so of your wall-mounted iMac Pro with a wireless Apple keyboard and mouse (or trackpad). Of the previous iMac generation, only the iMac Pro can use a VESA mount — however, the new 24" M1 iMac can be ordered from Apple with a built-in VESA adapter instead of a foot.

Hey, Hewlett-Packard or Dell, can you mount one of those monolithic desktop PCs to the wall? *I think not.*

Food for your ears

A machine this nice had better have great sound, and the iMac doesn't disappoint. You have a couple of options for iMac audio:

- » The 21.5" Intel iMac sports built-in stereo speakers (and a microphone to boot). The 27" Intel iMac raises the bar with stereo speakers and three microphones. And not to be outdone, the 24" M1 iMac delivers a whopping six speakers and three microphones!
- » Built-in ports connect your iMac audio to either:
 - More powerful (and more expensive) external speaker systems
 - A set of headphones
 - A home stereo system

You can also use wireless Bluetooth speakers with your iMac.

The power cable

Sorry, but you can't get a wireless power system . . . yet. (Apple's working hard on that one.) With the wireless keyboard and mouse/trackpad setup, though, the power cable is actually the only required cable that you need to run your computer! Now, that's *sassy*.

The power button

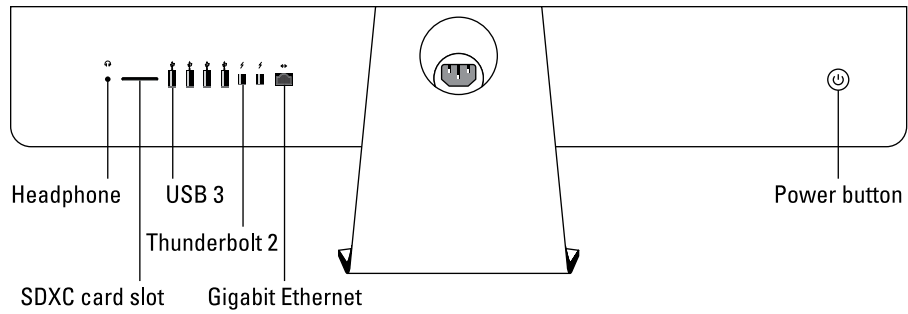
Yep, you have one of these, too. It's on the back of the case. (If you're looking at the screen, it's at the lower-left corner.)

Those holes are called ports

Our next stop on your tour of Planet iMac is Port Central — that row of holes on the back of your computer (see Figure 1-2). Each port connects a different type of cable or device, allowing you to easily add all sorts of extra functionality to your computer.

One of the holes is an exception to the Rule of Ports: The iMac's SDXC card slot accepts the same type of SD memory cards as most of today's digital cameras and video cameras. (In other words, that hole is not for connecting a cable; you insert the card instead.) The SDXC slot appears as a tiny horizontal slot on the Intel iMacs.

FIGURE 1-2:
Only slightly less
sexy — it's the
back end of a
standard Intel
iMac.



Each of these stellar holes is identified by an icon. Here's a list of what you'll find as well as a quick rundown on what these ports do:



- » **USB:** Short for *Universal Serial Bus*, the familiar USB port is the jack-of-all-trades in today's world of computer add-ons. Most external devices (such as portable drives, scanners, and digital cameras) that you want to connect to your iMac use a USB port. Both current Intel iMac models sport four USB 3.0 ports on the back, and the M1 iMac can be ordered with two USB 3.0 ports if you desire. USB 3.0 connections are much faster than the old USB 2.0 standard, but you can still use your USB 2.0 devices with the faster ports (at the slower speed, of course).

For the specs on connecting your keyboard and mouse, see the upcoming section “Absolutely essential connections.”

For more on USB ports, get the lowdown in Chapter 21.



TIP



- » **Ethernet:** The standard iMac includes a standard 10/100/1000 (1Gb) Ethernet port, so it's ready to join your existing wired Ethernet network. (Alternatively, you can go wireless for your network connection; find more on that in the next section and in Chapter 11.) On the iMac Pro side, hold onto your hat: The Pro also supports 2.5Gb, 5Gb and even an amazing 10Gb Ethernet connection! (Apple knows that professionals are more likely to use a superfast network between computers.)



- » **Thunderbolt 3:** Yes, I know, it's a dumb name, but it really *is* that fast. Thunderbolt 3 (also called USB-C) ports offer the absolute speediest connection between external devices and your iMac, including the fastest (and most expensive) external drives and storage systems. Thunderbolt 3's appeal doesn't end there, though: In case that splendid screen isn't quite big enough, you can add an adapter or cable to this port and send the video signal from your iMac to an Apple Thunderbolt monitor, a standard LCD/LED monitor, or a flat-screen TV. (Apple also offers different adapters that can connect your iMac to standard VGA monitors and projectors.) All current iMac models sport two Thunderbolt 3 ports.

Connections for external audio



As I mention earlier, your iMac comes equipped with powerful stereo speakers on the bottom of the case, but you're certainly not limited to them. Apple provides a Headphone/Audio Line Out jack, allowing you to send the high-quality audio from your rectangular beast to a set of standard headphones or to an optical digital audio device, such as a high-end home theater system.



TIP

You can also connect USB or Bluetooth speakers to your iMac.

Important hidden stuff

When you bought your new digital pride and joy, you probably noticed a number of subtle differences between the standard 21.5" iMac, the 27" iMac, and the faster top-end 24" M1 iMac. I call these differences the *Important Hidden Stuff* (or IHS, in case you prefer acronyms), and they're just as important as the parts and ports that you can see:



TECHNICAL
STUFF

- » **Internal drive:** The current iMac can be equipped with flash storage (also called a *solid-state drive*, or SSD). Apple also offers a *Fusion Drive*, which is essentially a combination of a traditional magnetic drive and flash storage (offering the larger capacity of a magnetic drive and the improved performance of flash storage).

As I type these words, the iMac product line offers several different storage capacities, depending on the processor speed and screen size you choose: anywhere from a standard 256GB solid-state drive to an immense 8TB SSD. (Yes, friends and neighbors, *TB* means *terabyte*, or 1,000GB.) The bigger, the better. (Remember, though, that the iMac has room for only one internal drive.)

- » **Wireless Ethernet:** "Look, Ma, no wires!" As I mention earlier, your iMac can join an existing wireless Ethernet network with its built-in wireless hardware. With wireless connectivity, you can share documents with another computer in another room, share a single high-speed Internet connection among several computers, or enjoy wireless printing. Truly *sassy*!



TIP

You can use your iMac with any standard 802.11g, 802.11n, or 802.11ac wireless network. (The M1 iMac adds support for 802.11ax as well.) And yes, PCs and Macs can intermingle on the same wireless network without a hitch. (Scandalous, ain't it?) Apple's AirPort wireless devices have been discontinued, however, so you'll have to do some searching online to locate an Apple wireless network device.

- » **Bluetooth:** Let's get the old "digital pirate" joke out of the way: "Arrgh, matey, I needs me a wireless parrot." (Engineers again . . . sheesh.) Although strangely named, Bluetooth is actually another form of wireless connectivity. This time, however, the standard was designed for accessories like your keyboard and mouse, and devices like your tablet and smartphone. Bluetooth is built into every iMac.
- » **SDXC card slot:** As I mention earlier, this slot allows your Intel iMac to read photos and video directly from standard SD memory cards. Photographers and video fans, rejoice!
- » **FaceTime HD camera:** The iMac built-in video and still camera appears as a tiny lens and activity light at the top of your computer.
- » **Video card:** You'll be pleased as punch to find that your Intel iMac comes equipped with either Intel Iris Plus or fast AMD Radeon Pro graphics hardware. The AMD Radeon Pro cards are well suited for entry-level 3D applications, and . . . well, honestly, blasting the enemy into small, smoking pieces with aplomb. On the Apple Silicon side, proud owners of M1 iMac models can choose from either a 7-core or 8-core graphics system, offering blazing speed (the 8-core version offers significantly faster performance). Both built-in M1 graphics platforms are worthy of Hollywood-quality video editing and the most demanding 3D applications.

Choosing a Home for Your New Pet

If you pick the wrong spot to park your new iMac, I can *guarantee* that you'll regret it later. Some domiciles and office cubicles obviously don't offer a choice — you've got but one desk at work, for example, and nobody's going to hand over another one — but if you can select a home for your iMac, consider the important placement points in this section.

Picking the right location

You know the mantra: Location, location, location.

- » **There's always the wall.** Your Intel iMac Pro (or a specially-ordered M1 iMac) can disguise itself as a particularly interesting digital picture frame. With the right mounting adapter, you can hang your computer right on the wall and snub your desk altogether.



WARNING

This wall-mounted solution has three big problems:

- Your VESA mounting plate must be installed safely and correctly (for example, using the studs within your walls).
The iMac is slim and trim, but it's no lightweight, and it doesn't bounce well. You don't want it to take a high dive!
- You may have to remove your iMac from the wall mount to connect or disconnect cables from the ports on the back.
- External peripherals aren't happy campers with a wall-mounted iMac — that includes Thunderbolt and USB devices, which must either sit on the floor or on a nearby (and conspicuous) shelf. (Personally, I think the cables for external devices tend to spoil the appearance of a wall-mounted computer, so if you're using a wall mount, I recommend using a wireless Apple Time Capsule device for your backups!)



REMEMBER

Your M1 iMac or iMac Pro must be mounted at the proper height on the wall. It's not good ergonomic practice to sit more than 2 feet away from your screen, and the screen should be placed at (or slightly below) eye level.

My solution? Don't plan on using any external devices. Instead, opt for a wireless network with a remote printer and remote backup storage space, like a Time Capsule unit on your network.

» **Keep things cool.** Your new iMac is nearly silent, but that super-fast processor generates quite a bit of heat. Fans inside the case draw the heat away. (Nothing like an overheated processor to spoil an evening of *Civilization VI*.)

Follow these three rules to keep your cool. Make sure that:

- The location you choose is far from heating vents.
- The location you choose is shielded from direct sunlight.
- You allow plenty of room below the machine (where the air enters the case) and behind the machine (where heated air escapes from the slot at the back of the case).

Hot air from a wall-mounted iMac can discolor the wall.



WARNING

Considering the convenience factor

Technology is nothing if you can't make it convenient:

» **Outlets, outlets, outlets!** Your computer needs a minimum of at least one nearby AC outlet and perhaps a nearby Ethernet jack (if you use the iMac's built-in Ethernet port for connecting to a wired Ethernet network). Oh, and



TIP

don't forget a surge protector or uninterruptible power supply (UPS), which I discuss at the end of this chapter.

If you prefer to send your data over the airwaves, consider using wireless networking for your iMac. I discuss everything you need to know about wireless networking in Chapter 11.

- » **Don't forget the lighting.** Let me act as your mom. (I know that's a stretch, but bear with me.) She'd say, "You can't possibly expect to work without decent lighting! You'll go blind!" She's right, you know. At a minimum, you need a desk or floor lamp.
- » **Plan to expand.** If your iMac hangs out on a desk, allow an additional foot of space on each side. That way, you have space for external peripherals and more powerful speakers.

Unpacking and Connecting

You are going to love this section. It's short and sweet because the installation of an aluminum iMac on your desktop is a piece of cake. (Sorry about the cliché overload, but this really *is* easy.)

Unpacking your iMac For Dummies

Follow these guidelines when unpacking your system:



TIP

- » **Check for damage.** I've never had a box arrive from Apple with shipping damage, but I've heard horror stories from others (who claim that King Kong must have been working for the shipping company). Check all sides of your box before you open it.

Take a photograph of any significant damage (just in case).

- » **Search for all the parts.** When you're removing those chunks o' foam, make certain that you check all sides of each foam block for parts that are snuggled therein or taped for shipment.
- » **Keep all those packing materials.** Do *not* head for the trash can with that box and those packing materials. Keep your box intact, complete with all the packing materials, for at least a year until your standard Apple warranty runs out. If you have to ship it to an Apple Service Center, the box with the original packing is the only way for your iMac to fly.

And now, a dramatic Mark's Maxim about cardboard containers:



MARK'S
MAXIM

Smart computer owners keep their boxes for the life of their machine.

For example, if you sell your iMac or move across the country, you'll want that box. *Trust me on this one.*

- » **Store the invoice for safekeeping.** Your invoice is a valuable piece of paper indeed.

Save your original invoice in a plastic bag, along with your computer's manuals and original software, manuals, and other assorted hoo-hah. Keep the bag on your shelf or stored safely within that iMac box, and enjoy a little peace of mind.

- » **Read the iMac manual.** "Hey, wait a minute, Mark — why do I have to read the manual from Apple along with this tome?" Good question, and here's the answer: There might be new and updated instructions in the documentation from Apple that override what I tell you in this book. (For example, "*Never* cut the red wire. Cut the blue wire instead." Or something to that effect.)

Besides, Apple manuals are rarely thicker than a restaurant menu. You can also download them from the Support section of the Apple website.



REMEMBER

Connecting cables like a true nerd

The iMac makes all its connections really simple, but your computer depends on you to place the outside wires and thingamabobs where they go.

Absolutely essential connections

After your new iMac is resting comfortably in its assigned spot (I assume that's a desktop or a wall), you need to make a minimum of one connection: the power cable. Plug the cable into the corresponding socket on the iMac first; then plug 'er into that handy AC outlet.



TIP

Apple has thoughtfully already installed your batteries in your wireless keyboard and mouse (or trackpad). If you ordered your iMac with a wired Apple keyboard and mouse, of course, you have no batteries to worry about at all.

Adding the Internet to the mix

If you have Internet access or a local computer network, you need to make at least one of the following connections.



TIP

Your local cable and telephone companies can provide you more information on cable or DSL Internet service.

If you have high-speed Internet service, or if you're in an office or school with a local computer network, you'll probably connect through the iMac's built-in Ethernet port. You make two connections:

1. Plug one end of the Ethernet cable into the Ethernet port on the iMac.

If your iMac doesn't have an Ethernet port, you'll need an adapter for either your USB or Thunderbolt port. Note that if you ordered your 24" M1 iMac with an Ethernet port, that port is actually found on the power adapter!

2. Plug the other end of the Ethernet cable into the Ethernet port from your network.

It's probably one of the following:

- An Ethernet wall jack
- An Ethernet switch
- A cable or DSL Internet router (or sharing device)



TIP

Will you be joining a wireless network? If so, look to Chapter 11 to find all the details you need to configure Monterey for wireless networking.

Discovering All the Cool Things You Can Do

This section answers the most common of all novice computer questions: “What the heck will I *do* with this thing?” You find additional details and exciting facts about the software that you get for free, software you'll want to buy, and stuff you can do on the Internet.

What software do I get?

Currently, all iMac computers ship with these major software applications installed and ready to use:

» **Apple's digital lifestyle applications:** You know you want these applications! They turn your iMac into a digital hub for practically every kind of high-tech device on the planet, including DV camcorders, digital cameras, portable music players, tablets, and even smartphones.

Chapters 13 through 16 of this book focus on the four major applications that accompany your iMac: Music & TV, Photos, iMovie, and GarageBand.

» **Apple's productivity applications:** Apple's powerful office productivity applications can be downloaded for free from the App Store. You can create documents, spreadsheets, and presentations within Pages, Numbers, and Keynote. (It's much like that Other Office Suite from those guys in Redmond, but you didn't hear that from me.) Chapters 17–19 show you the basics of producing great documents with these three applications.

Figure 1-3 illustrates a flyer under construction in Pages.

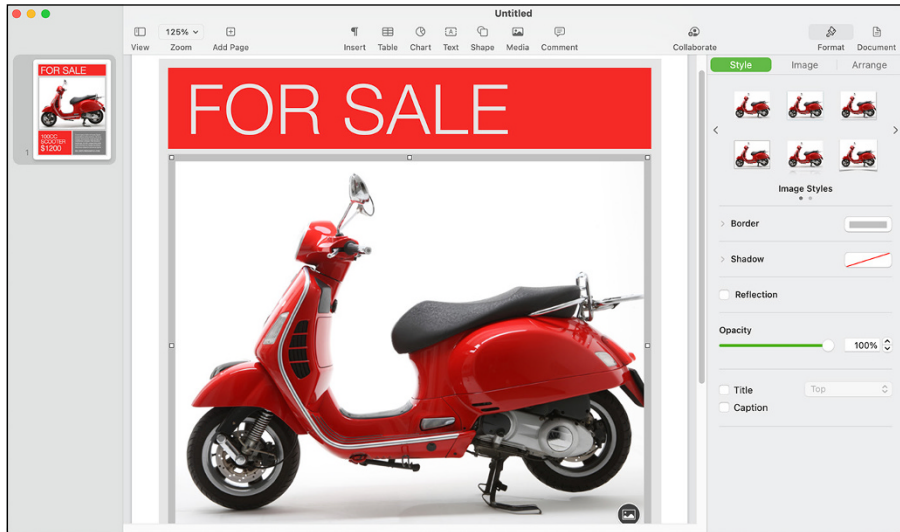


FIGURE 1-3:
Pages is a great
tool for home
and office.



REMEMBER

The installed software on your iMac might change as new programs become available.

Looking forward to fun on the Internet

What is a computer without the Internet? Apple gives you great tools to take full advantage of the online world, right out of the box:

» **Web surfing:** I use the Safari web browser every single day. It's faster and better designed than other browsers (although I might be biased). Safari includes tabbed browsing and offers shared bookmarks with your iOS devices through iCloud.

If *tabbed browsing* and *shared bookmarks* sound like ancient Aztec to you, don't worry. Chapter 8 is devoted entirely to Safari.



REMEMBER

- » **Web searches:** Siri (your voice-activated assistant) can search the entire Internet for stocks, movie listings, and business locations.
- » **FaceTime:** An easy way to videoconference with someone using another Mac, or even with those using iOS devices like the iPhone and the iPad, is through FaceTime. You'll find more on FaceTime in Chapter 12.
- » **Messages:** *Messages* lets you use your iMac to chat with others around the world for free via the Internet — by keyboard, voice, or (with your iMac's built-in FaceTime HD web camera) video! More on Messages appears in Chapter 12.

Always wear a shirt when videoconferencing.

- » **Email:** Soldier, Apple's got you covered. The macOS Mail application is a full-featured email system, complete with defenses against the torrent of junk mail awaiting you. (Imagine a hungry digital saber-toothed tiger with an appetite for spam.) Send pictures and attached files to everyone else on the planet, and look doggone good doing it.

Applications that rock

Dozens of useful applications are included with macOS. I mention the most important of them in later chapters, but here are three good examples to whet your appetite:

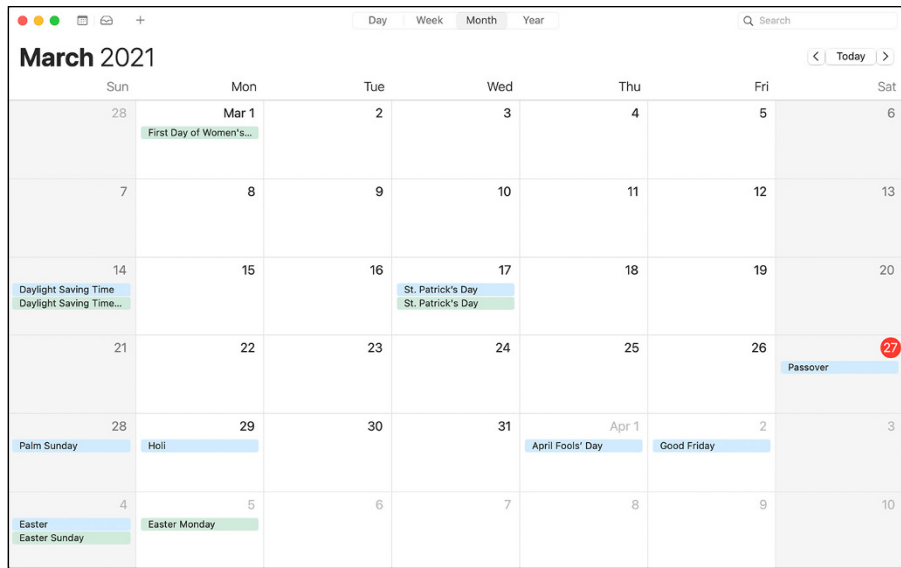
- » **Calendar:** Keep track of your schedule and upcoming events, and even share your calendar online with others in your company or your circle of friends. Figure 1-4 illustrates Calendar in action.
- » **DVD Player:** Got an external optical drive for your iMac? Put all that wide-screen beauty to work and watch your favorite DVD movies with DVD Player! You have all the features of a typical stand-alone DVD player, too, including a spiffy onscreen control that looks like a remote.
- » **Contacts:** Throw away that well-thumbed collection of fading addresses. The macOS Contacts application can store, search, and recall just about any piece of information on your friends, family, and acquaintances.



TIP

You can use the data you store in your Contacts in other Apple applications that are included with Monterey, such as Apple Mail and Messages.

FIGURE 1-4:
Hey, isn't that
Calendar running
on your iMac?
You are
iTogether!



Would you like to play a game?

“All productivity and no play . . .” Hey, even a hard-working person like you enjoys a good challenging game, so you can look forward to playing chess on your iMac right out of the box. Ah, but this isn’t the chessboard your dad used! Play the game of kings against a tough (and configurable) opponent — your iMac — on a beautiful 3D board. Heck, your iMac even narrates the game by speaking the moves!

Stuff You Oughta Buy Right Now

Your new aluminum supercomputer may need an additional purchase or two — but fear not, we’re not talking any outrageous expense here. I always recommend the same set of stuff for new PC and Mac owners. These extras help keep your new computer clean and healthy (and some make sure you’re happy as well):

» **Surge suppressor or uninterruptible power supply (UPS):** Even an all-in-one computer like your iMac can fall prey to a power surge. I recommend one of these:

- A *basic surge suppressor* with a fuse can help protect your iMac from an overload.



TECHNICAL
STUFF



WARNING



TIP



TECHNICAL
STUFF

- A *UPS* costs a little more, but it does a better job of filtering your AC line voltage to prevent brownouts or line interference from reaching your computer.

A UPS also provides a few minutes of battery power during a blackout so that you can save your documents and safely shut down your iMac.

- » **Screen wipes:** Invest in a box of premoistened screen wipes. Your iMac's awe-inspiring 5K Retina display can pick up dirt, fingerprints, and other unmentionables faster than you think.

Make sure your wipes are especially meant for flat-panel monitors or laptop computer screens.

- » **Blank optical discs and USB flash drives:** Many folks still consider an optical drive important, so if you'll miss watching DVD movies and importing/recording audio CDs, I'll bet you've already bought an external drive — and you'll need blank discs for recording music, video, and data. USB flash drives come in many different capacities, and your iMac treats a flash drive just like a traditional external drive. If your iMac is equipped with USB 3.0 ports, I recommend that you buy a USB 3.0 drive; they're significantly faster than the older 2.0 drives.

Looking for even more speed? Perhaps your iMac doesn't have USB 3.0 ports? If you want the absolute best performance from an external drive, super-fast Thunderbolt 3/USB-C SSD drives are also available, but they're pricey.

- » **Cables:** Depending on the external devices and wired network connectivity you'll be using, these are:

- A standard Ethernet cable (for wired networks or high-speed Internet)
- Thunderbolt or USB cables for devices you already have

Most hardware manufacturers are nice enough to include a cable with their products, but there are exceptions, especially USB printers. *Shame on those cheapskates!*

- » **A wrist rest for both your keyboard and mouse:** You might have many reasons to buy a new iMac, but I know that a bad case of carpal tunnel syndrome is *not* one of them. Take care of your wrists by adding a keyboard and mouse rest (even for a wireless keyboard/mouse combo hanging out on a TV tray).

- » Turning on your iMac
- » Checking your iMac for proper operation
- » Setting up macOS Monterey
- » Registering your iMac
- » Using Migration Assistant
- » Copying information from a Windows PC

Chapter 2

Life! Give My iMac Life!

If you've already been through Chapter 1, you got as far as unpacking your iMac and connecting at least one cable to it. And unless you bought this computer solely as a work of modern art, it's time to actually turn on your iMac and begin living The Good iLife. (Plus you still get to admire that Apple design whilst using TV.) After you get your new beauty powered on, I help you here with an initial checkup on your iMac's health.

I also familiarize you with the initial chores that you need to complete — such as using macOS Setup as well as moving the data and settings from your existing computer to your iMac — before you settle in with your favorite applications.

In this chapter, I assume that macOS Monterey (version 12) was preinstalled on your iMac or that you just completed an upgrade to Monterey. (If you're upgrading, your iMac is already turned on — and you can skip the next section!)

Throwing the Big Leaf Switch

Your iMac's power switch is located on the back of the computer, at the lower-left corner of the case (as you look at the screen). Press it now to turn on your iMac, and you hear the pleasant startup tone that's been a hallmark of Apple computers

for many years now. Don't be alarmed if you don't immediately see anything onscreen because it takes a few seconds for the initial Apple logo to appear.



REMEMBER

In my experience, a simple, quick press of the power button on some iMacs sometimes just doesn't do it. Instead, you actually have to hold down the button for a count of two or so before the computer turns on.

While the Apple logo appears, you see the familiar “moving bar” progress indicator appear. That's the sign that your iMac is loading Monterey. Sometimes the bar can take a bit to disappear. As long as it's moving, though, something good is happening — after all, Monterey has to load file sharing, networking, and printing components (and such).

At last, your patience of a whole 5 to 10 seconds is rewarded, and you see the Monterey Setup Assistant appear.

Mark's Favorite Signs of a Healthy iMac

Before you jump into the fun stuff, don't forget an important step: a quick preliminary check to make sure that your iMac survived shipment intact and happy. Although the shipping box that Apple uses for the iMac series is one of the best I've ever encountered in 40 years of swapping computer hardware, your computer could still have met with foul play from its shipping travels.

If you can answer yes to each of these questions, your iMac likely made the trip without serious damage:

1. Does the computer's chassis appear undamaged?

It's pretty easy to spot damage to your iMac's svelte metal and glass design. Look for scratches, puncture damage, and misalignment of the screen.

2. Does the LED screen work, and is it undamaged?

I'm talking about obvious scratches or puncture damage to your screen. Additionally, you should check whether any individual dots (or *pixels*) on your LED monitor are obviously malfunctioning. Bad pixels either appear black or in a different color from everything surrounding them.



TECHNICAL
STUFF

Techs call these irritating anarchists *dead pixels*. Unfortunately, many new LED screens include one or two. After all, even the standard 21.5" Intel iMac screen sports more than 1 million pixels.

3. Can you feel a flow of air from the vent on the back (or the bottom)?

Your iMac's processor, internal drive, and power supply generate quite a bit of heat, so the fan system never turns off completely. If you don't feel warm air from the fan system after your iMac has been on for an hour or two, you might have a problem.

4. Do the keyboard and mouse work?

Check your iMac's Bluetooth connection by moving the mouse (or running your finger across the trackpad); the cursor should move on your screen. To check the keyboard, press the Caps Lock key and observe whether the Caps Lock light turns on and off. (Don't forget to check for good batteries in all your wireless input devices and make sure they're turned on.)



TIP

If your iMac reports that there's no Bluetooth keyboard, mouse, or trackpad present, remember that you can always connect a standard Mac USB keyboard and pointing device to help you troubleshoot the problem. You'll find information on connecting (or *pairing*) Bluetooth accessories in the Bluetooth Bonus Chapter, available at www.dummies.com and my website, www.m1cbooks.com.

If you do notice a problem with your iMac (and you can still use your Safari browser and reach the web), you can make the connection to an Apple support technician at www.apple.com. If your iMac is lying on its back with its foot in the air and you can't get to the Internet, you can check your phone book for a local Apple service center, or call the AppleCare toll-free number at (800) 275-2273. Chapter 20 also offers troubleshooting information.

Harriet, It's Already Asking Me Questions!

After your iMac is running and you've given it the once-over for obvious shipping damage, your next chore is to set up your iMac. Unlike most other tasks in this book, I don't cover the setup process step by step. Apple "tweaks" the questions that you see during setup on a regular basis, and the questions are really very easy to answer. Everything is explained onscreen, complete with onscreen Help if you need it.

However, I do want you to know what to expect as well as what information you need to have at hand. I also want you to know about support opportunities, such as the AppleCare Protection Plan and Apple's iCloud Internet services — hence, this section. Consider it a study guide for whatever your iMac's setup procedure has to throw at you.

Setting up macOS Monterey

After you start your iMac for the first time — or if you just upgraded from an earlier version of macOS — your iMac will likely automatically launch the Monterey setup procedure. The setup process takes care of several tasks:



REMEMBER

» Setup provides Monterey your personal information.

As I mention in Chapter 1, your iMac ships with a bathtub full of applications, and many of those use your personal data (like your address and telephone number) to automatically fill out your documents.

Apple has recently strengthened its efforts to guard your privacy online. If personal stored information starts you worrying about identity theft, I congratulate you. If you're using your common sense, it *should*. However, Apple doesn't disseminate this information anywhere else, and the applications that use your personal data won't send it anywhere, either. And the Safari web browser fills out forms on a web page automatically *only* if you give your permission — and security-conscious iMac owners like me prefer to enter things manually. I applaud Apple's decades-long commitment to privacy and security, and I trust them with my personal data.

» Setup configures your language and keyboard choices.

macOS Monterey is a truly international operating system, so Setup offers you a chance to configure your iMac to use a specific language and keyboard layout.

» Setup configures your email accounts within Apple Mail.

If you already have an email account set up with your Internet service provider (ISP), keep that email account information handy to answer these questions. (The list should include the incoming POP3/IMAP and outgoing SMTP mail servers you'll be using, your email address, and your login name and password. Don't worry about those crazy acronyms, though, because your ISP will know exactly what you mean when you ask for this information.) Monterey can even automatically configure many email accounts for you — including web-based services such as Google Mail, Yahoo! Mail, and AOL Mail — if you supply your account ID and password. *Sweet.*

» Setup allows you to sign up for an iCloud ID and Apple's iCloud service.

iCloud makes it easy to share data automatically between your iMac and devices like an iPhone or iPad, along with Apple email accounts (through both web mail and the Apple Mail application). I go into all these in more detail in Chapter 9. For now, just create your iCloud ID (also often called an Apple ID), sign up for iCloud, and take the opportunity to feel smug about owning an Apple computer.

» **Setup sends your registration information to Apple.**

As a proud owner of an iMac, take advantage of the year of hardware warranty support and the free 90 days of telephone support. You have to register to use 'em, but rest assured that all this info is confidential.

» **Setup launches Migration Assistant.**

This assistant guides you through the process of *migrating* (an engineer's term for *copying*) your existing user data from your old Mac or PC to your new iMac. Naturally, if your iMac is your first computer, you can skip this step with a song in your heart! (Read more on Migration Assistant in the section "Importing Documents and Data from Your Old Mac.")

Registering your iMac

I'll be honest here: I know that many of us (myself included) don't register every piece of computer hardware we buy. However, your iMac is a different kettle of fish, and I *strongly* recommend that you register your purchase with Apple during the setup process. You spent a fair amount of moolah on your computer, and it's an investment with a significant number of moving parts.

Even the hardest of techno-wizards would agree with this important Mark's Maxim:



MARK'S
MAXIM

If you don't register your iMac, you can't receive support from Apple.

Rest assured that Apple is not one of those companies that constantly pesters you with email advertisements and near-spam. I've registered every Apple computer I've owned, and I've never felt pestered. (And I have an *extremely* low tolerance for pester.) However, just in case your tolerance is even lower than mine, Apple's registration process allows you to disable this email communication.

Importing Documents and Data from Your Old Mac

If you're upgrading from an older Mac computer running a previous version of macOS to your new iMac, I have great news for you: Apple includes the Migration Assistant utility application that can help you move (whoops, I mean, *migrate*) all sorts of data from your old Mac to your new machine. The list of stuff that gets copied over includes:

- » **User accounts:** If you set up multiple user accounts (so that more than one person can share the computer), the utility ports them all to your new iMac.
- » **Network settings:** Boy howdy, this is a real treat for those with manual network settings provided by an ISP or network administrator! Migration Assistant can re-create the entire network environment of your old Mac on your new iMac.
- » **System Preferences settings:** If you're a fan of tweaking and customizing macOS to fit you like a glove, rejoice. Migration Assistant actually copies over all the changes that you've made within System Preferences on your old Mac! (Insert sound of angelic chorus of cherubim and seraphim: *Hallelujah!*)
- » **Documents:** The files in your Documents folder(s) are copied to your new iMac.
- » **Applications:** Migration Assistant tries its best to copy over the third-party applications that you've installed in your Applications folder on the older Mac. I say *tries its best* because you might have to reinstall some applications, anyway. Some developers create applications that spread out all sorts of files across your hard drive, and Migration Assistant just can't keep track of those nomadic files. Also, some other applications make the trek just fine, but you might have to re-enter their serial numbers.



REMEMBER

If you're migrating from an Intel Mac to a new M1 iMac, you may also find that some applications can no longer be launched — unfortunately, these apps are not compatible with Apple's processor. I recommend checking with the software developer to see whether a new version of the app that supports the M1 processor is available.



TIP

Setup launches Migration Assistant automatically if you indicate that you need to transfer stuff during the setup process, but you can also launch Migration Assistant manually at any time. Click the Launchpad icon on the Dock (which bears a rocket-ship icon); then click the Search box at the top of the screen and type **Migration**. Click the Migration Assistant icon to launch the application. Note that Migration Assistant will close any running applications, so make sure to save and close any open documents.

To use Migration Assistant to copy your system from your older Mac, you need one of the following:

- » **Wired or wireless network connection between the computers:** If you've already hooked up your new iMac to your wired or wireless Ethernet network while using Setup Assistant, eschew cables completely and click Use Network instead. (Note, however, that a Wi-Fi migration will be much slower than migrating with either a direct cable connection or a wired network connection.)

- » **Thunderbolt cable** (compatible with all recent iMac, Mac mini, Mac Pro and MacBook models): A Thunderbolt connection will transfer your data between the two computers at lightning speed! (Bad pun intended.) Apple sells a Thunderbolt 3 cable that's perfect for the job for \$39 at the Apple Store.
- » **Time Machine external drive or an AirPort Time Capsule backup unit:** If you're using Time Machine on the older Mac with an external drive, you can migrate directly from your most recent backup — just plug your external Time Machine drive into your new iMac. The same option applies if you've invested in Apple's Time Capsule wireless backup device.

If you'll be using a Thunderbolt cable, make sure that the two machines are connected with the cable first. If you're using a network connection, both computers should be connected to the same network. Typically, you'll also have to load Migration Assistant on the source Mac (or a free Windows program downloaded from www.apple.com, if the source computer is a PC).

After the two computers are connected, simply follow the onscreen instructions displayed within the Migration Assistant window. The application will lead you through the process step by step. If you need to return to the previous step at any time, click the Back button that appears at the bottom of the screen.

Manually Importing Documents and Data from Windows

If you're a classic Windows-to-Mac *Switcher*, you made a wise choice, especially if you're interested in the creative applications supplied by Apple. Although you can choose to start your Apple computing life anew, you probably want to migrate some of your existing documents and files from that tired PC to your bright, shiny new iMac.

If you're switching from a PC to a Mac, you can run the Windows version of the Migration Assistant on your PC (available from Apple's website) to automatically handle most of your migration tasks for you, and you should witness the miracle of your PC's photos, video, music, and documents suddenly appearing on your iMac. Unfortunately, you'll have some exceptions. Some stuff won't make the move because the Windows Migration Assistant simply can't recognize and transfer files and folders from some nonstandard locations. For example, folders you created yourself at the root of your PC's hard drive likely won't be recognized, and naturally, your Windows programs won't run under macOS.

Here's the good news, though: You can easily copy those files that weren't transferred! Moving items manually from a USB flash drive or over a network is easy.



TIP

The macOS Help system contains an entire subsection on specific tricks that you can use when switching from Windows to Mac, including how to connect to a Windows network and how to directly connect the two computers.

In general, you can move documents, movies, photos, and music without a problem. Table 2-1 illustrates what can be moved between Windows (versions 7, 8, 8.1, and 10) and macOS, as well as the application that you use in Monterey to open those files and documents.

TABLE 2-1 **Moving Media and Documents betwixt Computers**

File Type	Windows Location	macOS Location	Mac Application
Music files	My Music folder	Music folder	Music
Video and movie files	My Videos folder	Movies folder	QuickTime/DVD Player/TV
Digital photos	My Pictures folder	Pictures folder	Photos
Office documents	My Documents folder	Documents folder	Mac Office/Open Office/Pages, Numbers and Keynote

IN THIS CHAPTER

- » Introducing the macOS Monterey Desktop
- » Launching and quitting applications
- » Mastering Finder windows, icons and shortcuts
- » Manipulating your Desktop with Mission Control and Spaces
- » Customizing the Dock and Desktop
- » Getting help while learning about Monterey

Chapter 3

The Basics Behind macOS Monterey

Ah, the Finder. Many admire its scenic beauty. But don't ignore its unsurpassed power or its many moods. And send a postcard while you're there. Okay, so the Monterey Finder might not be *quite* as beautiful as the city it's named after, but it's the basic toolbox you use every day while piloting your iMac. The Finder includes the most common elements of macOS: window controls, common menu commands, icon fun (everything from launching applications to copying files), keyboard shortcuts, and even emptying the Trash. In fact, you could say that if you master the Finder and learn how to use it efficiently, you're on your way to becoming a power user!

This chapter is your Finder tour guide, and we're ready to roll. I satisfy your curiosity about your new playground and introduce you to the basic elements of the Monterey Desktop, and I outline the resources available if you need help with macOS.

Oh, and I promise to use honest-to-goodness English in my explanations, with a minimum of engineer-speak and indecipherable acronyms. (In return, promise that you will boast about Monterey to your family and friends. Aunt Harriet might not be as technologically savvy as we are.)

Your Own Personal Operating System

Monterey is a special type of software called an *operating system* (or *OS*, as in *macOS*). This means that Monterey essentially runs your iMac and allows you to run all your other applications, such as Music and Adobe Photoshop. It's the most important computer application — or *software* — that you run.



TIP

Think of a pyramid, with Monterey as the foundation and other applications running on top.

You're using the OS when you aren't running a specific application, such as these actions:

- » Copying files from a USB flash drive (also called a *thumb drive*) to your internal drive
- » Navigating through files and folders on your drive
- » Choosing a different screen saver

Sometimes, Monterey even peeks through an application while it's running. For example, macOS controls application actions such as these:

- » The Open, Save, and Save As dialogs you see when working with files in Photoshop
- » The Print dialog that appears when you print a document in Pages (Apple's desktop publishing application)

In the following sections, I escort you around the most important hotspots in Monterey, and you meet the most interesting onscreen thingamabobs you use to control your iMac. (I told you I wouldn't talk like an engineer!)

The Monterey Desktop

The Monterey Desktop isn't made of wood, and you can't stick your gum underneath. However, this particular desktop does work much like the surface of a

traditional desk. You can store things there, organize things into folders, and take care of important tasks such as writing and drawing (using tools called *applications*). Heck, you even have a clock and a trash can.

Gaze upon Figure 3-1 and follow along as you venture to your Desktop and beyond. I discuss each of these Desktop elements in more detail later in this chapter.

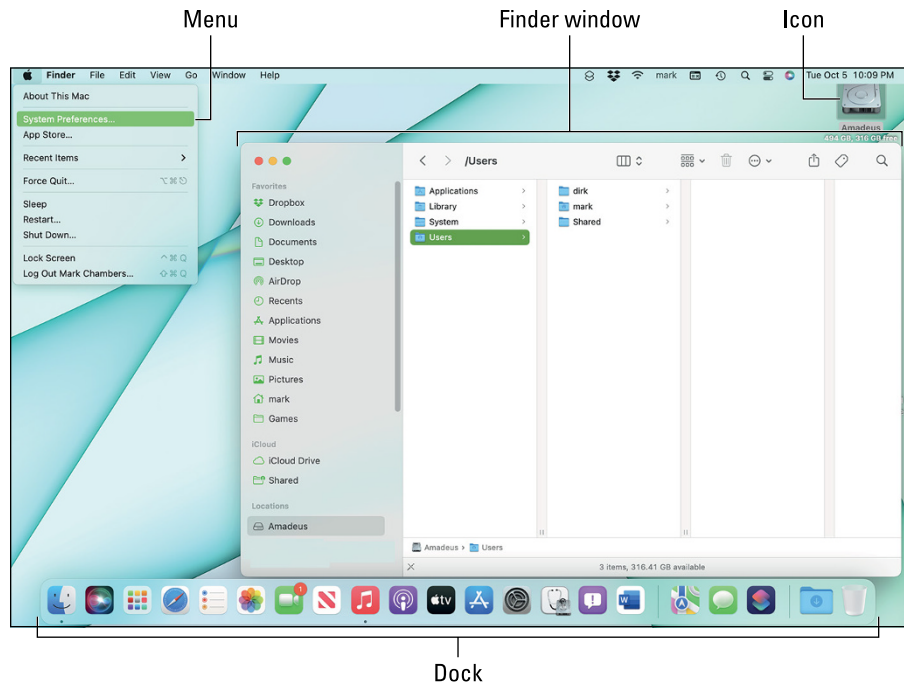


FIGURE 3-1:
Everything
Monterey starts
here — the
macOS Desktop.

Meet me at the Dock

The Dock is a versatile combination: one part organizer, one part application launcher, and one part system monitor. From the Dock, you can launch applications — for example, the postage stamp icon represents the Apple Mail application, and clicking the spiffy compass icon launches your Safari web browser. Icons in the Dock also allow you to see what's running, and display or hide the windows shown by your applications.

Each icon in the Dock represents one of the following (many of which are proudly displayed in Figure 3-2):

- » An application you can run (or that is running)
- » An application window that's *minimized* (shrunk)

- » Applications and documents
- » Files and folders
- » Network servers you access

Note that an icon can represent applications you run and documents you create. Sometimes you *single*-click an icon to watch it do its thing (as in the Dock), but usually you *double*-click an icon to make something happen.

There's no food on this menu

The menu bar isn't found in a restaurant. You find it at the top of the Desktop, where you can use it to control your applications. Virtually every application you run on your iMac has a menu bar.

To use a menu command, follow these steps:

1. Click the menu title (such as **File** or **Edit**).
2. Choose the desired command from the list that appears, as shown in **Figure 3-3**.

When you click a menu, it extends down so that you can see the commands it includes. While the menu is extended, you can choose any enabled menu item (just click it) to perform that action. You can tell that an item is enabled if its name appears in black (or white, if you're using the Dark Mode color scheme). Conversely, a menu command is disabled if it appears grayed out. Clicking it does nothing.

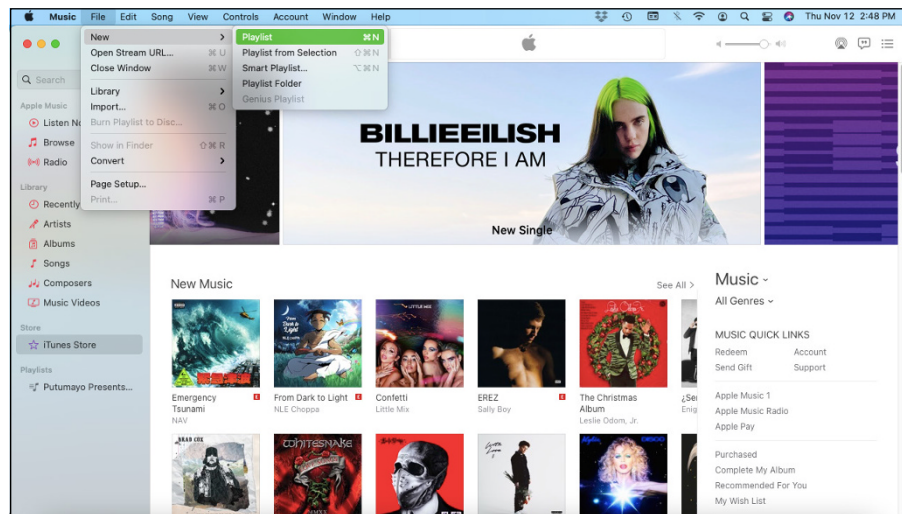


FIGURE 3-3:
Clicking a
menu displays a
list of menu
commands.



REMEMBER

When you see a menu path printed in this book (such as File ⇨ Save), it's just a visual shortcut that tells you to click the File menu and then choose Save from the drop-down menu that appears.

Virtually every Mac application has some menus, such as File, Edit, and Window. You're likely to find similar commands within these menus. However, only two menus are in *every* macOS application:

- » The *Apple menu*, which is identified with that jaunty Apple Corporation icon (🍏). This is a special menu because it appears in both the Finder menu bar and the menu bar in every application you run. It doesn't matter whether you're in Music or Photoshop or Word. If you can see a menu bar, the Apple menu is there. The Apple menu contains common commands to use no matter where you are in Monterey, such as Restart, Shut Down, and System Preferences. Figure 3-3 proudly displays the Apple icon at the upper left.
- » The *Application menu*, which always bears the name of the active application. For instance, the DVD Player menu group appears when you run the Monterey DVD Player, and the Word menu group appears when you launch Microsoft Word.



TIP

You can also display a context or shortcut menu — which regular human beings call a *right-click menu* — by right-clicking the Monterey Desktop, an application, a folder, or a file icon with your mouse. (If your iMac is equipped with a trackpad, you can right-click by tapping the trackpad with two fingertips. I explain more on clicking and tapping later, in the section, “Wait a Second: Where the Heck Are the Mouse Buttons.”)

The Finder menu bar is your friend

Whenever the Finder itself is ready to be used (or, in Mac-speak, whenever the Finder is the *active* application), the Finder menu bar appears at the top of the screen. You know the Finder is active and ready when the word *Finder* appears at the left of the menu bar.

There's always room for one more window

You're probably already familiar with the ubiquitous window itself. Both Monterey and the applications you run use windows to display things such as:

- » The documents you create
- » A web page

IT'S APPLE TO THE RESCUE!

UNIX is the established, super-reliable OS that powers most of the high-performance servers that make up the Internet. UNIX has built-in support for virtually every hardware device ever wrought by the Hand of Humankind (including all the cool stuff that comes with your iMac). It's also well designed and highly efficient.

Unfortunately, standard UNIX looks as hideous as old-fashioned character-based DOS, complete with a confusing command line. So ease of use for normal human beings like you and me goes out the window. Enter the genius types at Apple, who understood 20 years ago that all UNIX needed was a state-of-the-art, novice-friendly interface. To wit: macOS was developed with a UNIX foundation (or *core*), so it shares the same reliability and performance as UNIX. However, the software engineers at Apple (who know a thing or two about ease of use) made it good-looking and easy to use.

- » Your photographs
- » The contents of your drive

For example, the window shown in Figure 3-1, earlier in the chapter, is a Finder window, where Monterey gives you access to the applications, documents, and folders on your system. You use Finder windows to launch applications, to perform disk chores such as copying and moving files, and to navigate your drives.

Wait a Second: Where the Heck Are the Mouse Buttons?

Monterey takes a visual approach to everything, and what you see in Figure 3-1, earlier in the chapter, is designed for point-and-click convenience. That's because the mouse (or trackpad) are your primary navigational tools while you're using your iMac. Of course, you move the body of the mouse and the pointer follows like an obedient pup. Likewise, you move your finger over the surface of the trackpad to move the pointer. (The faster you move your finger, the farther the pointer goes.) When your pointer is over the desired item, you tap it (or *click* it, if you prefer the more familiar term), it opens, you do your thing, and life is good.

But wait! If you've grazed on the other side of the fence — one of Those Who Were Once Windows Users — you're probably accustomed to using a mouse with at least two buttons. This brings up the nagging question: "Hey, Mark! Where the

heck are my mouse buttons?” Or perhaps you’re thinking even farther out of the box, and you ordered a Magic Trackpad 2 as your pointing device of choice. Again, no buttons!

In a nutshell, the “buttons” on your iMac’s Magic Mouse 2 (or Magic Trackpad 2) are the entire top surface! Although you won’t see any separate buttons for clicking, your Magic pointing device can tell when you tap with one finger (to single-click). iMac owners using the Magic Trackpad 2 should think “tap” whenever they read “click” in the Apple world. If you’ve used an iPhone or iPad, the idea of *tap-ping* something onscreen makes perfect sense. (In this book I refer to the *pointer* whether you’re using the trackpad or a mouse.)



TIP

To configure everything Magic Mouse 2 — including all your buttons and your double-click/tracking/scrolling speeds — visit the Mouse pane within System Preferences. You can also configure your wireless mouse from here as well. Similarly, you can configure your wireless Magic Trackpad 2 using the Trackpad pane.

Speaking of right-clicking, you can easily configure your Apple pointing device to recognize a right-click (also called a *secondary click*) within System Preferences. Tapping the top-right corner (of a Magic Mouse 2) or tapping with two fingers (on the Magic Trackpad 2) performs the same default function in Monterey that clicking the right mouse button does in Windows. Namely, when you right-click most items — icons, documents, even your Desktop — you get a number of additional actions. That is, you get more commands specific to that item. (To keep familiar things familiar, I call it the “right-click menu,” and I promise to refer to it as such for the rest of the book.)

Figure 3-4 shows a typical convenient right-click menu in a Finder window. I have “extra” cool items at my disposal on this menu because of the applications I’ve installed that make use of a right-click menu.



TIP

Shortcuts can generate their own right-click menu items, called *Quick Actions*, that allow you to perform tasks on the selected item. (More on Shortcuts and creating Quick Action items in a few pages.)

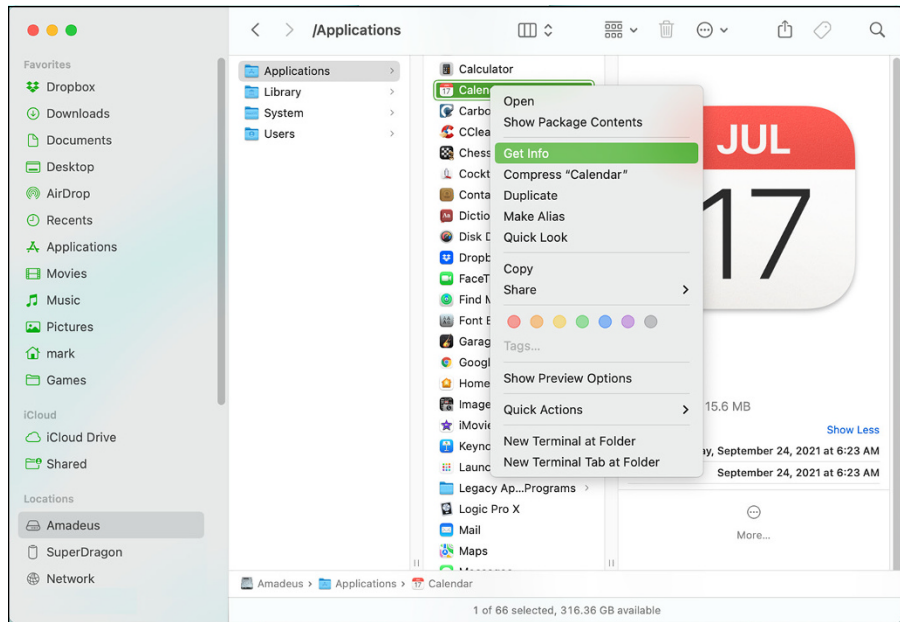


WARNING

If you’re using a Magic Trackpad 2 with your iMac, never use any object other than your finger (or a trackpad stylus) on the trackpad surface! That means no pencils (no, not even the eraser end), pens, or chopsticks; they can damage your trackpad in no time at all. And no, that doesn’t bode well for long fingernails.

But that’s not all. Apple’s series of Multi-Touch gestures for your Magic Mouse 2 and Magic Trackpad 2 include all sorts of handy time-saving commands! Depending on the changes you make within the Mouse and Trackpad panes in System Preferences, these gestures can include:

FIGURE 3-4:
Welcome to your
right-click menu!



- » **Select the Tap to Click check box:** Now, when you tap once quickly anywhere on the mouse, your Mac counts that as a click. Tap twice quickly, and your iMac recognizes that as a double-click.
- » **Select the Secondary Click check box:** A single tap with two fingers displays the right-click menu (which I cover in more detail in a page or two).
- » **Enable the Look Up check box:** Tap the trackpad with three fingers to look up a selected word in the Dictionary.
- » **Enable the Three Finger Drag check box:** (Sounds like a dance from the '60s, doesn't it?) By using three fingers, you can drag around windows on your Desktop to reposition them.
- » **Adjust your tracking speed:** Click and drag the Tracking speed slider to speed up or slow down the rate at which the pointer moves.

In this book I refer to the *pointer* whether you're using the trackpad or a mouse. I also use the term *button* from time-to-time for clarity — even though I've already pointed out there aren't physical buttons on either of these devices, it's an easy concept that we all recognize.

Launching and Quitting Applications with Aplomb

Now it's time to pair your newly found mouse or trackpad acumen with the Monterey Finder window. Follow along with this simple exercise. Move the pointer over the Music icon in the Dock. (This icon bears the symbol of a musical note.) Then tap the surface of your mouse or trackpad once (see the preceding section for how to set this preference). Whoosh! Monterey *launches* (or starts, or runs) the Music application, and you see a window much like the one shown in Figure 3-5.

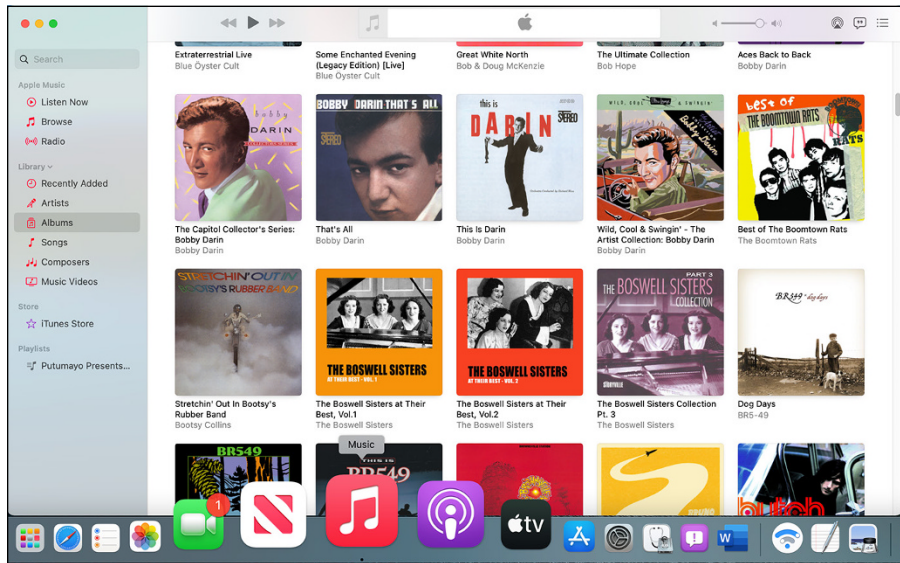


FIGURE 3-5:
Click a Dock icon
to launch that
application.



TIP

If an application icon is already selected (which I discuss later in the chapter), you can simply press **⌘+O** to launch it. The same key shortcut works with documents, too.

Besides the Dock, you have a plethora of other ways to launch an application or open a document in Monterey:

- » **From the Apple menu ():** You can launch a number of applications from anywhere in Monterey using the Apple menu. Click *System Preferences* to change all sorts of settings, such as your display background and how icons appear. Click *App Store* to launch the macOS App Store and display software

that you can download for your iMac. (Most are commercial applications that you have to pay for, but many great free applications are available as well.) You can also use the App Store to see whether update patches are available for your Apple software.

» **From the Launchpad:** Arrange all your application icons in a full-screen display. (The Launchpad icon in the Dock bears a spiffy rocket.) If you have more than one screen (or *page*) worth of applications, press the arrow keys to move between Launchpad pages. To launch an application, just click the icon. (If you're the proud owner of an iPhone or iPad, the Launchpad is familiar, because it corresponds directly to the iOS Home screen on those devices.) The Magic keyboard sports a Launchpad button — press F4 to display or hide the Launchpad.

» **From the Desktop:** If you have a document you created or an application icon on your Desktop, you can launch or open it from the Desktop by *double-clicking* that icon (tapping the surface of the mouse or trackpad twice with one finger in rapid succession when the pointer is on top of the icon).



TIP

Double-clicking a device or network connection on your Desktop opens the contents in a Finder window. This method works for CDs and DVDs you've loaded, as well as external drives and USB flash drives. Just double-click 'em to open them and display their contents in a Finder window. Applications and documents typically launch from a CD, a DVD, or an external drive just like they launch from your internal drive (the one that's typically named *Macintosh HD*). So you don't have to copy stuff from the external drive just to use it. Note, however, that running an application directly from your optical or external drive usually causes the application to run significantly slower. (Oh, and don't forget that you can't change the contents of music CDs and DVDs you buy; they're read-only, so you can't write to them.)

» **From Siri:** Click the Siri icon at the right side of the Finder menu bar. When you see the Siri box appear (with the words *What Can I Help You With?* and the waveform), say "Launch" and the name of the application. For example, you can open Pages by saying "Launch Pages" — you'll see Siri display the words it hears.

» **From the right-click menu:** Click the right side of your mouse (or tap your trackpad with two fingers) to display the right-click menu and choose Open.

» **From the Recent Items selection:** When you click the Apple menu and hover the pointer over the Recent Items menu item, the Finder displays all the applications and documents you used over the past few computing sessions. Click an item in this list to launch or open it.

- » **From the Recent Applications group in the Dock:** If you enable the Recent Applications check box within the Dock pane in System Preferences, you'll see the icons for the last three applications you used at the right side of the Dock. Click one of these icons to launch that application.
- » **From a Shortcut:** macOS can launch an application as part of a Shortcut, which I discuss later in this chapter.
- » **From the Login Items list:** Login items are applications that Monterey launches automatically each time you log in to your user account. I cover login items in detail in Chapter 10.
- » **From the Finder window:** You can also double-click an icon within the confines of a Finder window to open it (for documents), launch it (for applications), or display the contents (for a folder).



TIP

The macOS Quick Look feature can display the contents of just about any document or file — but without actually opening the corresponding application! *Sweet.* To use Quick Look from a Finder window, click a file to select it, and then press the spacebar. (Quick Look is also incorporated into Gallery view, which I discuss in a page or two.)

DIG THAT CRAZY LAUNCHPAD!

You can customize your Launchpad display by dragging icons to arrange them in the order you prefer. (For example, I have all the applications I use the most on the first Launchpad page.) Drag an application icon to the right or left side of the screen to move it to another page. Monterey also introduces a new Launchpad folder titled Games, where all the new games you install will automatically appear.

Launchpad, like a Finder window, allows you to create folders to help organize your applications. To create a folder in Launchpad, drag one application icon on top of another, and then add other icons by dragging them to the folder (or remove them by dragging them out of the folder). To run an application within a folder, click the folder icon to display the icons within it, and then click the desired application. To change a folder name, click the folder to open it, click the folder name to display a text-editing box, type the new moniker for the folder, and press Return.

If you want to remove an application from Launchpad — *which also deletes the application from your iMac entirely* — click the icon and continue pressing until the icons start to wiggle. (Yes, you read that correctly; I wrote *wiggle*. iPhone and iPad owners know what I mean.) Click the tiny delete (X) button that appears next to the icon whose application you want to delete, and the icon — and its application — disappear. Press Esc to stop all that wiggling. (Note that applications supplied with Monterey can't be deleted this way.)

After you finish using an application, you can quit that application to close its window and return to the Desktop. Here are a number of different ways to quit an application:



TIP



WARNING

- » **Press ⌘+Q.** This keyboard shortcut quits virtually every Mac application. Just make sure that the application you want to quit is currently active first (the application name should appear immediately to the right of the Apple menu).
- » **Choose the Quit command from the application's menu.** To display the Quit command, click the application's named menu from the menu bar. As I just mentioned, this menu is always to the immediate right of the Apple menu. For example, Safari displays a Safari menu, and that same spot in the menu bar is taken up by Calendar when Calendar is the active application. Refer to Figure 3-3, and look for the App Store menu, right next to the Apple menu (🍏) at the very top of the figure.
- » **Choose Quit from the Dock.** You can right-click an application's icon in the Dock and then choose Quit from the menu that appears.

A running application displays a small dot under its icon in the Dock.
- » **Click the Close button in the application window.** Some applications quit entirely when you close their window, such as the System Preferences window or the Apple DVD Player. Other applications might continue running without any window, such as Safari or iTunes; to close these applications, you have to use another method in this list. (More on window controls like Close in the next section.)
- » **Choose Force Quit from the Apple menu. *This is a last-resort measure!*** Use this method only if an application has frozen and you can't use another method in this list to quit. Force-quitting an application doesn't save any changes to any open documents in that application!

Performing Tricks with Finder Windows

In the following sections of your introduction to macOS, I describe basic windows management in Monterey: how to view the contents of your iMac, move things around, close windows, and make windows disappear and reappear like magic.

Viewing your stuff

The default appearance of a Finder window in macOS uses the familiar large-format icons that have been a hallmark of the Mac since Day One. You can display

the contents of a Finder window in *Icon view* by clicking the Icon View button on the Finder window toolbar. Figure 3-7 illustrates a Finder Window in Icon view.

List view displays the folders in a hierarchical fashion, with each subfolder appearing indented underneath its parent folder. You can expand and collapse each folder by clicking the disclosure triangle next to the folder name. (Thanks, Apple, for such a unique name.) You can change to this view by clicking the List icon in the Finder toolbar.

Column view is my favorite — thanks, Apple! It's efficient and fast as all get-out. Click the Column icon in the Finder toolbar, and drives on your Monterey system are displayed on the left. Each column on the right represents a lower level of subfolders. When you click to select a file or program (rather than a folder), the Finder displays a preview, a quick summary of the selected item and any Quick Actions in the right-most column. The Finder window shown in Figure 3-1, earlier in the chapter, is using Column view.



TIP

Each column has its own, individual scroll bar (for those *really* big folders), and you can drag the column handle at the bottom of the separators to resize the column width to the left. When you hold down the Option key and drag a column handle, all columns are adjusted at one time.

Gallery view allows you to browse visually — click the Gallery View icon in the Finder toolbar to display a row of thumbnails at the bottom of the screen, which you can scroll through with the scroll bar at the bottom of the window. A click on any item displays a preview of the item that fills most of the window, along with file information (or metadata, if the item is an image) and any Quick Actions associated with the item.

Scrolling in and resizing windows

Can you imagine what life would be like if you couldn't see more than a single window's worth of stuff? Shopping would be curtailed quite a bit — and so would the contents of the folders on your iMac's drives!

That's why Monterey includes *scroll bars* that you can click and drag to move through the window's contents. (By default, scroll bars don't appear in Monterey until you move the pointer close to them.) You can:

- » Click the scroll box and drag it. For the uninitiated, that means clicking the darker portion of the bar and holding down your finger on the mouse or trackpad surface while you move your finger in the desired direction.

- » Click anywhere in the empty area above or below the scroll box to scroll pages one at a time.
- » Hold down the Option key and click anywhere in the empty area above or below the bar to scroll to that spot in the document.

Figure 3-6 shows two vertical scroll bars in a typical Finder window, as well as the Sidebar and three Finder Tabs.

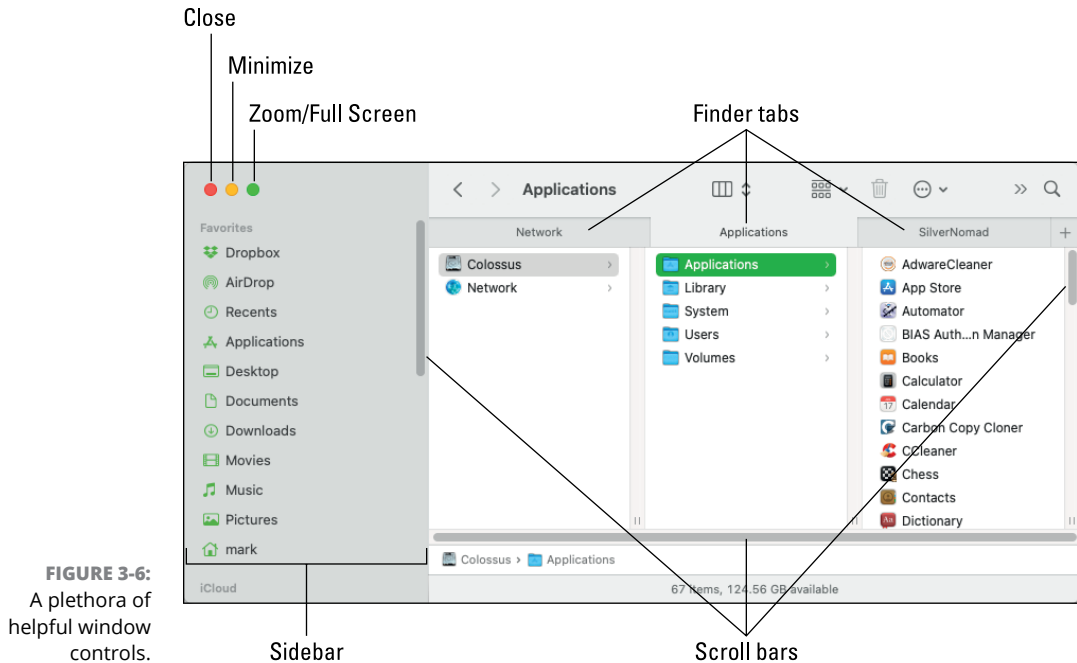


FIGURE 3-6:
A plethora of
helpful window
controls.



TIP

Often, pressing the Page Up and Page Down keys moves you through a document one page at a time. Also, pressing the arrow keys moves the insertion cursor one line or one character in the four compass directions.

You can also resize most Finder and application windows by enlarging or reducing the window frame itself. Move the pointer over any corner or edge of a window, and then drag the edge in any direction until the window is the precise size you need. (More information on dragging pops up later in this chapter.)

Minimizing and restoring windows

Resizing a window is indeed helpful, but maybe you simply want to banish the doggone thing until you need it again. That's a situation for the Minimize button,

which also appears earlier, in Figure 3-6. A *minimized* window disappears from the Desktop but isn't closed; it simply reappears in the Dock as a miniature icon. Minimizing a window is easy: Move the pointer over the Minimize button (the second of the three buttons at the upper-left corner of the window) — a minus sign appears in the button to tell you you're on target — and then click.



TIP

You can set your Dock & Menu Bar preferences so that double-clicking the window's *title bar* (the top frame of the window, which usually includes a document or application name) minimizes the window. (I cover Dock preferences in Chapter 5.)

To restore the window to its full size (and its original position on the Desktop), just click its window icon in the Dock.

Moving and zooming windows

Perhaps you want to move a window to another location on the Desktop so that you can see the contents of multiple windows at the same time. Click the window's title bar and drag the window anywhere you like. Then release the button. (Don't click the icon in the center of the title bar, though. You'll move just the icon itself, not the window.)



TIP

Many applications can automatically arrange multiple windows for you (examples include Microsoft Word and PowerPoint). Choose Window ⇨ Arrange All (if this option appears).

To see everything a window can show you, use the Zoom feature to expand any Finder or application window to its maximum practical size. Note that a zoomed window can fill the entire screen, or, if that extra space isn't applicable for the application, the window might expand to only a larger part of the Desktop.

To zoom a window, move your pointer over the third button at the top-left corner of the window. Again, refer to Figure 3-6, which struts its stuff and illustrates the position. (Man, that is one versatile figure.) A double-arrow icon appears on the Zoom/Full-Screen button. Click to expand your horizons to full-screen, or hold down the Option key while clicking to zoom the window to maximum size.

Speaking of *full-screen* mode, it comes in very handy on your iMac's beautiful widescreen display — that's where a single application fills the entire screen, without displaying a window frame or traditional Finder menu bar. The method you use to switch to full-screen mode varies depending on the application, so there's no One Menu Command or One Keyboard Shortcut that will always do the

deed. Most of the applications included with macOS Monterey use View ⇨ Enter Full Screen, and many applications have a button you can click in the window to switch back and forth. A click on the Zoom/Full-Screen button switches most Apple applications into full-screen. Finder windows can also be switched to full-screen mode in Monterey! To exit full-screen mode, just press Esc.

So how do you switch between applications if they're all in full-screen mode?

- » Move your pointer to the bottom of the screen to display the Dock, where you can click another application to switch to it.
- » Invoke Mission Control and choose another application from there. (More about Mission Control later in this chapter.)
- » If you're using a trackpad, swipe three fingers to the left or right across the trackpad surface.
- » From the keyboard, use the ⌘+Tab shortcut to cycle through the applications you have running.

Closing windows

When you're finished with an application or you no longer need to have a window open, move the pointer over the Close button at the upper-left corner of the window (it's the first of the three circular buttons). When the X appears in the button, click it. And yes, I can make *one more* reference to Figure 3-6, which I'm thinking of nominating as Figure of the Year.

TOGGLING TOOLBARS THE MONTEREY WAY

It's time to define a window control that's actually *inside* the window for a change. A *toolbar* is a strip of icons that generally appears under the window's title bar (although toolbars can appear in other locations as well). These icons typically perform the most common actions in an application; the effect is the same as if you used a menu command or pressed a keyboard shortcut. Toolbars are popular these days. You see 'em in everything from the Finder window to most application windows.

You can usually banish a window's toolbar to make extra room for icons, documents, or whatever the window happens to be holding. Just choose View ⇨ Hide Toolbar. To restore the toolbar to its original position, choose View ⇨ Show Toolbar. **Note:** If you toggle the Finder window toolbar off, you also lose the Finder window Sidebar.

ONLY ONE WINDOW CAN BE ACTIVE AT ONE TIME

Here's a very special Mark's Maxim in the macOS universe:

Only one application window can be active in Monterey at any time.

You can always tell which window is active:

- The active window is on top of other windows. (You can still use a window's Close, Minimize, and Zoom buttons when the window is inactive.)
- Any input you make by typing or by moving your finger on the trackpad appears in the active window.
- macOS *dims* the title bars of inactive windows you haven't minimized.



TIP

Perhaps you have more than one window open in the same application, and you want to close 'em all in one fell swoop. Hold down the Option key while you click the Close button in any of the windows.



REMEMBER

If you haven't saved a document, and you try to close that application's window, the application gets downright surly and prompts you for confirmation. "Hey, human, you don't really want to do this, do you?" If you answer in the affirmative — "Why, yes, machine. Yes, indeed, I do want to throw this away and not save it." — the application discards the document you were working on. If you decide to keep your document (thereby saving your posterior from harm), you can cancel the action and then save the document within the application.

Juggling Folders and Icons

Finder windows aren't just for launching applications and opening the files and documents you create. You can also use the icons in a Finder window to select one or more specific items or to copy and move items from place to place within your system.

A field observer's guide to icons

Not all icons are created equal. Earlier in this chapter, I introduce you to your iMac's drive icon on the Desktop. Here's a little background on the other types of icons you might encounter during your travels:

- » **Hardware:** These icons are your internal storage devices (such as your drive) as well as external peripherals — like an external DVD drive or a USB flash drive.
- » **Applications:** These icons represent the applications (or programs) you can launch. Most applications have a custom icon that incorporates the company's logo or the specific application logo. Double-clicking an application usually doesn't load a document automatically; you typically get a new blank document or an Open dialog box from which you can choose the existing file you want to open.
- » **Documents:** Many of the files on your internal drive are documents that can be opened in the corresponding application. Double-clicking a document automatically launches the associated application (that is, as long as macOS recognizes the file type).
- » **Files:** Most of the file icons on your system are mundane things such as preferences and settings files, text files, log files, and miscellaneous data files. Yet most are identified with at least some type of recognizable icon that lets you guess what purpose the file serves. You'll also come across generic file icons that look like a blank sheet of paper (used when Monterey has no earthly idea what the file type is).
- » **Aliases:** An *alias* acts as a link to another item elsewhere on your system. For example, to launch Adobe Acrobat, you can click an Adobe Acrobat alias icon that you can create on your Desktop instead of clicking the actual Acrobat application icon. The alias essentially acts the same way as the original icon, but it doesn't take up the same amount of space — only a few bytes for the icon itself, compared with the size of the actual application. Plus, you don't have to go digging through folders galore to find the original application icon. (Windows switchers know an alias as a *shortcut*. The idea is the same, although Macs had it first. Harrumph.) You can always identify an alias by the small curved arrow at the base of the icon, and the icon might also sport the tag `alias` at the end of its name.

You have two ways to create an alias. Here's one:

1. **Select the item. (More on selecting items in the next section.)**
2. **Choose File ⇨ Make Alias, or press ⌘+L.**

Here's another way to create an alias:

1. **Hold down ⌘+Option.**
2. **Drag the original icon to the location where you want the alias.**

Note that this funky method doesn't add the `alias` tag to the end of the alias icon name unless you drag the icon to another spot in the same folder.



TIP

So why bother to use an alias? Two good reasons:

- » **You can launch an application or open a document from anywhere on your drive.** For example, if you occasionally need to use another application while working on a Pages project, you can add an alias and launch the other application directly from the folder where you store those Pages documents. Speed, organization, and convenience. Life is good.
- » **You can send an alias to the Trash without affecting the original item.** When that school project is finished, you can safely delete the entire folder without worrying about whether Pages will run the next time you double-click the application icon!

Selecting items

Often, the menu or keyboard commands you perform in the Finder need to be performed *on* something. Perhaps you're moving an item to the Trash, getting more information on the item, or creating an alias for that item. To identify the target of your action to the Finder, you need to select one or more items on your Desktop or in a Finder window. In the following sections, I show you just how to do that.

Selecting one thing

Monterey gives you a couple of options when selecting just one item for an upcoming action:

- » **Move the pointer over the item and click.** A dark border (or *highlight*) appears around the icon, indicating that it's selected.
- » **If an icon is already highlighted on your Desktop or in a window, move the selection highlight to another icon in the same location by using the arrow keys.** To shift the selection highlight alphabetically, press Tab (to move in order) or press Shift+Tab (to move in reverse order).



REMEMBER

Selecting items in the Finder doesn't actually *do* anything to them by itself. You have to perform an action on the selected items to make something happen.

Selecting a whole bunch of things

You can also select multiple items with aplomb by using one of these methods:

» Adjacent items:

- **Drag a box around them.** If that sounds like ancient Sumerian, here's the explanation: Click a spot above and to the left of the first item. Keep holding down your finger on the mouse or trackpad surface and then drag down and to the right. (This is called *dragging* in Mac-speak.) A box outline like the one shown in Figure 3-7 appears, indicating what you're selecting. Any icons that touch or appear within the box outline are selected when you release the button.
- **Click the first item to select it, and then hold down the Shift key while you click the last item.** Monterey selects both items and everything between them.

» **Nonadjacent items:** Select these by holding down the ⌘ key while you click each item.

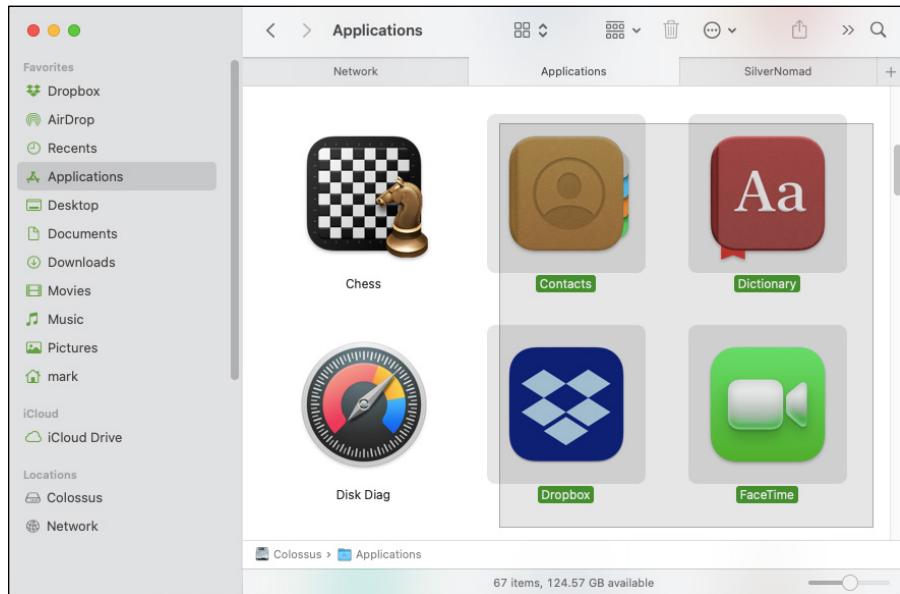


FIGURE 3-7:
Drag a box around icons to select them.



TIP

Check out the Status bar (which can appear at the top or bottom of a Finder window, depending on whether the toolbar is hidden). It tells you how much space is available on the drive you're working in, as well as how many items are displayed in the current Finder window. When you select items, it shows you how many you highlighted. (If you don't see a Status bar, choose View ⇨ Show Status Bar.)

Copying items

Want to copy items from one Finder window to another, or from one location (like a flash drive) to another (like your Desktop)? Très easy. Just use one of these methods:



TIP

» On the same drive

- **To copy one item to another location:** Hold down the Option key (you don't have to select the icon first) and then click and drag the item from its current home to the new location.

To put a copy of an item in a folder, just drop the item on top of the receiving folder. If you hold the item you're dragging over the destination folder for a second or two, Monterey opens a new window so that you can see the target's contents. (This is called a *spring-loaded* folder. Really.)

- **To copy multiple items to another location:** Select them all (see the preceding section), hold down the Option key, and then drag-and-drop one of the selected items where you want it. All the items you selected follow the item you drag. (Rather like lemmings. Nice touch, don't you think?)

To help indicate your target when you're copying files, Monterey highlights the location to show you where the items will end up. (This works whether the target location is a folder or a drive icon.) If the target location is a window, Monterey adds a highlight to the window border.

» On a different drive

- **To copy one or multiple items:** Click and drag the icon (or the selected items, if you have more than one) from the original window to a window you open on the target drive. (No need to hold down the Option key while copying to a different drive.) You can also drag one item (or a selected group of items) and simply drop the items on top of the drive icon on your Desktop.

The items are copied to the top level, or *root*, of the target drive.

If you try to move or copy something to a location that already has an item with the same name, you see a dialog that prompts you to decide whether to replace the file or to stop the copy/move procedure and leave the existing file alone. (Heck, you can even keep *both* — macOS performs the copy or move, but also appends the word *copy* to the item being copied.) Good insurance, indeed.



REMEMBER

Moving things from place to place

Moving things from one location to another location on the same drive is the easiest action you can take. Just drag the selected item or items to the new location. The item disappears from the original spot and reappears in the new spot.

MY, WHAT AN ATTRACTIVE SIDEBAR . . . AND SO USEFUL!

Have you noticed the Sidebar that typically occupies the left side of a Finder window? It's a pane of links to common locations and devices that you can use to jump like a flash to a specific spot on your internal drive. For example, you can click the Applications link under the Favorites heading, and you're transported to your Applications folder in an instant.

Here's a great example of Sidebar magic: I like as few icons on my Desktop as possible, so each book I'm working on gets its own folder. All the items for that project that might otherwise end up on my Desktop are saved to that folder instead. In fact, I make a point of adding my current book project folder to my Finder window Sidebar so that it's available immediately from any Finder window. To add a folder to the Sidebar, just drag the folder into the column at the left side of the Finder window and drop it on top of the Favorites heading in the Sidebar's list.

You can configure the items that will appear in your Sidebar: Choose **Finder** ⇨ **Preferences** and then click the **Sidebar** tab to display the list. From here, you can select and deselect check boxes to configure your Sidebar to your liking.

Duplicating in a jiffy

If you need more than one copy of the same item in a folder, use the Monterey Duplicate command. I use Duplicate often when I want to edit a document but want to ensure that the original document stays pristine, no matter what. I just create a duplicate and edit that file instead.

To use Duplicate, you can:

- » Click an item to select it and then choose **File** ⇨ **Duplicate**.
- » Right-click the item and choose **Duplicate** from the menu.
- » Hold down the Option key and drag the original item to another spot in the same window. When you release the button, the duplicate file appears like magic!

The duplicate item has the word `copy` appended to its name. A second copy is named `copy2`, a third is `copy3`, and so on.



REMEMBER

Duplicating a folder also duplicates all the contents of that folder. Therefore, creating a duplicate folder can take some time if the original folder was stuffed full (or contained files several hundred megabytes or larger in size). The duplicate folder has `copy` appended to its name, but the contents of the duplicate folder keep their original names.

Using Finder Tabs

Monterey includes a powerful feature you can use to display multiple locations in the same window. *Finder Tabs* work just like the tabs in Safari (as well as other popular browsers for both Macs and PCs), allowing you to switch between multiple locations on your Mac *instantly* by clicking a tab to switch to that location. You can even drag files and folders from tab to tab!

To open a new tab in a Finder window, you have a wealth of choices:

- » Click the desired location and press ⌘+T.
- » Right-click the location and choose Open in New Tab.
- » Select the location and click the New Tab button (which bears a plus sign) at the right side of the window.
- » Click the Action icon (which bears a gear icon) in any Finder window toolbar and choose Open in New Tab.

For example, suppose that you're working on an iMovie project. You might create tabs using the Applications item in the Finder window Sidebar and a folder (or even a DVD or shared drive) named Work that contains your video clips. The location appears as a new tab immediately under the toolbar. You can open as many tabs as you like, and you can also drag the Finder Tabs themselves to reorder them. To switch between tabs using the keyboard, press `Ctrl+Tab`. To close a tab, hover the pointer over it and click the X button that appears. That hardworking Figure 3-6 (shown earlier in the chapter) shows three Finder Tabs at work.



TIP

You can also set new folders to open in tabs instead of windows. Just click the Finder menu at the top of the Desktop, choose Preferences, click the General tab, and then click the Open Folders in Tabs Instead of New Windows check box to enable it.

Keystrokes to Fame and Fortune

Your iMac's keyboard might not be as glamorous as the mouse, but any Mac power user will tell you that using keyboard combinations are usually the fastest method of performing certain tasks in the Finder, such as saving or closing a file. I recommend committing these key sequences to memory and putting them to work as soon as you begin using your iMac so that they become second nature to you as quickly as possible.



Note that the 24" M1-powered iMac may be ordered with a Magic Keyboard that includes the same fingerprint-reading Touch ID sensor that's featured on MacBooks, allowing you to unlock your iMac, use Apple Pay, and identify yourself to secured applications — all with the touch of your finger. If you have one of these stellar input devices, you'll see the Touch ID sensor at the top-right corner of the keyboard.

Special keys on the keyboard

The Apple standard keyboard has a number of special keys that you might not recognize — especially if you've made the smart move and decided to migrate from the chaos that is Windows to macOS! Table 3-1 lists the Apple keyboard's function keys and describes what they do.

TABLE 3-1 Too-Cool Function Keys

Action/Key Name	Symbol	Purpose
Audio Mute		Mutes (and restores) all sound produced by your iMac
Volume Up		Increases the sound volume
Volume Down		Decreases the sound volume
Ctrl	Ctrl	Displays the right-click/Control+click menu with the trackpad
Command		Primary modifier for menus and key sequences
Delete	Delete	Deletes selected text
Option	Option	Modifier for key sequences

Using the Finder and application keyboard shortcuts

The Finder is chock-full of key sequences that you can use to take care of common tasks. Some of the handiest combinations are listed in Table 3-2, along with the locations where the corresponding menu entries appear in Monterey.

TABLE 3-2 Monterey Keyboard Sequences of Distinction

Key Combination	Location	Action
⌘+A	Edit menu	Selects all items (works in the Finder, too)
⌘+C	Edit menu	Copies the selected items to the Clipboard
⌘+H	Application menu	Hides the current application window
⌘+M	Window menu	Minimizes the active window to the Dock (also works in the Finder)
⌘+O	File menu	Opens or launches an existing document, file, or folder (also works in the Finder)
⌘+P	File menu	Prints the current document
⌘+Q	Application menu	Exits (quits) the application, and prompts you to save any changes
⌘+T	File menu	Opens a new Finder tab with the currently selected location
⌘+V	Edit menu	Pastes the contents of the Clipboard at the current pointer position
⌘+X	Edit menu	Cuts the highlighted item to the Clipboard
⌘+Z	Edit menu	Reverses (undoes) the effect of the last action you took
⌘+?	Help menu	Displays the Help system (works in the Finder, too)
⌘+Tab	Finder	Switches between open applications
⌘+Option+M	Finder	Minimizes all Finder windows to the Dock
⌘+Option+W	Finder	Closes all Finder windows



TIP

But wait; there's more! Most of your applications also provide their own set of keyboard commands. While you're working with a new application, display the application's Help file and print a copy of the keyboard commands as a handy cheat sheet.

If you've used a PC before, you're certainly familiar with three-key sequences. The most infamous is Ctrl+Alt+Delete, the beloved reboot/Task Manager combination nicknamed the *Windows three-finger salute*. Three-key commands work the same way in Monterey (but you'll be thrilled to know you don't need to reboot by using that notorious Windows combination!). If you're new to computing, to use a three-key command, hold down the first two keys and then press the third key.



TIP

You're not limited to the keyboard sequences I've listed. In System Preferences, visit the Keyboard pane and then click the Shortcuts tab to list them (as well as change an existing command or add a command).

Speeding Things Up with Shortcuts

How about yet another new macOS feature that originated on your iOS devices? Monterey adds *Shortcuts* to macOS, and they're quite powerful. With Shortcuts, you can quickly and easily create a series of automated actions that can be assigned to an icon on your system. For example, a Shortcut can track your time performing a task, display a map of where a specific photo was taken, or create a GIF from a video clip — all with a single click, and without launching any applications! If you've used the Automator application in previous versions of macOS, you'll feel right at home with Shortcuts.



REMEMBER

Shortcuts can appear on your Dock or Finder menu bar. You can also search for and run Shortcuts using Spotlight.

To create a new Shortcut (or browse the prebuilt Shortcuts offered by Apple), launch the Shortcuts application from the Launchpad (or type the word *shortcuts* into a Spotlight search box and launch it from there). Click the Gallery entry in the Sidebar to view Apple's suggested Shortcuts that you can use immediately (shown as tiles that are separated into categories like work, lifestyle, music, and your Apple Calendar). Click the See All link to display a short description of each Shortcut in that category. To add a Shortcut to your collection, just click the Add icon in the desired tile (which carries a plus sign). You see the new Shortcut added under your All Shortcuts heading in the Sidebar. To run any Shortcut in your collection, hover your pointer over the tile and click the Play button that appears.

You can build your own Shortcuts by clicking the New Shortcut button in the toolbar, which carries a plus sign. The Shortcuts application displays the Edit window, where you can drag actions from the Sidebar on the right and drop them into the main section of the window. Actions may have criteria that you preset, or they may allow your input at the time you run the Shortcut. Each action is processed in order from top to bottom when you run the Shortcut.



TIP

Click the Suggestions label in the Sidebar to display possible actions that may appear next in your Shortcut, based on what you've already added.

Usually you can add a Shortcut to your collection and simply run it immediately, but what if you have to make adjustments? Click a Shortcut tile to select it and press Command+O to display the actions that the Shortcut will take in the Edit window. From here, you can fine-tune the Shortcut by adding or deleting actions, changing timings or file locations, or choosing different search criteria. To run the Shortcut with your edits, click the Run icon in the Edit window toolbar. Any changes you make are automatically saved to the Shortcut when you close the Editor window.

After you've added a new Shortcut to your collection, it's easy to add it to the Dock. Within the Shortcuts application, click the All Shortcuts heading, click the tile for the desired Shortcut, and then choose Add to Dock from the File menu.

To add a Shortcuts icon to the Finder menu bar, drag the desired tile to the Menu Bar heading in the Shortcuts window Sidebar. Clicking the Shortcuts icon in the Finder menu bar will display a list of the Shortcuts that you've added to this heading.

Shortcuts can also appear in the right-click menu for a selected item under a separate heading named *Quick Actions* (as shown in Figure 3-4). To add a Shortcut as a Quick Action, open the desired Shortcut in the Edit window and click the Settings icon in the Edit window toolbar; then click the Details tab. Click the Use as Quick Action and Finder check boxes to enable them, and close the Editor window. Now enjoy your superpowered right-click menu!



REMEMBER

Shortcuts can be created on your iMac and shared automatically through iCloud with your iPhone and iPad, or you can create Shortcuts on your Apple devices and run them on your Macs (running macOS Monterey or later).

Home, Sweet Home Folder

Each user account you create in Monterey is actually a self-contained universe. For example, each user has a number of unique characteristics and folders devoted to just that person, and Monterey keeps track of everything that user changes or creates. (In Chapter 10, I describe the innate loveliness of multiple users living in peace and harmony on your iMac.)

This unique universe includes a different system of folders for each user account on your system. The top-level folder uses the short username Monterey assigns when that user account is created. Naturally, the actual folder name is different

for each person. Mac techno types typically call this folder your *Home folder*. (On the Sidebar, look for the teeny house icon under the Favorites heading, marked with your account name.)



REMEMBER

When you're on the hunt for your Home folder, don't look for a folder that's actually named *Home*. Instead, look for the short username that was assigned when you created the user account.

Each account's Home folder contains a set of subfolders, including:

- » Movies
- » Music
- » Pictures
- » Downloads (for files you download by using Safari or through Apple Mail attachments)
- » Public (for files you want to share with others on your network)
- » Documents (for files created by the user)

Although you can store your stuff on your Desktop, that gaggle of files, folders, and aliases can get crowded and confusing quickly. Here's a Mark's Maxim to live by:



MARK'S
MAXIM

Your Home folder is where you hang out and where you store your stuff. Use it to make your computing life much easier!



TIP

Create subfolders within your Documents folder to organize your files and folders even further. For example, I create a subfolder in my Documents folder for every book I write so that I can quickly and easily locate all the documents and files associated with that book project.

I discuss security for your Home folder and what gets stored where in Chapter 10. For now, remember that you can reach your Home folder easily, because it appears in the Finder window Sidebar. One click on the Sidebar entry for your Home folder, and all your stuff is within easy reach. (If your Home folder doesn't appear in the Sidebar, that's easy to fix: Choose Finder ⇨ Preferences, click the Sidebar tab, and then select the check box to display your Home folder.)

In addition to using the Finder window Sidebar, you can reach your Home folder in other convenient ways:

- » **From the Go menu:** Choose Go ⇨ Home to display your Home folder immediately from the Finder window. Alternatively, you can press ⌘+Shift+H to accomplish the same thing.

» **From the Open dialog:** The Monterey standard File Open dialog also includes the same Home folder (and subfolder) icons as the Finder window Sidebar.

» **In any new Finder window you open:** If you like, you can set every Finder window you open to automatically display your Home folder:

1. **Choose Finder ⇨ Preferences and click the General tab.**

2. **Click the arrow button at the right side of the New Finder Windows Show pop-up menu.**

A menu pops up (hence the name).

3. **Click the Home entry (with the house icon and your short username) in the menu.**

4. **Click the Close button at the upper-left corner of the dialog.**

You're set to go. From now on, every Finder window you open displays your Home folder as the starting location!



TIP

Here's another reason to use your Home folder to store your stuff: *default locations!* Monterey expects your stuff to be there when you migrate your files from an older Mac to a new iMac, and all Apple applications can use your Home folder when loading and saving projects.

Working with Mission Control

For those power users who often work with a passel of applications, allow me to turn your attention to one of the sassiest features in Monterey: Mission Control. Figure 3-8 shows off the Mission Control screen:

» **Press F3** to show *all* open windows using Mission Control, grouped by application; then click the one you want. Figure 3-8 illustrates the tiled All Windows display on my iMac after I press F3. Move the pointer on top of the window you want to activate — the window sports a blue border and its name is displayed when it's selected — and click once to switch to that window. You can specify which keys you want to use in the Mission Control pane in System Preferences.

» **Press Ctrl+F3** to show all open windows from the application that you're currently using; click the one you want to activate. This Mission Control function is great for choosing from all the images you've opened in Photoshop or all the Safari web pages populating your Desktop!

FIGURE 3-8:
Mission Control is
the desktop manager in
Monterey.



Astute observers will notice that the application menu bar also changes to match the now-active application.



TIP

Besides the **F3** and **Control+F3** hot keys that I just discussed, Mission Control provides one more nifty function: Press **⌘+F3**, and all your open windows scurry to the side of the screen. Now you can work with drives, files, and aliases on your Desktop — and when you're ready to confront those dozen application windows again, just press the keyboard shortcut a second time.

Naturally, these key combinations can be viewed and customized. Visit the comfortable confines of System Preferences and click the Mission Control icon to choose what key sequence does what.



TIP

Although the Mission Control screen appears automatically when necessary, you can launch it at any time from your iMac's Launchpad display or by pressing the Mission Control key on your keyboard. From the trackpad, display the Mission Control screen by swiping up with three fingers.

Switching Desktops with Spaces

Ah, but what if you want to switch to a different *set* of applications? For example, suppose that you're slaving away at your pixel-pushing job — say, designing a magazine cover with Pages. Your page design Desktop also includes Adobe's Photoshop and InDesign, which you switch between often using one of the techniques I just described. Suddenly, however, you realize that you need to schedule a

meeting with others in your office, using Calendar, and you want to check your email in Apple Mail. What to do?

Well, you could certainly open Launchpad and launch those two applications on top of your graphics applications and then minimize or close them. But with Mission Control's *Spaces* feature, you can press the Control+← or Control+→ sequences to switch to a different “communications” Desktop, with Calendar and Apple Mail windows already open and in your favorite positions. (I've also created a custom “music” Desktop for GarageBand and Music.)

After you set up your meeting and answer any important email, simply press Control+← or Control+→ again to switch back to your “graphics” Desktop, where all your work is exactly as you left it. (And yes, Virginia, Spaces does indeed work with full-screen applications.)

To create a new Desktop for use in Spaces, click the Launchpad icon on the Dock and then click the Mission Control icon. Now you can set up new Spaces Desktops. Move your pointer to the top right of the Mission Control screen and click the Add button (with the plus sign) that appears. (If you relocated your Dock to the right side of the screen, the Add button shows up in the upper-left corner instead.) Spaces creates a new empty Desktop thumbnail. Switch to the new Desktop by clicking the label at the top of the Mission Control screen, and then open those applications you want to include. (Alternatively, you can drag the applications from Mission Control onto the desired Spaces label.) That's all there is to it!

To switch an application window between Spaces Desktops, drag the window to the edge of the Desktop and hold it there. Spaces automatically moves the window to the next Desktop. (Applications can also be dragged between Desktops within the Mission Control screen.) You can also delete a Desktop from the Mission Control screen. Just hover your pointer over the offending Spaces label to display the thumbnail; then click the Delete button (with the X) that appears.



REMEMBER

You can jump directly to a specific Spaces Desktop by clicking its thumbnail in your Mission Control screen or by holding down the Control key and pressing the number corresponding to that desktop. Finally, you can always use the Control+← or Control+→ shortcuts to move between Desktops and full-screen applications.

Personalizing Your Desktop

Many folks put all their documents, pictures, and videos on their Monterey Desktop because the file icons are easy to locate! Your computing stuff is right in front of you . . . or is it?

Call me a finicky, stubborn techno-oldster — go ahead, it's true — but I prefer a clean macOS Desktop without all the iconic clutter. In fact, my Desktop usually has just three or four icons even though I use my iMac several hours every day, often on multiple book projects. It's an organizational thing; I work with literally hundreds of applications, documents, and assorted knickknacks daily. Sooner or later, you'll find that you're using that many, too. When you keep your stuff crammed on your Desktop, you end up having to scan your screen for a particular file, alias, or type of icon. You end up taking more time to locate it on your Desktop than in your Documents folder! And don't forget, open windows hang out on your Desktop, too. To find anything, you have to close or move those windows!

Plus, you'll likely find yourself looking at old icons that no longer mean anything to you, or stuff that's covered in cobwebs that you haven't used in years. Stale icons — *yuck*.



TIP

I recommend that you arrange your Desktop so that you see only a few icons for the files or documents you use the most. Leave the rest of the Desktop for that cool image of your favorite actor or actress.

Besides keeping things clean, I can recommend a number of other favorite tweaks that you can make to your Desktop:

»» **Keep Desktop icons arranged as you like.**

1. **From the Finder menu, choose View ⇨ Show View Options.**
2. **From the Sort By pop-up menu, choose the criteria that Monterey uses to automatically arrange your Desktop icons, including the item name, the last modification date, or the size of the items.**

I personally like things organized by name, but many iMac owners prefer to see things organized by date (putting the most recently modified item at the top, for example).

»» **Choose a favorite background.**

1. **Right-click any open spot on your Desktop and choose Change Desktop Background.**

The Desktop & Screen Saver pane appears, as shown in Figure 3-9.

2. **Browse through the various folders of background images that Apple provides, open a folder of your own images, or use an image from your Photos library.**

» Display all the peripherals and network connections on your system.

1. Choose Finder ⇨ Preferences.

2. Make sure that all four of the top check boxes are selected: **Hard Disks**; **External Disks**; **CDs, DVDs, and iPods**; and **Connected Servers**.

If you're connected to an external network, or if you've loaded an external drive or device, these external storage locations show up on your Desktop. You can double-click that Desktop icon to view your external stuff.

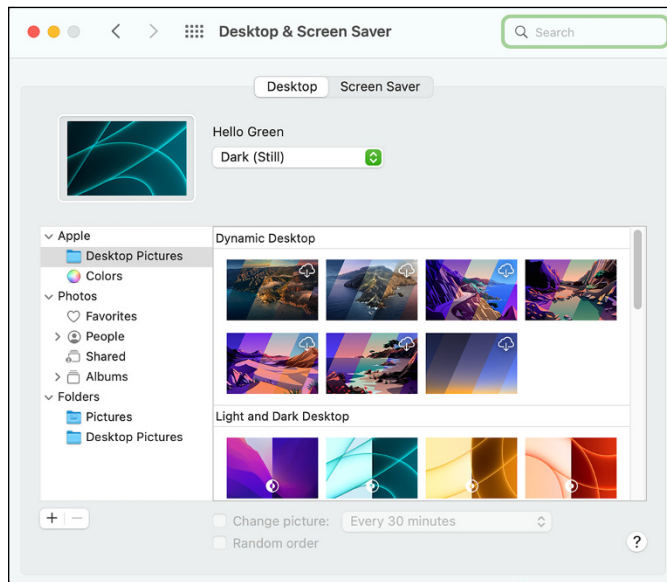


FIGURE 3-9:
Choose a Desktop
background of
more interest.

Taking Control of Your iMac

Another source of “customization glee” (yes, I am honestly that much of a computer nerd) is the new macOS Control Center, which adds a welcome level of convenience when changing system settings. To display the Control Center anywhere within Monterey, click the Control Center icon in the Finder menu bar. (It looks like two horizontal sliding switches.) The Center appears, as shown in Figure 3-10, at the right side of the Desktop.

Most of the tiles you see displayed in the Control Center are simple switches for macOS features, like the Display and Sound sliders, which you can click and drag directly to adjust the display brightness and sound volume. The Wi-Fi tile is

different (offering a submenu of multiple settings), allowing you to not only enable or disable your iMac's Wi-Fi but also switch networks or display the full Network pane within System Preferences.

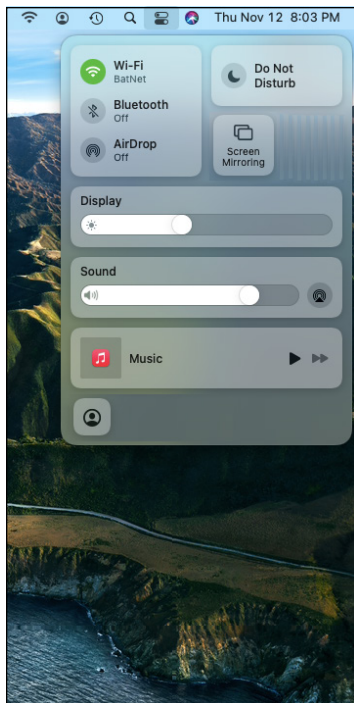


FIGURE 3-10:
The Control Center makes it easy to quickly change global settings.

You can specify what features are shown within the Control Center and which features remain on the Finder menu bar. Click the System Preferences icon in the Dock; then click the Dock & Menu Bar icon. This pane displays the available features in a list on the left. Click a feature to select it, and then click to enable (or disable) the Show in Control Center check box at the right side of the pane. Note that the icons for the Clock, Spotlight, Siri, and Time Machine can appear only in the Finder menu bar, so they can't appear within Control Center.

Customizing the Dock

In terms of importance, the *Dock* — the quick-access strip for applications and documents that appears on your Desktop — ranks right up there with the cockpit of a modern jetliner. As such, it had better be easy to customize, and naturally, macOS doesn't let you down.

Adding applications and extras to the Dock

Why be satisfied with just the icons that Apple places on the Dock? You can add your own applications, files, and folders to the Dock as well:



WARNING

- » **Adding applications:** You can add any application to your Dock by dragging its icon into the area to the *left* side of the Dock (that's to the left side of the vertical line on the Dock). You'll know when you're in the proper territory because the existing Dock icons obligingly move aside to make a space for it.

Attempting to place an application directly on the right side of the Dock sends it to the Trash (if the Trash icon is highlighted when you release the button), so beware. Note, however, that you can drop an application icon inside a Stack (more on that in a bit) or a folder that already exists at the right side of the Dock. (If you've repositioned the Dock to the left or right side of the screen, consider the top of the Dock as the "left side" and the bottom of the Dock as the "right side.")

- » **Adding individual files and volumes:** Individual files and volume icons can be added to the Dock by dragging the icon into the area to the *right* side of the Dock. (Attempting to place these to the left side of the Dock opens the application associated with the contents, which typically isn't what you intended.) Again, the existing Dock icons move aside to create a space when you're in the right area.

To open the Dock item you've added in a Finder window, right-click the icon to display a Dock menu, where you can open documents, run applications, and have other assorted fun, depending on the item you choose.

- » **Adding several files or a folder:** Monterey uses a feature called *Stacks*, which I discuss in the next section, "Keeping track with Stacks," to handle multiple files or add an entire folder to the Dock.

- » **Adding websites:** You can drag any URL from Safari directly into the area at the right of the Dock. Clicking that Dock icon automatically opens your browser and displays that page.



REMEMBER

If you see *two* vertical lines in the Dock, you've turned on the Dock's Recent Applications feature, which displays icons for the last three applications you've recently launched. (You can change this setting in the Dock & Menu Bar pane of System Preferences.) With Recent Applications turned on, consider the vertical line farthest to the right to be the right side of the Dock when adding items to the Dock.

To remove an icon from the Dock, just click and drag it off the Dock. Note, however, that the original application, folder, or volume is *not* deleted — just the Dock icon itself is permanently excused. If you like, you can delete almost any of the default icons that macOS installs on the Dock; only the Finder and Trash icons must remain on the Dock.

Keeping track with Stacks

Monterey offers *Stacks*, which are groups of items (documents, applications, and folders) that you want to place on the Dock or your Desktop for convenience — perhaps the files needed for a project you’re working on, or your favorite game applications. For example, I have a Stack named Wiley on my Dock that holds all the project files I need for the book I’m currently writing.

Using Desktop Stacks

To create Stacks on the Desktop, you first need to enable them. From the Finder menu, click View ⇨ Use Stacks. Monterey automatically moves all the items on your Desktop into Stacks grouped by file type. Once Desktop Stacks are turned on, you can change the grouping criteria by clicking View ⇨ Group Stacks By (or by right-clicking on the Desktop Stack and selecting the same option). Items that you copy or move to your Desktop are added to the appropriate Desktop Stack (if it exists), or a new Desktop Stack is created to hold them.

To display the items in a Desktop Stack, click it to open the Stack. The contents appear on your Desktop as individual icons again, while the Stack itself remains selected (and gains a down arrow icon to indicate that it’s open). To close a Desktop Stack, click the Stack icon again. Note that individual Stacks cannot be removed from your Desktop; you must completely disable the feature by choosing View ⇨ Use Stacks from the Finder menu, which returns all the individual items to your Desktop.

To open a document or folder from a Desktop Stack, display the contents and double-click the desired icon.

Using Dock Stacks

To create a Stack in the Dock, just select a folder containing the items and drag the folder to the right side of the Dock. As always, the Dock opens a spot on the right side of the Dock to indicate you’re in the zone.

To display the items in a Dock Stack, just click it:

- » **If the Stack holds relatively few items**, they’re displayed in a really cool-looking arc that Apple calls a *fan*, and you can click the item you want to open or launch. Figure 3-11 illustrates a typical Stack on the Dock unfurled as a fan.
- » **If the Stack is stuffed full of many items**, the Stack opens in a grid display, allowing you to scroll through the contents to find what you need.

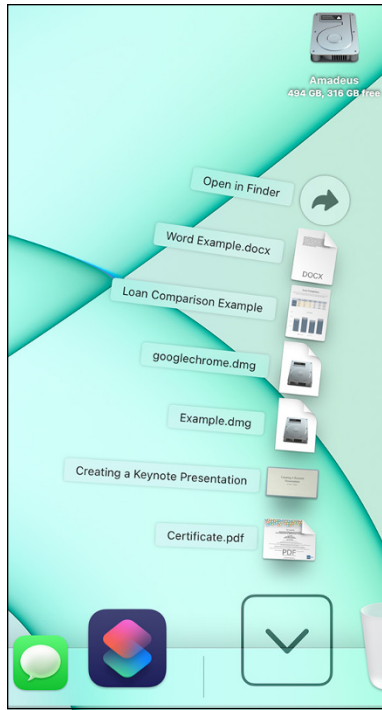


FIGURE 3-11:
Stacks make it
easy to access
your stuff from
the Dock or
Desktop.

You can open a document or folder from a Dock Stack by displaying the contents and clicking the desired icon.



TIP

Monterey provides a number of options for an individual Dock Stack, as well. Right-click the Stack icon, and you can choose to sort the contents by name, date created or added, date modified, or file type. If you'd prefer a grid display for a Dock Stack (no matter how many items the Stack contains), you can choose Grid view mode. Choose List to display the Stack's contents in much the same way as List view in a Finder window. List view mode also allows you to view folders in a Dock Stack as nested menu items. Choose Automatic to return to the default view mode. When set to Display as Stacks, the Stack icon is displayed using icon images from the contents of the folder; if security is an issue, however, choose Display as Folder from the right-click menu to display the Dock Stack as a plain folder icon instead.

You can remove a Stack from the Dock by right-clicking the Stack icon and choosing Options from the menu that appears. Choose Remove from Dock from the submenu that appears. Alternatively, just drag that sucker right off the Dock.

You can also display the contents of a Dock Stack in a Finder window. Right-click the Stack icon and choose the Open item at the bottom of the pop-up menu.



TIP

If you add a folder full of items to the Dock, the Stack is named after the folder; otherwise, Monterey does the best job it can in figuring out what to name the Stack.

Apple provides a Dock Stack already set up for you: The Downloads folder, situated next to the Trash, is the default location for any new files that you download using Safari or receive in your email. Monterey bounces the Download Stack icon to indicate that you've received a new item.

Resizing the Dock

You can change the size of the Dock from the Dock settings in System Preferences — but here's a simpler way to resize the Dock, right from the Desktop.

Move your pointer over the vertical solid line that separates the left side of the Dock from the right side; the pointer turns into a funky vertical line with arrows pointing up and down. This is your cue to click and drag while moving up and down, which expands and shrinks the Dock, respectively.

You can also right-click when the funky line pointer is visible to display a menu of Dock preferences. This allows you to change your Dock preferences without the hassle of opening System Preferences and displaying the Dock settings.

What's with the Trash?

Another sign of an iMac power user is a well-maintained Trash can. It's a breeze to empty the discarded items you no longer need, and you can even rescue something you suddenly discover you still need!

The translucent Monterey Trash icon resides in the Dock, and it works just like the Trash has always worked in macOS: Simply drag selected items to the Trash to delete them.



REMEMBER

Note one *very* important exception: If you drag a Desktop icon for an external device or a removable media drive to the Trash (such as an iPod, DVD, or external drive), the Trash icon turns into a giant Eject icon, and the removable device or medium is ejected or shut down — not erased. Repeat, *not erased*. (That's why the Trash icon changes to the Eject icon — to remind you that you're not doing anything destructive.)

Here are other ways to chuck items you select to go to the wastebasket:

- » Choose File ⇨ Move to Trash.
- » Click the Action button on the Finder toolbar and choose Move to Trash from the list that appears.
- » Press ⌘+Delete.
- » Right-click the item and choose Move to Trash from the menu that appears.

You can always tell when the Trash contains at least one item, because the basket icon is full of crumpled paper. However, you don't have to unfold a wad of paper to see what the Trash holds. Just click the Trash icon in the Dock to display the contents of the Trash. To rescue something from the Trash, drag the item(s) from the Trash folder to the Desktop or any other folder in a Finder window. (If you're doing this for someone who's unfamiliar with Monterey, remember to act like it was a lot of work, and you'll earn big-time DRP, or *Data Rescue Points*.)

When you're sure that you want to permanently delete the contents of the Trash, use one of these methods to empty the Trash:

- » Choose Finder ⇨ Empty Trash.
- » Press ⌘+Shift+Delete.
- » Right-click the Trash icon in the Dock and choose Empty Trash from the menu that appears.

All You Really Need to Know about Printing

Because the end of this chapter is near, I turn now to a task that most folks need to tackle soon after buying their iMac or installing Monterey: printing documents. Because basic printing is so important (and in most cases, so simple), allow me to demonstrate how to print a document.

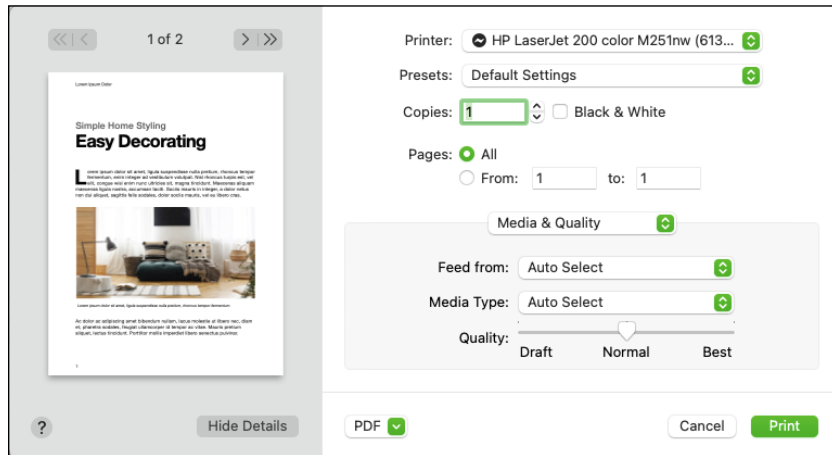
Most of us have a Universal Serial Bus (USB) printer — the USB being the favored hardware connection in macOS. As long as your printer is supported by macOS, setting it up is as easy as plugging it into one of your iMac's USB ports.



TIP

Before you print, *preview!* Would you jump from an airplane without a parachute? Then why would you print a document without double-checking it first? Most applications now have their own built-in Preview thumbnails in the Print sheet, as shown in Figure 3-12 — and this is definitely A Good Thing because you see what the printed document will look like, possibly saving you both paper and some of that hideously expensive ink or toner.

FIGURE 3-12:
The Print sheet
is available
from any
application
with any
real guts.



To print from any application using the default page characteristics — standard 8½ x 11-inch paper, portrait mode, no scaling — follow these steps:

- 1. In your application, choose File ⇨ Print or press the ⌘+P keyboard shortcut.**

In most applications, macOS displays the simple version of the Print sheet. (To display all the fields you see in Figure 3-12, click the Show Details button at the bottom of the sheet.) Some applications use their own custom Print dialogs, but you should see the same general settings.

- 2. Click in the Copies field and enter the number of copies you need.**

You can also enable or disable collation, just as you can with those oh-so-fancy copiers.

- 3. Decide what you want to print.**

- **The whole shootin' match:** To print the entire document, use the default Pages radio button setting of All.
- **Anything less:** To print a range of selected pages, select the From radio button and enter the starting and ending pages (or, if the application allows it, a selection of individual pages).

4. (Optional) Choose application-specific printing parameters.

Each macOS application provides different panes so that you can configure settings specific to that application. You don't have to display any of these extra settings to print a default document, but the power is there to change the look dramatically when necessary. To display these settings, open the Layout pop-up menu in the center of the Print sheet and choose one of these panes. For example, if you're printing from Contacts, you can choose the Contacts entry from the pop-up menu and elect to print a phone list, an envelope, mailing labels, or an email list.

5. When everything is go for launch, click the Print button.

Of course, there are more settings and more functionality to the printing system in macOS. However, I can tell you from my experiences as a consultant and hardware technician that this short introduction to printing will likely suffice for 90 percent of the Mac owners on Earth. 'Nuff said.

And Just in Case You Need Help . . .

You can call on the resources described in this section if you need additional help while you're discovering how to tame Monterey.



TIP

Some of the help resources are located on the Internet, so your Safari web browser will come in handy when you search for answers.

The Monterey built-in Help system

Sometimes the help you need is as close as the Help menu on the Finder menu bar. You can get help for either of the following:

- » **A specific application:** From the application, just click Help. Then click in the Search box and type a short phrase that sums up your query (such as *startup keys*). You see a list of help topics on the menu. Just click a topic to display more information.
- » **General topics:** Click a Finder window and then click Help on the menu bar. Again, you see the Search box, and you can enter a word or phrase to find in the Help system. To display the Help Center window, click the Help Center item under the Search box.

The Apple web-based support center

Apple has online product support areas for every hardware and software product it manufactures. Visit www.apple.com and click the Support link at the top of the web page.



TIP

The Search box works just like the macOS Help system, but the knowledge base that Apple provides online has *a lot* more answers.

Magazines

Many magazines and publications (both in print and online) offer tips and tricks on using and maintaining macOS Monterey.

My personal online favorites are Macworld (www.macworld.com) and the Wiley For Dummies website (www.dummies.com).

Local Mac user groups

I'd be remiss if I didn't mention your local Mac user group. Often, a user group maintains its own website and discussion forum. If you can wait until the next meeting, you can even ask your question and receive a reply from a *real live human being*. This is quite a thrill in today's web-centric world!

To locate a local user group using your Internet connection, launch Safari, click in the Address box, and type

Mac User Group *location*

Instead of *location*, type the desired spot on the map, like

Mac User Group Columbia Missouri

Don't forget to press Return!

2

Shaking Hands with macOS

IN THIS PART . . .

Learn more about the new features within macOS Monterey.

Use System Preferences to fine-tune how Monterey works.

Use Spotlight to search your entire system in seconds.

Keep track of practically everything using Reminders, Maps, Notes, News, and Notifications.

- » Controlling your iMac from the Finder menu
- » Discovering widgets and Guides
- » Flexing new muscles in Safari and Messages

Chapter 4

What's New in Monterey?

Have you upgraded to Monterey from the previous version of macOS, Big Sur? Or have you just bought a new iMac with Monterey preinstalled? Either way, you've opened the door to a number of new features, and this chapter was written especially for you. (And if you're not rubbing your hands together with gleeful anticipation, you *should* be — I know I am.) Here, you'll find descriptions of my favorite new features that ship with the latest version of macOS.

Note that a number of other new Monterey features appear elsewhere in the book. The *Shared With You* feature introduced with Monterey is covered in Chapter 12, for example. The new features you find here, however, are what I consider the *real* standouts, so they're showcased separately.

Let the fun begin!

Shortcuts Hit Your iMac

Shortcuts have been around on the iPhone and iPad since the arrival of iOS 13, and the application has become quite popular on these devices. (Note that I'm not talking about keyboard shortcuts here, but a new feature entirely.) Shortcuts make it easy to perform a series of actions with one click. For example, a Shortcut can automatically open the News application and display the articles from the Top Stories section, all with a single click from the Dock or the Finder menu.

Shortcuts can include dozens of actions, and your iMac can prompt you for any specific information the Shortcut may require to finish the task. Typically, you select a folder, file, or document as the target of the task and then run the Shortcut. Heck, you can even add Shortcuts to the right-click menu for the ultimate in convenience!

Never one to ignore what works, Apple's macOS version of Shortcuts includes many of the features that made it such a standout on iOS:

- » Apple offers a great selection of prebuilt, ready-to-run Shortcuts that you can download to your iMac.
- » You can create your own Shortcuts and share them with others, or edit existing Shortcuts.
- » Shortcuts are automatically shared across all your Macs and Apple devices.

The Shortcut Edit window (shown in Figure 4-1) uses drag-and-drop to build a Shortcut, using a library of actions that are processed by Monterey in the order you add them.

And here's the best part: Even if you don't want to create your own Shortcuts, you can pick your favorites from the Gallery of prebuilt Shortcuts and enjoy them on your iMac.

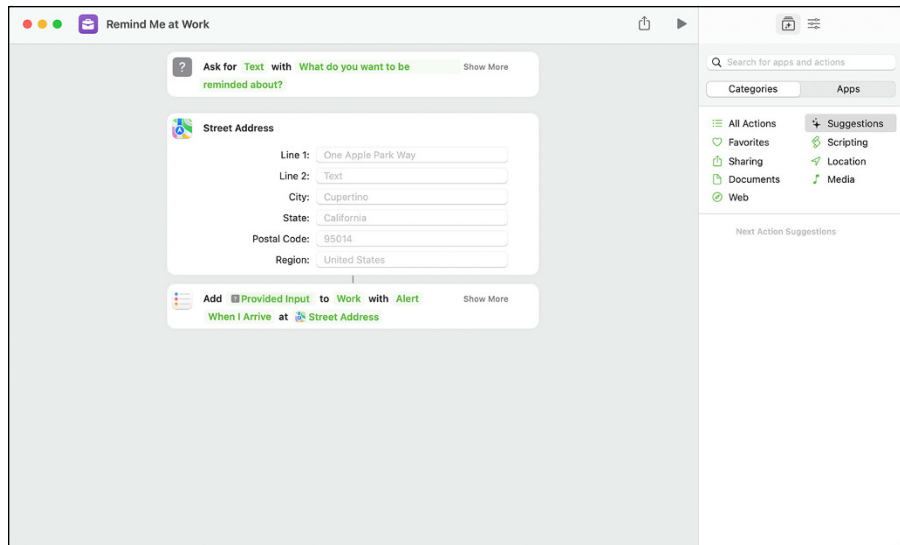


FIGURE 4-1:
Creating a new
Shortcut using
the Edit window.

Let's Get Focused

Have you ever wished you could eliminate distractions and interruptions while you're at work, or sleeping, or gaming, or relaxing to music on your iMac? Sure, macOS has had a Do Not Disturb feature for some time now, but it wasn't very configurable, and it certainly didn't take into account the activities you were currently performing on your Mac.

With the arrival of macOS Monterey, you now have the ability to create an environment, called a *Focus*, that provides you with control over exactly which notifications and interruptions are allowed and which are hidden. For example, you can create an Office Focus that immediately displays messages, notifications, and email from your coworkers, but hides the same type of communications from your gaming friends (and game applications on your iMac) until your workday is done. Then, of course, you can switch to your Gaming Focus and hide everything work related. (I know I do.)

A Focus can be selected manually, or it can be set to activate based on a schedule you specify. A Focus can automatically enable specific hardware or applications that you commonly use during that activity. And, of course, the Focus you set on your iMac is shared with your iOS devices, so you can switch to your iPad or iPhone and maintain that Focus.

Figure 4-2 shows the Office Focus I created within the Notifications & Focus pane in System Preferences. Now I'm ready to center my attention on my work (at least from 8:00 in the morning to 4:30 in the afternoon)!

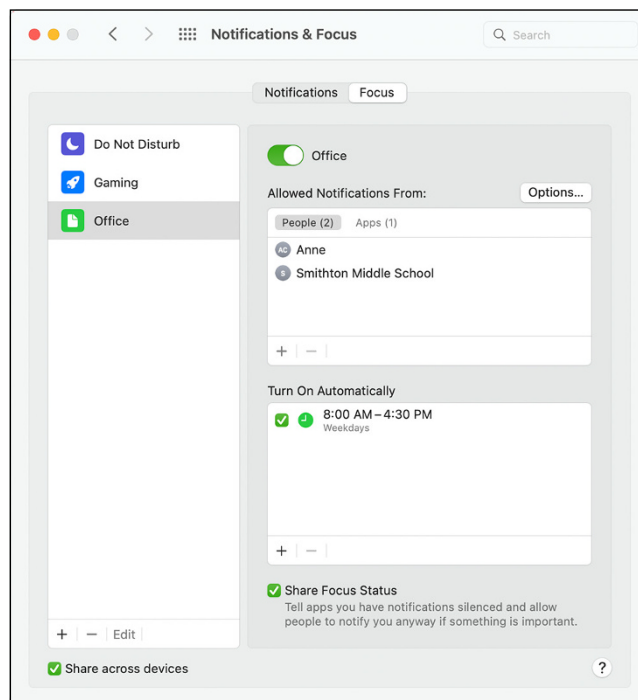


FIGURE 4-2:
I'm focused on
uninterrupted
productivity.

Putting Tags to Work

Tags are a wonderful new addition to macOS Monterey that appear in two of my favorite applications, Notes and Reminders. Tags begin with a pound character (#), and are used as search criteria within these applications, making it easy to locate specific entries. For example, you can use the tag *#soccer* within both applications to tag reminders about your kid's soccer practices, upcoming games, and even notes about the all-important snacks and drinks you have to bring.

You can assign any number of tags to a reminder or a note, and they now appear as a separate heading within the Sidebar for each application. I can tell you that searching for specific notes and reminders has become far easier and more powerful now that I'm using tags, and I highly recommend them.

Hiding Email the iCloud Way

Most of us are unlucky enough to be bombarded with spam email. In fact, I know of many friends and coworkers who have created “junk” email addresses to substitute for their primary addresses on websites and social media, just so that they can avoid the possibility of a barrage of unsolicited mail and phishing attacks. Unfortunately, this gambit requires you to check those junk email accounts as well as your primary account, making it quite a hassle to monitor everything. True, you’re protecting your primary account from spammers, but is it worth it?

Apple has recognized this problem and has delivered an ingenious solution called Hide My Email. Within Monterey, you can easily create unique “alias” email addresses. These addresses forward any messages they receive to your primary address — but without sharing your primary address! For example, I can create the address `lskdfis3@privaterelay.appleid.com` and use it on a website, and any messages sent to that address are automatically forwarded to `mark@mlcbooks.com`! This way, the website doesn’t get access to my actual email address, and I don’t have to monitor any junk email accounts (instead, I let the spam filter on my primary account take care of that junk mail).

You can find the Hide My Email settings tucked away within the Apple ID pane in System Preferences, which I discuss in detail in Chapter 5.

FaceTime . . . Over the Web?

In the past, FaceTime calls have been limited to Macs and Apple devices, so if you wanted to chat with someone who didn’t have a Mac, an iPhone, or an iPad, you were out of luck. Monterey changes all that with the addition of FaceTime *web links*, which allow you to connect with someone over FaceTime using a web browser!

It’s easy to create a link and send it to one (or more) of your friends using Messages or Mail. Clicking the link either opens the FaceTime app (if they’re using a Mac or an iOS device) or launches their web browser, and they can join your chat if they have a camera or microphone on their device. *Well done, Apple!*

- » Navigating System Preferences
- » Locating specific controls
- » Customizing Monterey from System Preferences

Chapter 5

A Nerd's Guide to System Preferences

Remember the old TV series *Voyage to the Bottom of the Sea*? You always knew you were on the bridge of the submarine *Seaview* because it had an entire wall made up of randomly blinking lights, crewmen darting about with clipboards, and all sorts of strange and exotic-looking controls on every available surface. You could fix just about anything by looking into the camera with grim determination and barking an order. After all, you were *On the Bridge*. That's why virtually all the dialog and action inside the sub took place on that one (expensive) set: It was the nerve center of the ship, and a truly happenin' place to be. Just like the bridge of your favorite starship from an entire host of TV shows and movies.

In the same vein, I devote this chapter to the System Preferences window and the most commonly used settings within it. After all, if you want to change how Monterey works or customize the features in our favorite operating system, you should head toward System Preferences. This one window is the nerve center of macOS and a truly happenin' place to be. Sorry, no built-in wall of randomly blinking lights — but you *do* find exotic controls just about everywhere.

An Explanation — without Jargon, No Less

The System Preferences window, shown in Figure 5-1, is a self-contained beast. You can reach it in the following ways:

- » Click the Apple menu () and choose System Preferences.
- » Click the Time and Date display in the menu bar, and then choose Open Date and Time Preferences. In fact, you can also click most of the other menu status icons — including Bluetooth and Wi-Fi — and then choose Open Preferences.
- » Right-click any uninhabited area of your Desktop and choose Change Desktop Background.
- » Last, but not least, click the Launchpad icon in the Dock and then click the System Preferences icon (it looks like a collection of gears).

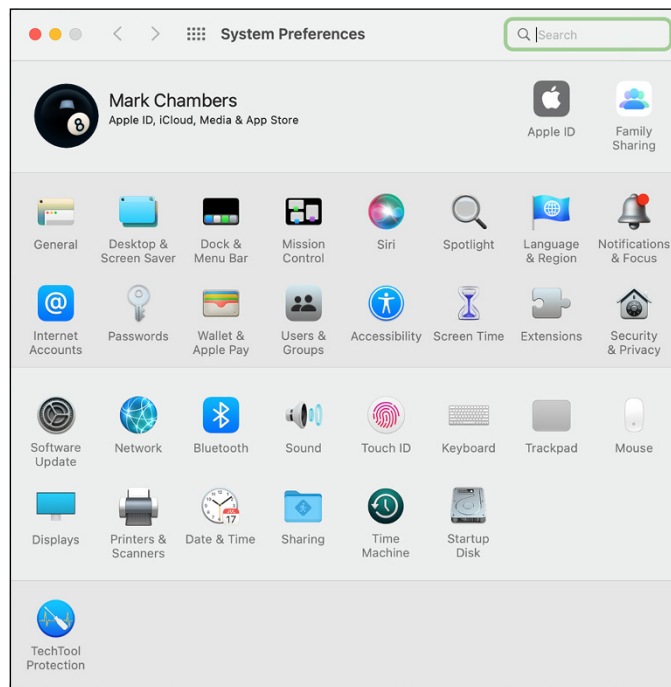
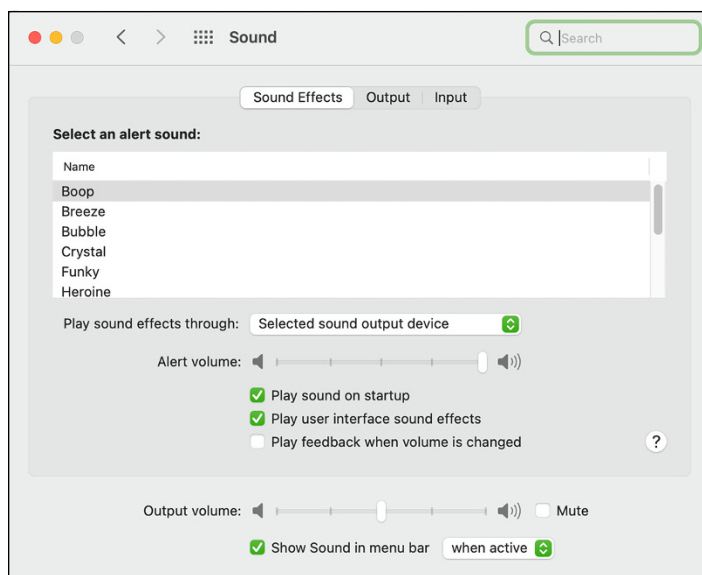


FIGURE 5-1: The powerhouse of settings and switches: System Preferences.

When the System Preferences window is open, you can click any of the icons to switch to that *pane*. The entire window morphs to display the settings for the selected pane. For example, Figure 5-2 shows the Sound pane, which allows you to set a system alert sound, configure your iMac's built-in microphone, and choose from several different output options.

FIGURE 5-2:
The Sound pane,
proudly showing
off the Sound
Effects section.



Many panes also include a number of tabbed buttons at the top — in this case, Sound Effects, Output, and Input. You can click these tabs to switch to another section in the same pane. Many panes in System Preferences have multiple sections. This design allows our friends at Apple to group a large number of related settings in the same pane (without things getting too confusing).



To return to the top-level System Preferences pane from any other pane, just click the Show All button (located in the upper-left corner of the pane) or press $\mathbb{A}+L$. You can also click the familiar Previous and Next buttons to move backward through the panes you've already visited and then forward again, in sequence. (Yep, these buttons work just like the browser controls in Safari. Sometimes life is funny that way.)

Although the System Preferences panes are arranged by category when you first install Monterey, you can also display the panes in alphabetical order. To arrange the panes in this way, choose View ⇨ Organize Alphabetically. Note that you can also select any pane directly from the View menu. Choose View ⇨ Customize, and you can hide specific icons from the System Preferences window. Just deselect the check box next to each icon you want hidden, and then click Done. You can still reach hidden icons from the System Preferences View menu, so they're not banished forever.



TIP

You can right-click the System Preferences icon in the Dock to jump to any pane from the shortcut menu. *Wowzers!*

HEY, I HAVE BONUS ICONS IN MY WINDOW!

Some third-party applications and media plug-ins can actually install their own panes in your once-pristine System Preferences window. You see them arranged at the bottom of the window. Naturally, I can't document these invited guests in this chapter, but they work the same way as any other pane in System Preferences. Click the icon, adjust any settings as necessary, and then close the System Preferences window to save your changes.

Of course, if you see an icon at the bottom of the window that you *don't* recognize (or don't know which application installed it there), you should definitely investigate its origin. (I recommend doing a Safari search on the name of the icon along with the word *Monterey*.)

You won't find an OK button that you have to click to apply any System Preferences changes. Apple's developers do things the right way. Your changes to the settings in a pane are *automatically* saved when you click Show All or when you click the Close button in the System Preferences window. You can also press ⌘+Q to exit the window and save all your changes automatically. This is one of my favorite shortcuts.



REMEMBER

If you see an Apply button in a pane, you can click it to immediately apply any changes you made, without exiting the pane. This is perfect for settings you might want to try before you accept them, like many of the controls in the Network pane. However, if you're sure about what you changed and how those changes will affect your system, you don't have to click Apply. Just exit the System Preferences window or click Show All as you normally would.

Locating That Certain Special Setting

Wouldn't it be great if you could search through all the different panes in System Preferences — with those countless radio buttons, check boxes, and slider controls — from one place, even when you're not quite sure what you're looking for?

Figure 5-3 shows exactly that kind of activity taking place. Just click in the System Preferences Spotlight Search box (located in the upper-right corner of the pane, with the magnifying glass icon) and type just about anything. For example, if you know part of the name of a particular setting you need to change, type that.

Monterey highlights the System Preferences panes that might contain matching settings. And if you're a *switcher* from the Windows world, you can even type what you might have called the same setting in Windows.

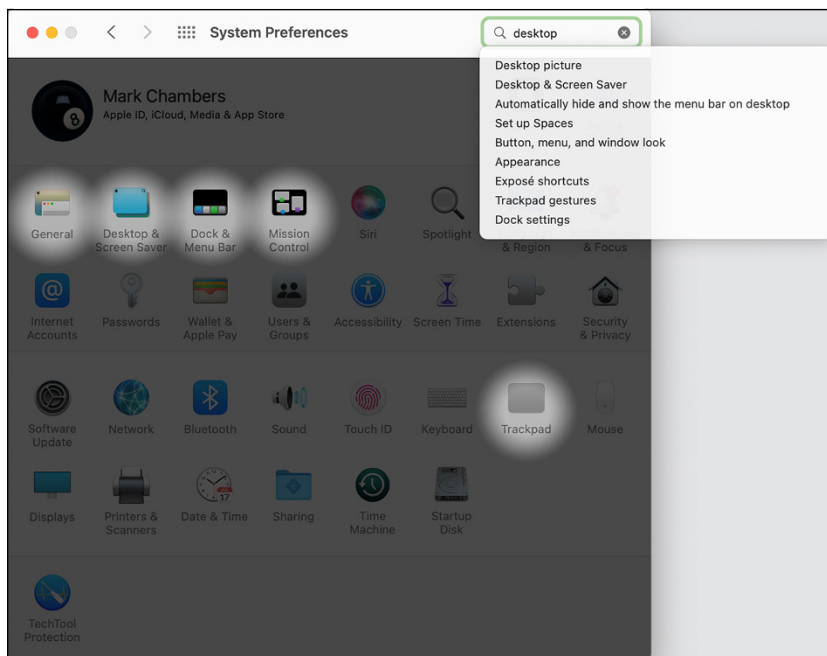


FIGURE 5-3:
Searching for
specific settings
is a breeze with
the Spotlight
Search box.

The System Preferences window dims, and the icons that might contain what you're looking for stay highlighted. *Slick.*



TIP

You can also search for System Preferences controls by using the Spotlight Search box from the Finder menu. Find more on this cool feature in Chapter 6.

If you need to reset the Spotlight Search box to try again, click the X icon that appears at the right side of the box to clear it.

Popular Preferences Panes Explained

It's time to get down to brass tacks. In this section, I take you through the most often-used panes in System Preferences to show what magic you can perform. I don't discuss every pane, because I cover many of them in other chapters. In fact, you might never need to open some System Preferences panes, such as the

Language & Region pane. This chapter covers just about all the settings you're likely to use on a regular basis.

The Displays pane

If you're a heavy-duty gamer, or you work with applications such as Keynote or Photoshop, you probably switch your monitor's characteristics regularly. To switch easily, visit the Displays pane, shown in Figure 5-4. It includes these settings:



TIP

- » **Resolution:** To allow Monterey to choose the best resolution for your display, select the Default for Display radio button. To manually select a resolution, select the Scaled radio button, and then click the resolution you want to use from the Resolutions list that appears. In most cases, you want to use the highest resolution.

Move the Brightness slider to adjust the brightness level of your iMac's display. If you like, you can enable the Automatically Adjust Brightness check box to allow your iMac to select a brightness level.

Ready to stream content to your TV directly from your iMac — *without cables*? You can use Monterey's wireless AirPlay feature to send the display from your desktop to your HD-TV. AirPlay requires an Apple TV unit that supports this feature. You can also send the audio from your iMac directly to an AirPlay-enabled receiver or speaker system. To make it easier to control AirPlay, open the Dock & Menu Bar pane in System Preferences and click the Screen Mirroring entry at the left; then click Show in Menu Bar check box. (Note that the icon will only appear in your menu bar when you have an Apple TV unit within range.)

- » **Color Profile:** Click a display ColorSync profile from the drop-down list to control the colors on your screen. To load a ColorSync profile, click the Customize entry at the bottom of the list.



TIP

You can also create a custom ColorSync profile and calibrate the colors that you see from the Customize list. Click the Add icon (which bears a plus sign) to launch the Display Calibrator Assistant. This easy-to-use assistant walks you step by step through creating a ColorSync profile matched to your iMac's gamma and white-point values.

- » **Night Shift:** The Night Shift feature allows Monterey to automatically adjust your display to provide warmer colors during nighttime operation. Click Schedule to choose either Sunset to Sunrise operation or create your own custom schedule. You can also turn on Night Shift manually using the Turn On Until Tomorrow check box. Finally, adjust the Color Temperature slider to increase or decrease the warmth of colors on your display. The True Tone check box allows your iMac to automatically adjust your display colors to

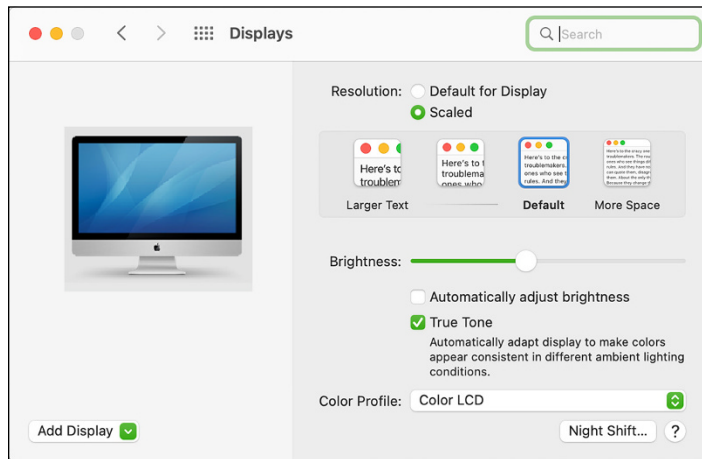


TIP

deliver the same tones under different lighting (such as a lamp you may turn on and off next to your keyboard).

If you connect your iMac to one (or more) external monitors, don't be surprised to see the Arrangement settings appear as well. You can drag the output to a different monitor, or drag the menu bar to another screen, or you can choose to mirror the same output to all displays connected to your computer. (And don't forget, if you have an iPad running iOS 13 or later, you can use the Sidecar feature to turn that iPad into a second monitor — wirelessly! You'll find more on Sidecar in Chapter 9.)

FIGURE 5-4:
The Display pane
makes it easy to
change your
screen resolution.



The Desktop & Screen Saver pane

No offense to the awesome Monterey coastline background, but what if you want to choose your own background? And what about adding a nifty Apple screen saver? You can change both the background and screen saver by using these options in the Desktop & Screen Saver pane.

The settings on the Desktop section, shown in Figure 5-5, are:

- » **Current Desktop picture:** You can click a picture in the thumbnail list at the right half of the screen to use it as your Desktop background. The Desktop is immediately updated, and the thumbnail appears in the *well* (the upper-left box in Figure 5-5). To display a different image collection or open a folder of your own images, click the Add Folder button at the lower-left corner of the window (a plus sign) and browse for your heart's desire; then click Choose to select a folder and display the images it contains.

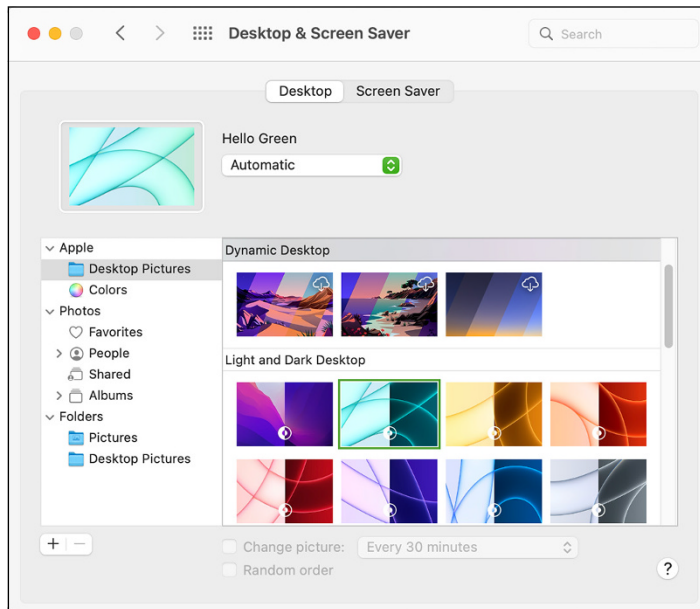


TIP

- » **Layout:** You can tile your background image, center it, fill the screen with it (cropping the edges if necessary), and stretch it to fill the screen (without cropping). Note that filling the screen in either case may distort the image. The layout pop-up menu appears only when you're using your own pictures, so you don't see it if you're using a Desktop image supplied by Apple; instead, you see a drop-down list that allows you to choose a light or dark version of the Apple image.
- » **Change Picture:** Change the Desktop background automatically after the delay period that you set, including each time you log in and each time your Mac wakes up from sleep mode.
- » **Random Order:** To display screens randomly, enable the Random Order check box. Otherwise, the backgrounds are displayed in the sequence in which they appear in the thumbnail list.

The Dynamic Desktop selection automatically changes your desktop image based on the local time of day, offering you a subtle change in mood, as well!

FIGURE 5-5:
Pick your own
Desktop
background.



The settings on the Screen Saver section are:

- » **Screen Saver:** In the Screen Saver list at the left, click any screen saver to preview (on the right). To try out the screen saver in full-screen mode, hover your pointer over the display on the right and click the Preview button that

appears. (You can end the test by moving the cursor.) If the screen saver module you select has any configurable settings, click the Screen Saver Options button to display them. (A screen saver is *not* configurable if the Screen Saver Options button doesn't appear.) Enable the Use Random Screen Saver check box to display a different screen saver module each time the screen saver is activated.

- » **Show Screen Saver After:** Specify the period of inactivity that triggers the screen saver. To disable the screen saver, disable the check box. (Your Start After delay should be a shorter time than the Turn Display Off After delay you set in the System Preferences Energy Saver pane. Otherwise, you won't see the great screen saver at all. I describe the Energy Saver pane later in this chapter.)
- » **Show with Clock:** If you want your selected screen saver to display the time as well, select this check box.
- » **Hot Corners:** Click the Hot Corners button and then click any of the four pop-up menus in the four corners of the screen. Doing so designates that corner as an *activation hot corner* for several functions within Monterey. When you move your cursor to that hot corner, the function you specified is triggered automatically.



TIP

For additional security, check out the Security & Privacy pane in System Preferences, where you find the Require Password After Sleep or Screen Saver Begins check box. When you select this check box, Monterey requires your user account password before allowing anyone to turn off the screen saver (a great idea in a secure environment, as you can imagine).

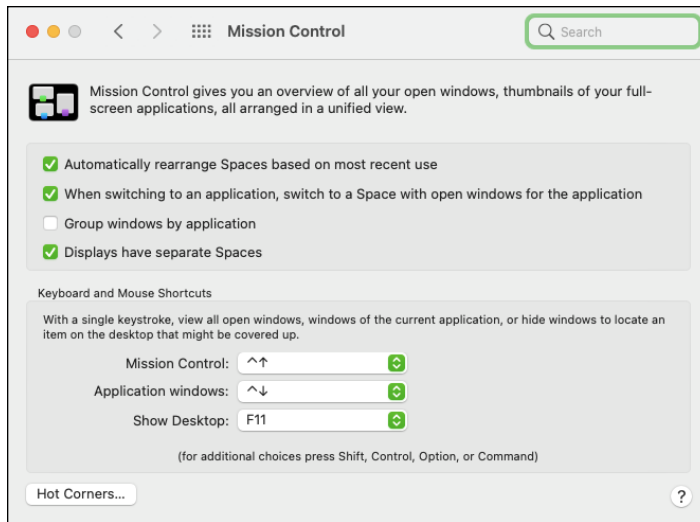
Mission Control preferences

Figure 5-6 shows the Mission Control and Spaces settings that you can configure in this group. You can use Mission Control to view all the application windows you're using at one time so that you can select a new active window. Or you can move all windows aside so that you can see the Desktop.

The settings are

- » **Automatically Rearrange Spaces Based on Most Recent Use:** If this check box is selected, Mission Control presents your most recently used Spaces first in the thumbnails at the top of the screen.
- » **When Switching to an Application:** When selected, this check box allows you to switch applications between Spaces desktops by using the ⌘+Tab shortcut. Monterey jumps to the Desktop that has an open window for the application you choose, even if that Desktop is not currently active.

FIGURE 5-6:
Set your
Mission Control
preferences here.



REMEMBER

» **Group Windows by Application:** When selected, this check box automatically arranges windows in the Mission Control screen by the application that created them.

» **Displays Have Separate Spaces:** If you have multiple monitors connected to your Mac, you can select this check box to create a separate Spaces display for each monitor.

» **Keyboard and Mouse Shortcuts:** From each pop-up menu, set the key sequences (and mouse settings) for Mission Control, Application Windows, and Show Desktop.

You're not limited to keyboard and mouse shortcuts in the pop-up menus. Press the Shift, Control, Option, and ⌘ keys while a pop-up menu is open, and you see these modifiers appear as menu choices! (Heck, you can even combine modifiers, such as ⌘+Shift+F9 instead of just F9.)

» **Hot Corners:** Click the button at the lower-left corner of the pane to specify your hot corner settings. These four pop-up menus operate just like hot corners and active screen corners in the Desktop & Screen Savers pane, allowing you to control the operation of the screen management features within Monterey. Click one to designate that corner as one of the following:

- **A Mission Control corner** displays the Mission Control screen.
- **An Application Windows corner** displays only the windows from the active application.
- **A Desktop corner** moves all windows to the outside of the screen to uncover your Desktop.

- **A Launchpad corner** activates the Launchpad screen.
- **A Notification Center corner** displays the Notification Center strip at the right side of your Desktop.

Note that you can also set the Screen Saver Start and Disable corners from here, as well as put your display to sleep.

The General pane

The talented General pane, shown in Figure 5-7, determines the look and operation of the controls that appear in application windows and Finder windows. It looks complex, but I cover each option here.

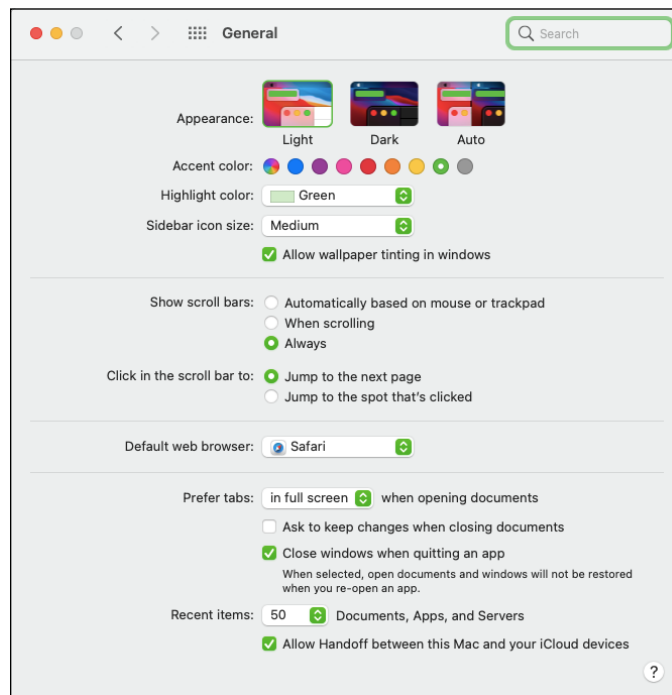


FIGURE 5-7: Appearances might not be everything, but they're easy to find here.

The settings are

- » **Appearance:** Click the Light or Dark option to switch between Light or Dark mode for your Finder menu bar, window buttons and window background, and your Dock. You can also choose to hide the Finder menu bar. To display it while hidden, move your pointer to the top of the screen.

- » **Accent Color:** Click an Accent color to use for buttons and menus.
- » **Highlight Color:** Choose a color to highlight selected text in fields and pop-up menus.
- » **Sidebar Icon Size:** Select the size of the icons in the Finder window Sidebar. It's the strip to the left of the Finder window that displays your devices and favorite locations on your system. If you have a large number of devices, or if you've added several folders to the Sidebar, reducing the size of the icons allows you to display more of them without scrolling.
- » **Allow Wallpaper Tinting in Windows:** When this check box is selected, macOS displays open windows with a tinted background when you're using Dark mode. (The tint reflects the primary color used in your desktop background.)
- » **Show Scroll Bars:** Specify when Monterey should display scroll bars in a window. By default, they're placed automatically when necessary, but you can choose to display scroll bars always or only when you're actually scrolling through a document.
- » **Click in the Scroll Bar To:** By default, macOS jumps to the next or previous page when you click in an empty portion of the scroll bar. Select the Jump to the Spot That's Clicked radio button to scroll the document to the approximate position in relation to where you click.
- » **Default Web Browser:** Click this pop-up menu to specify which application Monterey should use to display web pages. By default, macOS uses the Safari web browser.
- » **Prefer Tabs:** This setting allows you to specify when your applications should open documents in a new tab display or within a new document window. You can choose to use tabs always, only in full-screen mode, or only when you create a new tab in the application itself. (Note that if an application doesn't support tab display, new documents open in a window.)
- » **Ask to Keep Changes When Closing Documents:** If you select this check box, Monterey prompts you for confirmation if you attempt to close a document with unsaved changes. If the check box is deselected, Monterey allows the unsaved document to be closed without saving a new version.
- » **Close Windows When Quitting an App:** If this check box is deselected, the macOS Resume feature automatically saves the state of an application when you quit. When you relaunch the application, Monterey restores all application windows and opens the documents you were working on when you quit. In effect, you can continue using the application just as if you had never quit. If you select the check box, Monterey does not restore your work, and you have to reload your document.

- » **Recent Items:** The default number of recent applications, documents, and servers (available from the Recent Items item in the Apple menu) is 10. To change the default, open the pop-up menus here and choose up to 50. (I like 20 or 30.)
- » **Allow Handoff Between this Mac and Your iCloud Devices:** If this check box appears within the General pane, you can enable it to turn on Handoff functionality within Monterey. (I discuss Handoff within the confines of Chapter 9.)

The Energy Saver pane

I'm an environmentalist — it's surprising how many techno types are colored green — so the controls on this pane are pretty doggone important. When you use them correctly, you not only conserve power but also invoke the Power of Monterey to automatically start up and shut down your iMac whenever you like! (If you leave your iMac on for several days without a reboot, believe me: This is *your* Preference pane.)

To set a delay period for blanking your screen, drag the Turn Display Off After slider (shown in Figure 5-8) to the desired period. You can also power down the drive to conserve energy and prevent wear and tear (an especially good feature for magnetic hard drives).

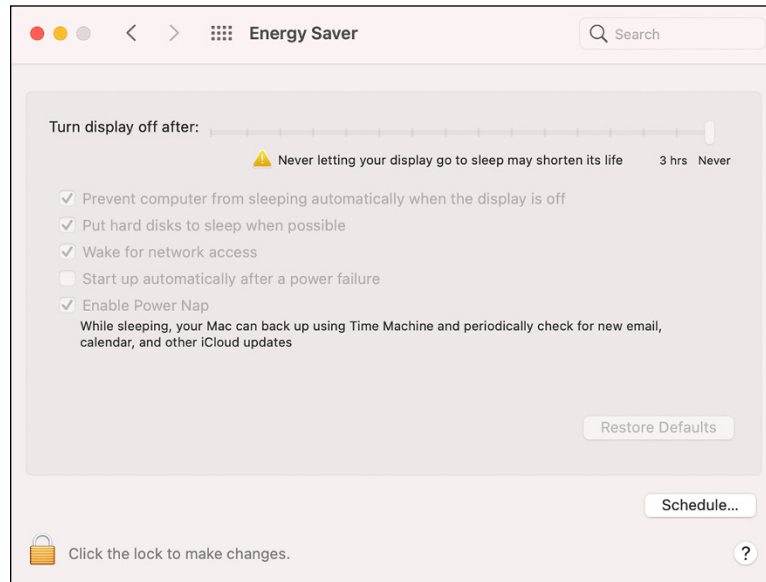


FIGURE 5-8:
Reduce your
iMac's power
consumption
from the Energy
Saver pane.



TIP

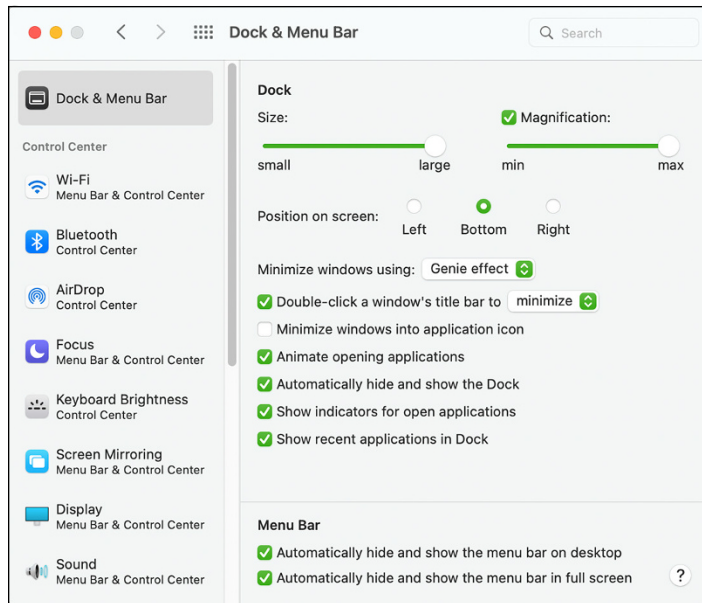
If you want to start up or shut down your iMac at a scheduled time, click the Schedule button. Select the desired schedules (the Start Up or Wake check box and the Shut Down/Sleep check box) to enable them. Then click the up and down arrows next to the time display to set the trigger time. Click OK to return to the Energy Saver pane.

The Dock & Menu Bar pane

I'll come clean: I think the Dock is the best thing since sliced bread. (I wonder what people referred to before sliced bread was invented?) You can use the settings shown in Figure 5-9 to configure the Dock's behavior until it fits your personality like a glove:

- » **Size:** Pretty self-explanatory. Just drag the slider to change the Dock's scale.
- » **Magnification:** When you select this check box, each icon in the Dock swells like a puffer fish when you move the cursor over it. (The Magnification slider determines just how much it magnifies.) I really like this feature because I resize my Dock smaller, and I have a large number of Dock icons.
- » **Position on Screen:** Select a radio button here to position the Dock on the left, bottom, or right edge of the Desktop.
- » **Minimize Windows Using:** Monterey includes two cool animations that you can choose from when shrinking a window to the Dock (and expanding it back to the Desktop). Click the Minimize Windows Using pop-up menu to specify the genie-in-a-bottle effect or the scale-up-or-down-incrementally effect.
- » **Double-Click a Window's Title Bar to Minimize/Zoom:** Select this check box to minimize or zoom a Finder or application window by simply double-clicking the window's title bar.
- » **Minimize Windows into Application Icon:** If this check box is not enabled, minimized application windows appear as thumbnail icons on the Dock. To minimize application windows into the application icon on the Dock — which can save space on your Dock — select this check box. (To restore a window that's been minimized into the application icon, right-click the icon on the Dock and choose Restore from the menu that appears.)
- » **Animate Opening Applications:** Active souls who like animation probably get a kick out of the bouncing application icons in the Dock, which indicate that you've launched an application and that it's loading. If you find this effervescence overly buoyant or distracting, deselect this check box.
- » **Automatically Hide and Show the Dock:** Select this check box, and the Dock disappears until you need it. (Depending on the size of your Dock, the Desktop real estate you gain can be significant.) To display a hidden Dock, move the cursor over the corresponding edge of the Desktop.

FIGURE 5-9:
Customize your
Dock and Menu
Bar with these
controls.



- » **Show Indicators for Open Applications:** macOS indicates which applications are running in the Dock with a small gray dot in front of the icon. To disable these indicators, deselect this check box.
- » **Show Recent Applications in Dock:** Enable this check box to park the icons for the three applications you used last at the right side of the Dock (a real boon for those of us who use the same group of applications often). macOS automatically updates the three icons as you use your iMac.
- » **Automatically Hide and Show the Menu Bar:** Like the Dock Hide and Show feature, you can select this check box to banish the Finder menu bar until you need it. To display the hidden menu bar, move your cursor over the top edge of your Desktop.
- » **Automatically Hide and Show the Menu Bar in Full Screen:** Enable this check box to automatically hide the Finder menu bar while you're using Full Screen mode.

Click any of the entries at the left of the pane to specify where you can quickly change settings for that feature from the macOS Desktop: the Control Center display; the Finder menu bar; or (with some entries) you can even choose both! Each entry has its own panel that appears, as well as a visual representation of the location and its appearance in macOS. Note that some settings can appear only in the Finder menu (like the icons for the Clock and Time Machine).

The Sharing pane

So you're in a neighborly mood, and you want to share your toys with others on your local wired or wireless network. Perhaps you'd like to start your own website or protect yourself from the Bad Guys on the Internet. All these fun diversions are available from the Sharing pane in System Preferences, as shown in Figure 5-10.

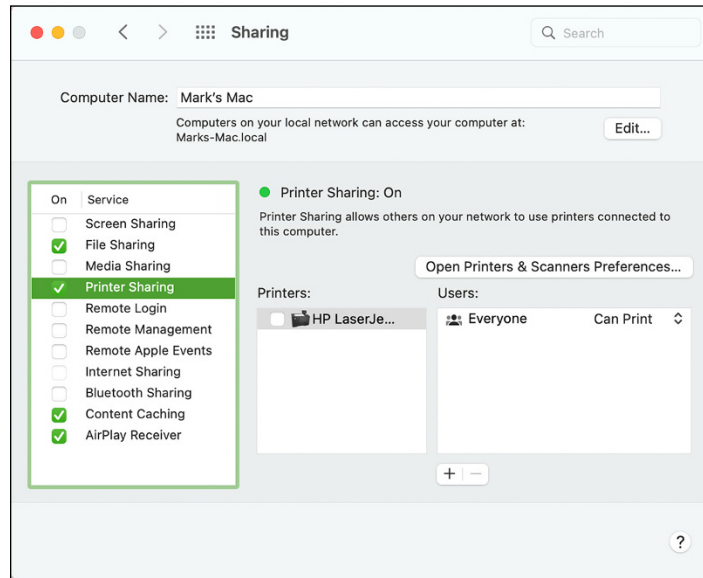


FIGURE 5-10:
Use controls
on the Sharing
pane to share
your toys.

Click the Edit button to change the default network name assigned to your iMac during the installation process. Your current network name is listed in the Computer Name text field.

Each entry in the services list controls a specific type of sharing, including DVD and CD Sharing (if you have an optical drive, which I don't, so this option is not shown in the figure), Screen Sharing, Media Sharing, File Sharing (with other Macs and PCs running Windows), Printer Sharing, Remote Login, Remote Management (using Apple Remote Desktop), Remote Apple Events, Internet Sharing, Bluetooth Sharing, Content Caching (which stores updates and other content for later installation), and AirPlay Receiver. To turn on any of these services, select the On check box for that service. To turn off a service, click the corresponding On check box to deselect it.

From a security standpoint, I highly recommend that you enable only the services you actually use. Each service you enable automatically opens your Monterey fire-wall for that service. Here's a Mark's Maxim to remember:



Poking too many holes in your firewall is not A Good Thing.

When you click one of the services in the list, the right side of the Sharing pane changes to display the settings you can specify for that particular service.

The Time Machine pane

iMac owners are thrilled with the Time Machine automatic backup feature that's built in to Monterey. It's saved *all* my stuff numerous times. You can easily configure how Time Machine handles your backups from this pane, as shown in Figure 5-11. Chapter 21 covers how to use Time Machine. Of course, you need an external drive (or an AirPort Time Capsule wireless backup device) for the best backup security. Note that Time Machine doesn't work with a CD or DVD rewriteable drive; you must use an external drive, a Time Capsule device, or a high-capacity USB flash drive.

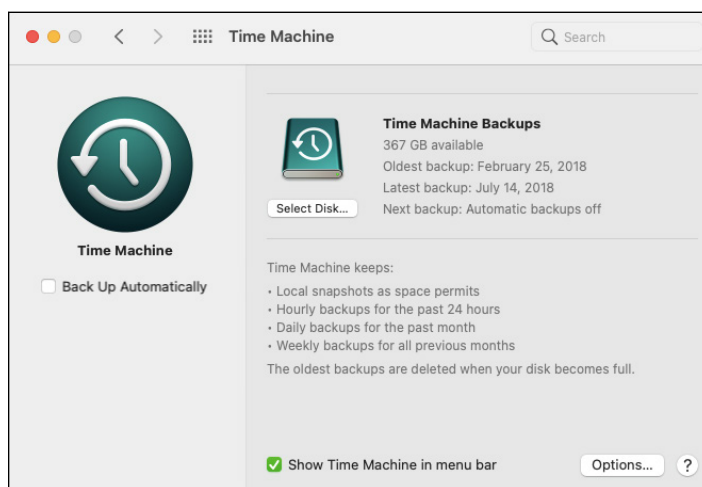


FIGURE 5-11:
Put Time Machine
to work, and your
data is always
backed up.

To enable Time Machine, click the Back Up Automatically check box to enable it, and then select a disk to hold your Time Machine backup data on the sheet that appears. (You can also switch backup disks at any time by clicking the Select Disk button.) Click Use Disk to confirm your choice — if you have an external Time Capsule wireless unit, click Set Up instead and follow the onscreen steps.



Your external backup drive should be at least twice the capacity of your internal drive, thus ensuring that your backup files have the elbow room they need.

By default, Time Machine backs up all the drives on your system; however, you may not need to back up some folders on your iMac. (A good example is your iCloud Drive, which is already backed up to Apple's iCloud servers.) To save time and backup drive space, Time Machine allows you to exclude specific folders from the backup process. Click Options, and then click the Add button (with the plus sign) to select the drives or folders you want to exclude. They appear in the Exclude These Items From Backups list.



TIP

To remove an exclusion, select it in the list and click the Delete button (with the minus sign). Note that the Estimated Size of Full Backup figure increases, and Time Machine adds the item you deleted from the list to the next backup.



TIP

If you enable the Show Time Machine in Menu Bar check box, you can elect to back up your Mac immediately by clicking the Time Machine icon in the Finder menu bar and then choosing Back Up Now.



REMEMBER

Would you like your data to be safe in case of fire or stolen hardware? You can always create copies of your most important files and documents in your iCloud Drive, or copy them to a USB flash drive and store it in another location!

Apple ID preferences

From the Monterey System Preferences Apple ID pane, shown in Figure 5-12, you can specify which types of data are automatically pushed to your iMac and iOS devices. If you haven't created an iCloud account yet — or if you signed out of an existing account earlier — System Preferences prompts you to enter your Apple ID and password. Click Sign In to display the contents of the iCloud pane.

Click the iCloud entry at the left of the pane to display the check boxes for each category:

- » **iCloud Drive and iCloud Mail:** From the iCloud Drive Options button, you can enable and disable iCloud Drive access for specific applications. If you've set up an iCloud email address, you can choose to access that email account on your iMac by enabling the iCloud Mail check box.
- » **Photos:** Push the latest photos and video clips you've added in Photos to other devices, and update your Photos library with photos and video clips pushed from your iOS devices.
- » **Hide My Email:** If you're security conscious (good for you), this new feature makes it easy to create random email addresses that will forward messages to the email account of your choice, so your private email address *remains* private!

FIGURE 5-12:
Control and
configure your
iCloud activity
with these
settings.



- » **Mail:** Synchronize your Mail account settings between devices.
- » **Contacts:** Push your Contact cards between devices.
- » **Calendars:** Push your calendar events to and from your iOS devices.
- » **Reminders:** Synchronize the reminders you've set between devices.
- » **Notes:** Synchronize your Notes between devices.
- » **Safari:** Synchronize your Safari bookmarks.
- » **Siri:** Synchronize your Siri configuration.
- » **Keychain:** Share passwords for applications and websites between your devices.
- » **Find My Mac:** Locate your iMac from a web browser or your iOS device. You can also choose to lock your computer remotely — or even *wipe your iMac's internal drive* to prevent someone from stealing your data.

Wiping your iMac remotely is a drastic step that will prevent you from locating it in the future.
- » **News:** Synchronize the articles you've read, articles you've saved, and sources you're following in the News application.
- » **Stocks:** Synchronize stocks that you're following between devices.



WARNING

- » **Home:** Share video from a HomeKit-enabled camera between devices, using Monterey's Home application.
- » **Siri:** Synchronize your Siri configuration.

To display the storage currently being used by your mail, backups, documents, and application data, click the Manage button in the bottom-right corner of the pane. Apple provides each iCloud account with 5GB of space for free, but you can elect to buy additional storage from the Manage sheet.

Notifications & Focus preferences

The Notifications & Focus group is shown in Figure 5-13. When you select the Notifications tab, each application that can display notifications appears in the list at the left of the pane.

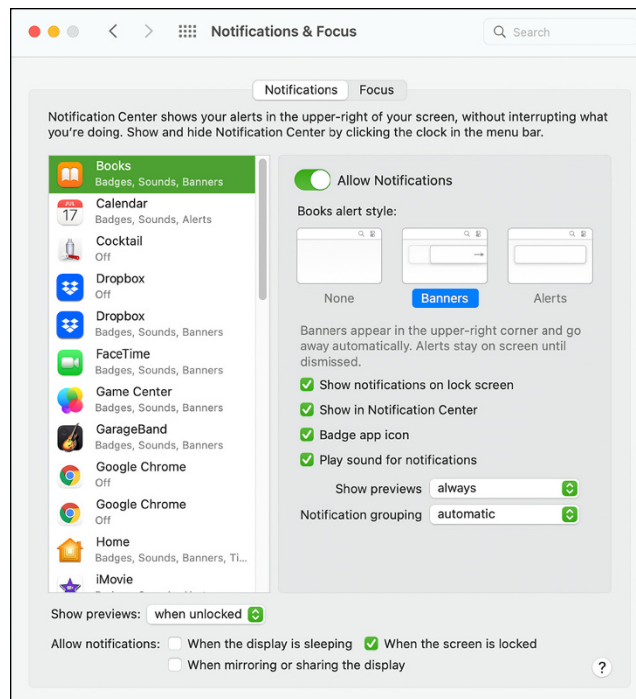


FIGURE 5-13: Each application that uses notifications can be individually configured.



TIP

Click the Do Not Disturb entry in the list at the left to set Do Not Disturb mode, where Notification banners, alerts, and sounds are disabled. You can specify a time period, turn on Do Not Disturb when your iMac is in sleep mode, or turn on Do Not Disturb when you're mirroring (or sending) the video from your iMac to a TV or projector. You can also optionally allow FaceTime calls from anyone while

Do Not Disturb is active or just from those you've marked as Favorites in FaceTime. If you select Allow Repeated Calls, a FaceTime caller can call a second time within 3 minutes without being disabled.

Click an application in the list at the left to configure its notifications. Different applications display different options in the settings pane, but the settings can include the following:



TIP

- » **Alert Style:** These three buttons specify which type of alert should appear under the Notification Center icon in the menu bar. You do not need to display Notification Center to see alerts, which appear on your Desktop. Choose None to disable alerts for this application. Choose Banners to display alert messages that automatically disappear after a delay. Choose Alerts to display alert messages that remain onscreen until you click the confirmation button in the Alert dialog.
- » **Show Notifications on Lock Screen:** If it appears, you can select this check box to allow notifications even if your iMac is displaying the Lock screen.
- » **Show Notification Preview:** If enabled, notifications for this application will include a preview of the content. You can also specify whether the preview will appear while your iMac display is locked.
- » **Notification Grouping:** From this drop-down list, you can specify that multiple notifications from the same source are displayed by application or by automatic arrangement, or turn off grouping altogether.
- » **Show in Notification Center:** To display notification messages from this application in Notification Center, select this check box.
- » **Badge App Icon:** This check box toggles on and off the display of this application's icon in alert boxes and in Notification Center. It also activates the numeric display of pending items on the icon itself (for example, unread mail and messages).
- » **Play Sound for Notifications:** To play a sound when alerts appear, enable this check box.

Click the Focus tab to select which notifications are allowed for each Focus category, as well as devices that are automatically enabled within that Focus category. You can also create new Focus categories from this panel.



TIP

Focus categories settings can be shared among all your Macs and iOS devices that support the feature, allowing you to set the same Focus on your iPad or iPhone.

- » Mastering basic Spotlight searching skills
- » Selecting text and keywords for best results
- » Displaying results in the Finder search window
- » Customizing Spotlight within System Preferences

Chapter 6

Searching Amidst iMac Chaos

What would you say if I told you that you could search your entire system for all the data connected with a person — and in only the short time it takes to type that person’s name? And I’m not just talking about files and folders that might include that person’s name. I mean *every* email message and *every* Calendar event that references that person — and even that person’s Contacts card to boot. Heck, how about if that search could dig up every occurrence of the person’s name inside your PDF documents? What if it could even search folders shared on other Macs across your network?

You’d probably say, “That makes for good future tech. I’ll bet I can do that in five or ten years. It’ll take Apple at least that long to do it — and just in time for me to buy a new iMac! (Harrumph.)”

Don’t be so hasty. You can do all this right now. (In fact, this functionality has been part of macOS for a number of years.) The technology is the macOS feature named *Spotlight*, built into Monterey. In this chapter, I show you how to use it like a fearsome iMac power guru.

Doing a Basic Search

Figure 6-1 shows the Spotlight Search box, which is always available from the Finder menu bar. Click the magnifying glass icon once (or press ⌘+spacebar), and the Spotlight Search box appears on your Desktop, front and center.



FIGURE 6-1:
Lots of power
purrs behind this
single Spotlight
Search box.

To run a search, simply begin typing. (The words you type that you want to match are called *keywords*.) Matching items appear as soon as you type, and the search results are continually refined while you type the rest of your search keywords. You don't need to press Return to begin the search. If Spotlight recognizes an app by name, it displays that app name instantly, and you can launch it by pressing Return. (My brothers and sisters, it just doesn't get any easier than that. This is how I usually launch apps that aren't on the Dock.)

After a second or two, the Spotlight Search box expands to display the results of your search, and the list is updated automatically in real time while you continue to type. The most-relevant items are grouped into categories — such as Messages, Websites, Definitions, Documents, Folders, Images, News, PDFs, Shortcuts and Contacts — right in the Spotlight Search box. Spotlight Search takes a guess at the item that's most likely the match you're looking for (based on your Search Results list in System Preferences, which I cover later in the chapter) and presents it first. To open the top item like a true Monterey power user, just press Return.



TIP



TIP

Although one or two keywords are typically enough to do the job, you can also type phrases, such as **emails from Mark Chambers** or **songs with sunshine in the title**.

Single-click any item in the list, and *shazam!* — Spotlight uses the Quick Look technology built in to Monterey to display the contents (such as a thumbnail image of a document or an album cover) or information on the item! For example, if the item is in an Music playlist, you see the song list in the results pane on the right, and you can click one of the songs to open Music and play it. If the item is a Mail message, click it once in the list to view the contents of the message — without leaving the Spotlight Search box. A Microsoft Word document? Why, it's displayed just as if you had opened it.

When you click an item in the list, Spotlight indicates which application will be used to open the item by displaying the icon for that application in the upper-right corner of the Spotlight box. For example, you'll see the Music icon for a song and the Safari icon for a website. If you right-click an item, Spotlight allows you to open the item using another application.

Any text string is acceptable as a Spotlight Search. However, here's a short list of the common search criteria I use every day:

- » **Names and addresses:** Because Spotlight has access to the Contacts application in Monterey, you can immediately display contact information using any portion of a name or an address.
- » **Email message text:** Need to open a specific email message, but you'd rather not launch Mail and spend time digging through the message list? Enter the person's email address or any text string contained in the message you're looking for.
- » **File and folder names:** A simple item name is the classic search favorite. Spotlight searches your entire system for that one file or folder in the blink of an eye.
- » **Events and Reminder items:** Yep, Spotlight gives you access to your Calendar events and those all-important Reminders you've created.
- » **Shortcuts:** You can open the Shortcut Gallery or search for a specific Shortcut.
- » **Specific songs and playlists:** Itching to hear "Rock Me Amadeus" by Falco? With the power of Spotlight and your Music library, you can satisfy your musical needs in seconds! (If you've subscribed to Apple Music, you can even search that streaming content as well.)

- » **System Preferences:** Now things start to get *really* interesting! Try typing the word **desktop** in the Spotlight field. At least one of the results in the list will be a System Preference panel! That's right: Every setting in System Preferences is referenced in Spotlight. (For example, the Desktop background setting resides on the Desktop & Screen Saver pane in System Preferences.)
- » **Weather, stocks, news, and sports scores:** Put Spotlight to work, and you can get instant displays of current weather and forecasts (type **weather** followed by a town name), stock figures (type the desired stock abbreviation), and even sports scores (type your favorite team name).
- » **Web pages:** *Whoa*. Stand back, Google. You can use Spotlight to search the web — and, if necessary, the web pages you've recently displayed in Safari!
- » **Metadata:** This category is pretty broad, but it fits. If you're not familiar with the term *metadata*, think of the information stored by your digital camera each time you take a photo — exposure setting, time and date, and even the location where the photo was taken, which are also transferred to Photos when you import. Here's another example: I like to locate Word documents on my system using the same metadata that's stored in the file, such as the contents of the Comments field. Other supported applications include Adobe Photoshop images, Microsoft Excel spreadsheets, Keynote presentations, Music media, and other third-party applications that offer a Spotlight plug-in.
- » **Airline flight information:** Type a flight number, and let Spotlight provide you information such as the flight's status, points of departure and arrival, and even gate numbers.

To reset the Spotlight Search and try another text string, press ⌘+A to select the entire contents and then press Delete.

After you find the item you're looking for in the list at the bottom of the Spotlight Search box, you can *double-click* the entry in the list to do any of these things:

- » Launch it (if the item is an application).
- » Open it in System Preferences (if it's a setting or description on a System Preferences pane).
- » Open it within the associated application (if the item is a document, website, News story or data item).
- » Display it in a Finder window (if the item is a folder).



TIP

Here's another favorite time-saver: You can display all the files of a particular type on your system by using the file type as the keyword. To provide a list of all photos with the word *horse* in the title on your system, for example, use *images horse* as your keywords. The same goes for *movies* and *audio*.



When you give Siri a command or ask Siri a question, macOS uses Spotlight's search features "behind the scenes" to locate everything from applications and documents to contacts and music tracks.

How Cool Is That? Discovering What Spotlight Can Do

Don't get fooled into simply using Spotlight as another file-'n'-folder-name search tool. Sure, it can do that, but Spotlight can also search *inside* PDFs, Pages and Word documents, and HTML files, finding matching text that doesn't appear in the name of the file! To wit: A search for *Monterey* on my system pulls up all sorts of items, not only files with *Monterey* in their names, but also files with the text *Monterey* within the documents themselves:

- » **Apple Store SF.ppt** is a PowerPoint presentation with several slides containing the text *Monterey*.
- » **new ch03.doc** is a Microsoft Word file chapter of this book that mentions Monterey in several spots.
- » **Conference Call with Wiley** is a Calendar event pointing to a conference call with my publisher about upcoming Monterey book projects.

Not one of these three examples has the words *Monterey* occurring anywhere in the title or filename, yet Spotlight found them because they all contain the text *Monterey* therein. That, dear reader, is the *true* power of Spotlight; you'll never lose another piece of information in the hundreds of thousands of files and folders on your iMac's drive.

Heck, suppose that all you remember about a file is that you received it in your mail last week or last month. To find it, you can type time periods, such as *yesterday*, *last week*, or *last month*, to see every item that you saved or received within that period. (Boy howdy, I love writing about TGIs — that's short for Truly Good Ideas.)

Be careful, however, when you're considering a search string. Don't forget that (by default) Spotlight matches only those items that have *all* the words you enter in the Spotlight box. To return the highest number of possible matches, use the fewest number of words that will identify the item. For example, use *horse* rather than *horse image*, and you're certain to be rewarded with more hits. On the other hand, if you're looking specifically for a picture of a knight on horseback, using a series of keywords — such as *horse knight image* — shortens your search considerably. It all depends on what you're looking for and how widely you want to cast your Spotlight net.

IS SPOTLIGHT SECURE?

So how about all those files, folders, contacts, and events that you *don't* want to appear in Spotlight? What if you're sharing your Mac as a multiuser computer or accessing other Macs remotely? Can others search for and access your personal information through Spotlight?

Definitely not! The results displayed by Spotlight are controlled by file and folder permissions as well as your account login, just as the applications that create and display your personal data are. For example, you can't access other users' calendars using Calendar, and they can't see your Mail messages. Only *you* have access to your data, and only after you've logged in with your username and password. Spotlight works the same way. If a user doesn't normally have access to an item, the item simply doesn't appear when that user performs a Spotlight search. (In other words, only you get to see your stuff.)

However, you can hide certain folders and disks from your own Spotlight searches if necessary. Check out the final section of this chapter for details on setting private locations on your system.

To allow greater flexibility in searches, Apple also includes those helpful Boolean friends that you may already be familiar with: AND, OR, and NOT. For example, you can perform Spotlight searches such as these:

- » **Horse AND cow:** Collects all references to both those barnyard animals into one search
- » **Batman OR Robin:** Returns all references to either Batman or Robin
- » **Apple NOT PC:** Displays all references to Apple that don't include any information about dastardly PCs

Expanding Your Search Horizons

I can just hear the announcer's voice now: "But wait, there's more! If you click the Search in Finder menu item at the bottom of your search results list, we'll expand your Spotlight Search box into the Finder Search window!" (Fortunately, you don't have to buy some ridiculous household doodad.)



TIP

Keyboard mavens will appreciate the Finder Search window shortcut key, and I show you where to specify this shortcut in the final section of this chapter.

Figure 6-2 illustrates the Finder Search window. To further filter the search, click one of the buttons on the search criteria bar to create your own custom filter. Click the button with the + (plus) on the search criteria bar and then click the pop-up menus to choose criteria, such as the type of file, the text content, or the location on your system (for example, your internal drive, your Home folder, or a network server). You can also filter your results listing by the date when the items were created or last saved. To add new criteria, click the + (plus) button at the right end of the search criteria bar; to delete existing criteria, click the – (minus) button at the right end of the search criteria bar. To save a custom filter that you’ve created, click the Save button.

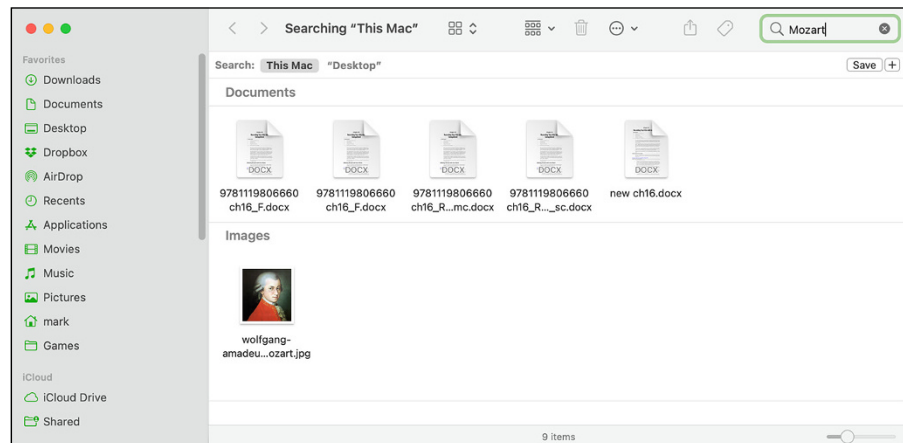


FIGURE 6-2:
The spacious
borders of the
Finder Search
window.

Images appear as thumbnail icons, so you can use that most sophisticated search tool — the human eye — to find the picture you’re looking for. (If you don’t see thumbnail images, click the Icon view button on the toolbar.) Don’t forget that you can increase or decrease the size of the icons by dragging the slider at the bottom right of the window.



TIP

To display the contents of an item in the list using Quick Look (without leaving the comfortable confines of the Finder Search window), click the item to select it, and press the spacebar for a better view. Note that Monterey must recognize the format of the file, and it must be supported by at least one application.

Again, when you're ready to open an item, just double-click it in the Finder Search window.

As I mention earlier, Spotlight can look for matching items on other Macs on your network only if those remote Macs are configured correctly. To allow another Mac to be visible to Spotlight on your system, enable File Sharing on the other Mac. (Oh, and remember that you need an admin-level account on that Mac — or access to a good friend who has an admin-level account on that Mac.)

Follow these steps to enable file sharing on the other Mac:

1. **On the Dock, click the System Preferences icon (the one with the gears) or click the Apple menu and choose System Preferences.**
2. **Click the Sharing pane.**
3. **In the service list on the left side of the Sharing pane, select the On check box next to the File Sharing item to enable it.**
4. **Click the Close button in the System Preferences window (or, if you're a keyboard power user, simply press the ⌘+Q shortcut).**



REMEMBER

You can search only those items that you have rights and permissions to view on the remote Mac (such as the contents of the Public folders on that computer). I discuss these limitations earlier in this chapter, in the sidebar “Is Spotlight secure?”

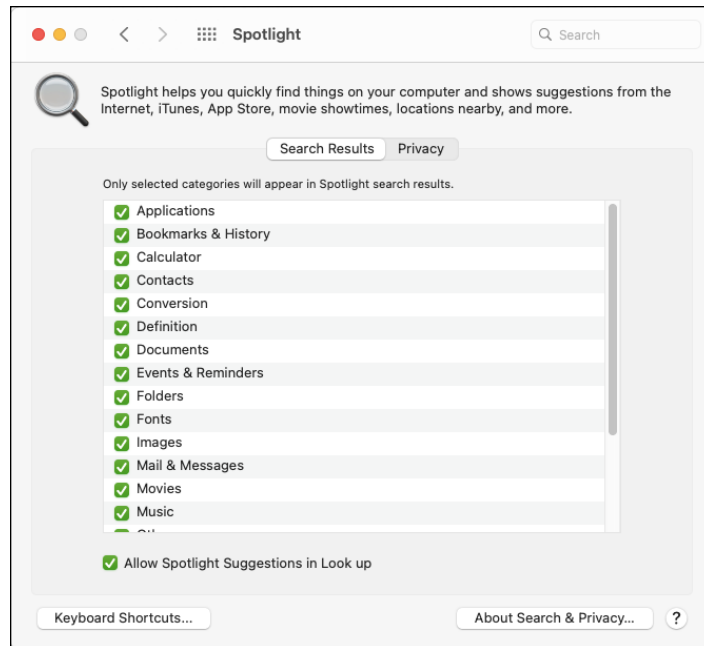
Customizing Spotlight to Your Taste

You might wonder whether such an awesome macOS feature has its own pane in System Preferences — and you'd be right again. Figure 6-3 shows off the Spotlight pane in System Preferences. Click the System Preferences icon on the Dock and then click the Spotlight icon to display these settings.

Click the Search Results section to

- » **Determine which categories appear in the Spotlight Search box.** For example, if you don't use any presentation software on your Mac, you can deselect the check box next to Presentations to disable this category (thereby making more room for other categories that you *will* use).

FIGURE 6-3:
Fine-tune your
Spotlight settings
from System
Preferences.

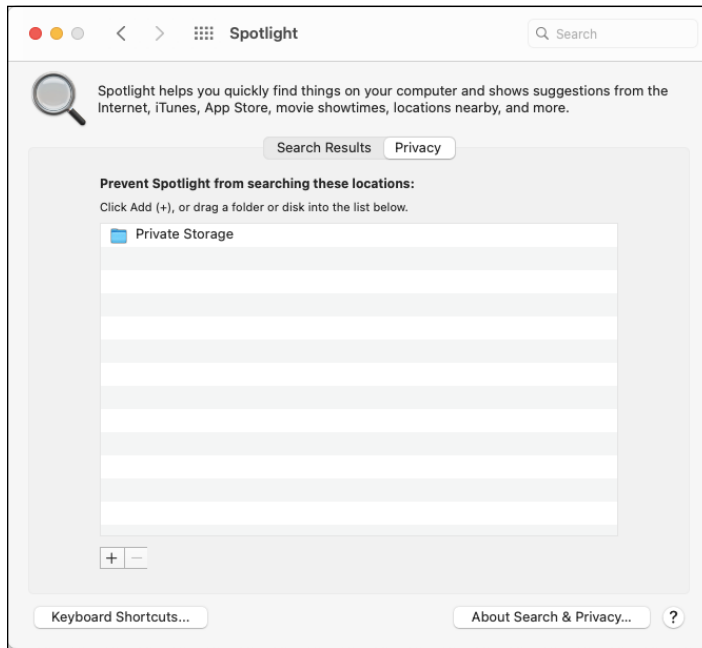


» **Specify the Spotlight Search box and Finder search window keyboard shortcuts.** Click the Keyboard Shortcuts button to enable or disable either keyboard shortcut and choose the key combination from the pop-up menu. By default, the menu keyboard shortcut is $\text{⌘}+\text{spacebar}$, and the Finder search window keyboard shortcut is $\text{⌘}+\text{Option}+\text{spacebar}$.

Click the Privacy section (shown in Figure 6-4) to specify disks and folders that should *never* be listed as results in a Spotlight Search. I know, I know — I say earlier that Spotlight respects your security, and it does. However, the disks and folders that you add to this list won't appear even if *you* are the one performing the search — a great idea for folders and removable drives that you use to store sensitive information, such as medical records.

To add locations that you want to keep private, click the Add button (+) and navigate to the desired location. Click the location to select it and then click Choose. Alternatively, you can drag folders or disks directly from a Finder window and drop them onto the pane.

FIGURE 6-4:
When certain
folders and disks
must remain
private (even
from you!), add
them to this list.



- » Setting reminders
- » Making notes
- » Using Notification Center
- » Navigating with Maps
- » Staying current with News

Chapter 7

Putting Common Apps to Work

As I've said many times before in my books, "If it works in one place, it's likely to show up in another." In this case, five popular time-saving (and headache-preventing) apps have crossed over from the world of iOS devices — the iPhone and iPad— and have securely landed on your Monterey Desktop. These apps are Reminders, Notes, Notification Center, Maps, and News, all taken from the iOS world.

That's not the only good news, though: These five Mac applications work seamlessly with an iCloud account. So if you also use an iOS device (with the same Apple ID), much of the data you store — such as the notes you take and the reminders you make — is automatically synchronized among all your Apple computers and devices.

Because all five of these applications have a similar goal — keeping you in touch with the information, daily tasks, locations, and digital events that matter to you — I decided to cover them in one shiny chapter. Consider this chapter a guide that demonstrates how you can remind, note, notify, read, and map like a true power user.

Remind Me to Use Reminders

In its simplest form, a *reminder* is just a short phrase or sentence. You don't need to look far to find the Reminders application on your iMac. Just click the Reminders icon on the Dock to display the main window, shown in Figure 7-1.

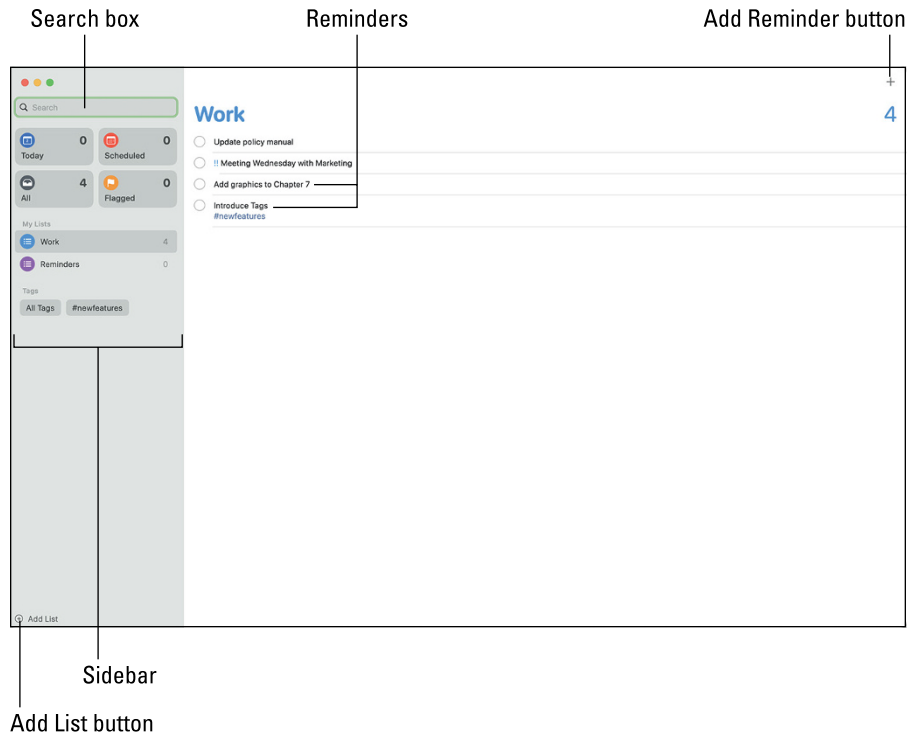


FIGURE 7-1:
The main
Reminders
window in
action.

These are the highlights of the Reminders window:

- » **Search box:** Click here and type a phrase or name to search for it among your reminders.
- » **Reminders Sidebar:** You can add as many separate reminder lists as you like in the application (one for work, for example, and another for your Mac user group). In the Sidebar, you can switch quickly among your lists.



TIP

You can hide or show the Reminders Sidebar at any time using the View menu or by pressing ⌘+Control+S. You save a significant amount of screen real estate when the display is hidden.

- » **Add List button:** Click this button (or press ⌘+Shift+N) to add a new reminder list to the Sidebar. The list name is highlighted in a text box, so you can simply type the new name and press Return.
- » **Reminders:** These entries are the reminders themselves. Each reminder is prefaced by a radio button; select the radio button when the reminder is complete, thereby moving that reminder automatically to the Completed link. And yes, if you click the Show link next to the number of completed reminders to display them and deselect the radio button for a reminder, it returns (like a bad penny) to the original list.
- » **Add Reminder button:** Click this button (or press ⌘+N) to add a reminder to the selected list. Press Return afterward to save the reminder to your list.

Adding a reminder is straightforward. First, click an entry in the My Lists display or click the Today or Scheduled group and then click the Add Reminder button. Type the desired text and press Esc to create a basic reminder.

Naturally, you're not limited to a simple text message! When you create a reminder, the application allows you to add notes, link a location, or add a date to display a message.



TIP

Monterey introduces *tags* to the Reminders app, allowing you to search for specific reminders using terms that you create. (They work much like Keywords in the Photos app.) When adding a new reminder, click the Add Tags field and type one or more tags separated by spaces. Each tag needs to start with the # character, as in **#wedding** or **#newfeatures**. Reminders even displays a # button that you can click to enter the symbol. After you've entered tags within all your reminders, you can use the Search box at the top of the Reminders Sidebar to display just those reminders that include the tags you specify. Tags also show up in the Sidebar (making them easy to display with a single click) and under the reminder entry. *Neat!*

You can also hover your cursor over any existing reminder to display an Info button (the lowercase *i*-in-a-circle icon that appears at the right side of the window). Click the Info button to display the Edit sheet, shown in Figure 7-2.

These fields are on the Edit sheet:

- » **Reminder text:** Click this text to edit the reminder text itself.
- » **Flag:** Click this button (bearing a flag icon) to add this reminder to your Flagged group. This button allows you to display just the flagged reminders you've created.
- » **Tags:** Click this field to add a tag, or click any existing tag to edit it.

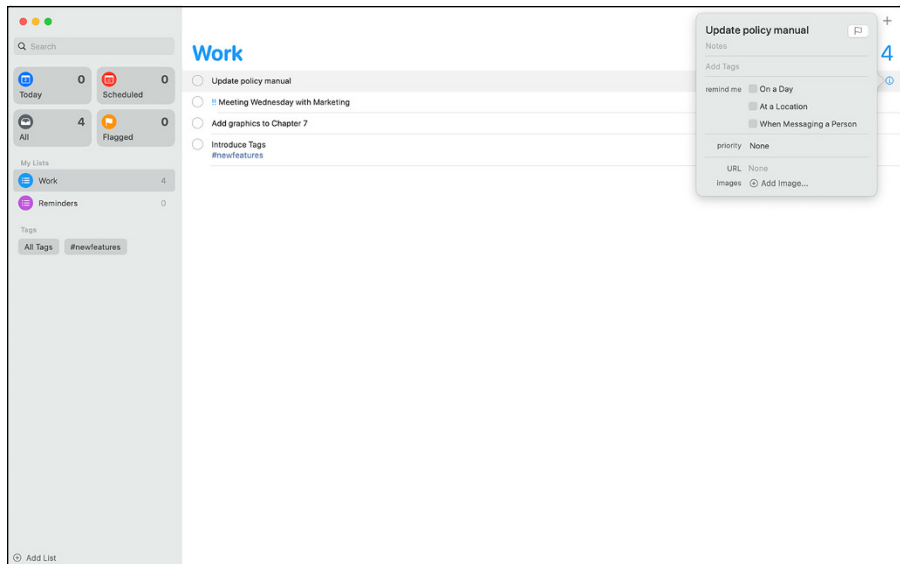


FIGURE 7-2:
Editing a
reminder.

- » **Notes:** Click the Notes label to enter a free-form text note along with the reminder.
- » **On a Day:** Select this check box if the reminder should appear in Notification Center on a particular day. By default, the date is the one selected when you created the reminder. You can click the Date and Time fields to change them.
- » **At a Location:** This feature is powerful. Select the At a Location check box and you can type an address in the Enter a Location field. Reminders monitor your current location on your iPad or iPhone by using Location Services. They notify you when you're leaving or arriving at that approximate location (and, optionally, on the date and time you specify in the On a Day field). You could create a reminder that notifies you on your iPhone when you're arriving at the mall on September 15 to pick up the watch that's being repaired. You can even specify that a reminder appear when you send a Message text to a specific person. *Shazam!*
- » **Repeat:** If you select the On a Day check box, you can also set this reminder to repeat every day, week, month, or year at the same time.
- » **Priority:** You can assign one of four priorities to the reminder: Low, Medium, High, or None. Assigning a priority prefaces the reminder text with one (Low), two (Medium), or three (High) blue exclamation points so that the reminder stands out from the crowd.
- » **URL:** Click this field and enter a web page to associate with the reminder. When the reminder is displayed, you can click this address to launch Safari and display that page.

» **Images:** Click the Add Image button to browse your system for a photo to add to this reminder.

Click anywhere outside the Edit sheet when you've finished making changes. You can edit a reminder as often as you like. I sometimes need to change the date on a reminder multiple times as my schedule changes, for example.



TIP

To delete a reminder from the list, right-click it and choose Delete from the short-cut menu.

iCloud connectivity allows the Reminders application to share information with other Macs and iOS devices, as well as Microsoft Outlook on both PCs and macOS. To share reminders, click the System Preferences icon on the Dock, click the Internet Accounts icon, and then click one of the accounts on the left side of the pane. If an account allows you to share data from the Reminders application — such as the iCloud account — you'll see a Reminders check box on the right side of the pane.

Taking Notes the Monterey Way

Imagine a notepad of unlimited pages that's always available whenever you're around your iMac, iPhone, or iPad. That's the idea behind Notes, and it's superbly simple. To open the macOS version of the application, click the Notes icon on the Dock. The window shown in Figure 7-3 appears.

The salient stuff in the Notes window includes these items:

- » **Search box:** If you're hunting for a specific note, click this box and type a phrase or name to search for it.
- » **Folders list:** You can create new folders to hold specific kinds of notes. In Figure 7-3, for example, I added a Work folder. To add a new folder, choose File ⇨ New Folder or press ⌘+Shift+N and type the new folder name. To switch between folders, display the Folders list and click the desired folder. You can display or hide the Folders list from the View menu.
- » **Notes list:** Each note you create appears as a separate entry in the list. You can click a note in the list to switch to it immediately.
- » **New Note button:** Click this button to add a new note. Notes uses the first line of text you type as the title of the note, which appears in the list.

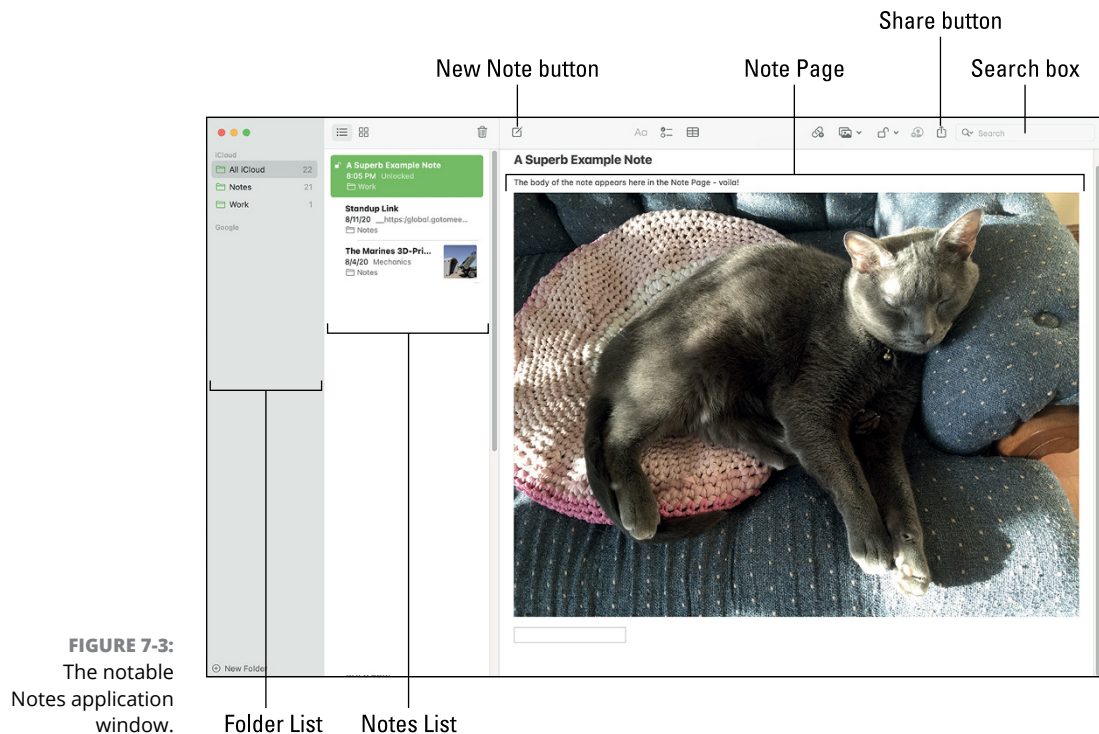


FIGURE 7-3:
The notable
Notes application
window.

- » **Note page:** This free-form pane is where you type the body of your note. You can also drag images from a Finder window to include them in the body of the note, or embed PDF and audio files by dragging them from a Finder window as well. The Photos Browser, available from the Notes toolbar, makes it easy to add images from your Photos library.
- » **Share button:** Got a shopping list to distribute? Open this pop-up menu to share the contents of the current note, just like the Share button that appears on the Finder window's toolbar. Sharing options can include a new email message, a new message in the Messages application, and exchanging information with another device via AirDrop.

To edit a note, click it to select it in the Notes list and then simply make your changes or additions on the note page. You can format the text from the Format menu, choosing everything from fonts and colors to bulleted and numbered lists. Toolbar buttons make it simple to add a checklist (complete with fancy controls that you can click to mark something completed) or lock specific notes with a password. You can use tags in notes as well, just as I describe in the previous section on Reminders — and don't forget to preface your tag with the # symbol.

To delete a note you no longer need, right-click it in the Notes list and choose Delete from the shortcut menu. The application moves the note to the Recently Deleted folder, where it can be retrieved for up to 30 days.



TIP

You can pin a note to the top of the Notes list to make it more visible; the note stays anchored to the top of the list whenever it's visible. Right-click the desired note in the list and choose Pin Note from the shortcut menu (or choose Unpin Note to return the note to regular status).

A note can include tables to help organize your data, much like the Pages application! Click the Table button on the Notes toolbar to create a default table (two columns and two rows); then click the first field and begin typing. Press Tab to continue to the next field in the table. To create a custom table, click within a cell (or select the table as a whole) and use the row and column controls that appear to specify the number of rows and columns.

Like Reminders, the Notes application can share information with Macs and iOS devices, as well as with Microsoft Outlook on both Macs and PCs. The process is the same: Open System Preferences and click the Internet Accounts icon; then click the desired account on the left side of the pane. Accounts that support sharing data from Notes display a Notes check box on the right side of the pane. Imagine all the sundry things you include in a class project — notes, photos, charts and tables — all in one convenient location!



TIP

Need an extra layer of security for your notes? The application allows you to lock your notes to keep them private, requiring a password to view them. Click Notes ⇨ Preferences and click Set Password, then enter your password twice and click the Set Password button. (iMac keyboards with a Touch ID sensor can unlock notes with a fingerprint! Click Use Touch ID to start the ball rolling.) After your password or Touch ID is set, you can select a note in the list and click the Lock icon that appears in the Notes toolbar to lock it, which places a tiny lock icon next to the note's title.

Staying Current with Notification Center

Unlike Reminders and Notes, Notification Center isn't an application that you launch. Instead, Notification Center appears at the far-right end of the Monterey Desktop. It's always running, and you can display or hide Notification Center at will.

Click the clock display icon (or, if you're using the trackpad, swipe with two fingers from the right edge to the left) to display your notifications. These notifications can be generated by a host of Monterey applications and functions, including Calendar, Mail, FaceTime, Reminders, Game Center, Photos, Messages, Safari, Facebook, and even the Mac App Store. Third-party applications can also generate notifications.

Notification Center displays all sorts of information that specifically applies to today's date (as shown in Figure 7-4), including Calendar events, Reminders, the current weather, and the latest stock figures. (In fact, Notification Center actually scrolls vertically to show you more content.) You can specify what information is displayed by clicking the Edit Widgets button at the bottom of Notification Center (not shown in Figure 7-4). To switch back to Notifications view, click the Done button that appears at the bottom of the Edit Widgets view.

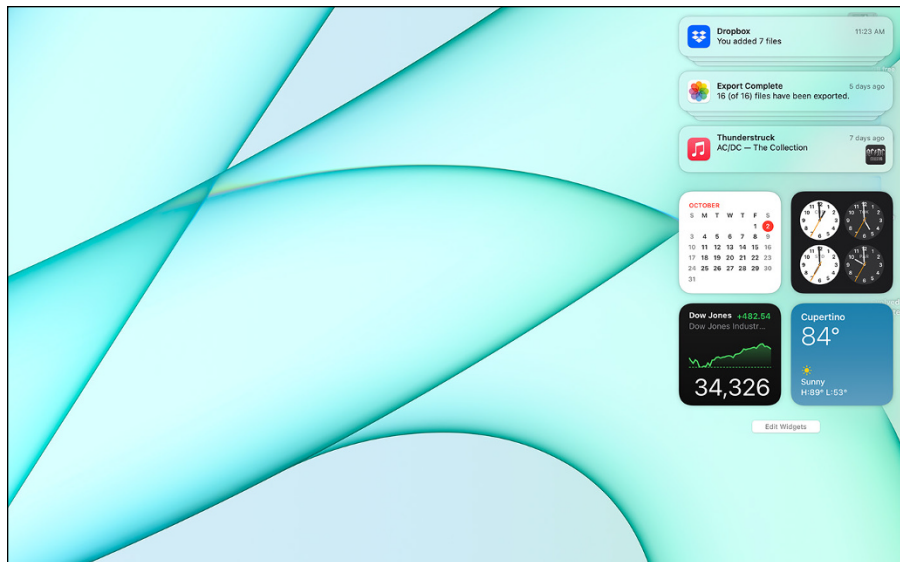


FIGURE 7-4:
Notification
Center muscles
your desktop to
the side.

I love how Notification Center doesn't interfere with open applications; it simply moves the entire desktop to the left so that you can see the Center. You can close Notification Center at any time by clicking anywhere on the Desktop to the left, clicking the clock display on the Finder menu bar again, or swiping two fingers across the trackpad in the opposite direction.

Notification entries that appear in Notification view are grouped below the application that created them. You can delete many entries from Notification Center by clicking the Delete button that appears next to the application heading (which

bears an X symbol). Other entries, such as Calendar alerts, remain in Notification Center until the event has passed.

But wait — there's more to Notification Center than a strip of widgets! Depending on the settings you choose, notifications can also appear without Notification Center being open at all. These notifications are displayed as pop-up *banners* (which disappear in a few seconds) and *alerts* (which you must dismiss by clicking a button).

Monterey can also allow *actions* in notifications. Depending on the application or function that generates the notification, you may see buttons on a banner or an alert that allow you to take care of business (without requiring the application to be running). If a new email message is received in Apple Mail, for example, you can choose to reply to or delete the message. Websites can display updates as notifications, and you can answer a FaceTime or an iPhone call directly from the notification.

STAY FOCUSED!

Another great new feature in Monterey is *Focus*, which enhances the existing Do Not Disturb feature from previous versions of macOS. Focus allows you to selectively choose which people and apps can interrupt you while working, playing, or sleeping. In fact, you can fine-tune Focus for any number of situations and environments. For example, I have a Writing Focus that prevents anyone other than my immediate family and my friends at Wiley Publishing from contacting me, and it limits the apps that can notify me to Messages, Mail, and FaceTime. With my Writing Focus, anytime I sit down to work on a manuscript, I'm certain that I won't be disturbed (by my iMac, anyway) unless it's important.

A selected Focus can be set automatically at a certain time, or you can set it automatically when you open a specific application. You can also set an existing Focus from the macOS Control Center by clicking the Control Center icon on the Finder menu and clicking the Focus tile.

You can create a new Focus from the Notifications & Focus pane within System Preferences. Click the Focus tab to display the settings. Click the Add button (which bears a plus sign) at the bottom of the Focus list and choose a predefined Focus, or click Custom to build your own.

If you have any devices that are running iOS 15 or higher, the selected Focus can be automatically enabled on those iPads or iPhones, as well as any other Macs running Monterey. To enable this feature, display the Focus settings within System Preferences and enable the Share Across Devices check box.



TIP

You can configure the notifications for all your applications from the Notifications & Focus pane in System Preferences. You can find details on the Notifications & Focus pane in Chapter 5.

Introducing the Maps Application

If you own an iPad or iPhone, prepare yourself for a joyful state: Your beloved iOS Maps application also resides on your Dock! As long as you have a connection to the Internet, Maps is ready to display locations, provide directions, and even supply informal views of important sites worldwide. (Recognize the grand dame in Figure 7-5?)



FIGURE 7-5:
The Statue of
Liberty shines in
the Maps
application.

Displaying an overhead view of an address is one of the simplest chores in all of macOS. In the Maps window, just click the Search box at the top of the window, type the address, and press Return. Maps displays the address with a red pushpin to help you locate it.



TIP

Depending on the location you've chosen, you may also see a tiny Info icon (which looks like a lowercase *i* within a circle) next to the name. To view more information, click the Info icon.



TIP

If you're in range of a Wi-Fi signal and have Location Services turned on, you can quickly map your current location by choosing View ⇨ Go to Current Location or pressing ⌘+L.

Ah, but why stop with a simple address? You can also enter the following types of information:

- » The name of a landmark, monument, or building (such as *Statue of Liberty*).
- » The name of a business or restaurant (or even a genre of food, such as *Chinese*) followed by the city name. Maps displays matching sites with pushpins, complete with reviews, and you can click any of the pushpins to find more information on a location. Figure 7-6 illustrates a search for *pizza restaurants* in my hometown of Columbia, Missouri. You see the Info pop-up window that appears when I click the Info icon next to the restaurant's name, complete with a link to the website and reviews aplenty.
- » Attractions and services, followed by the city name. You can search for a gas station, movie theater, or local park.

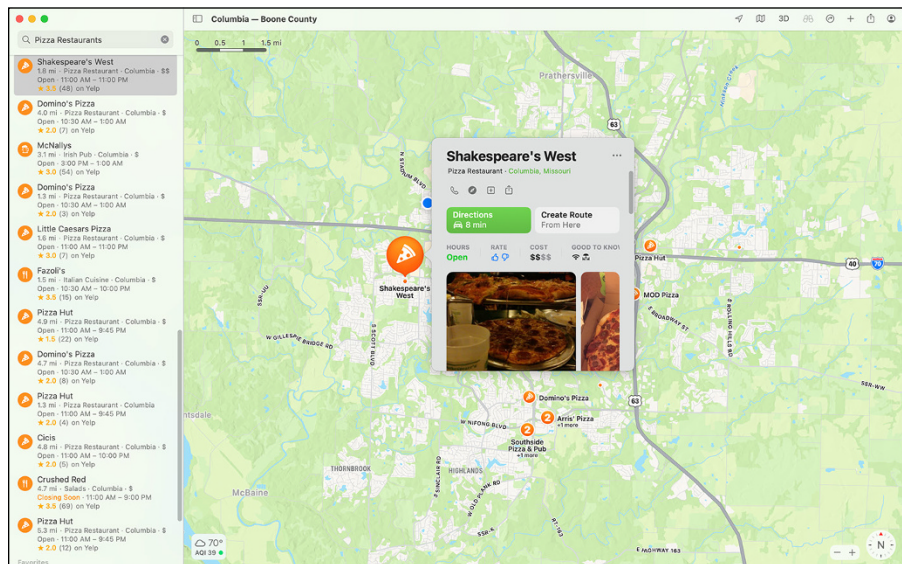


FIGURE 7-6:
Looks like this
pizza joint is
highly rated.



TIP

If you need to zoom in or zoom out on a Maps display, use the scroll function on your pointing device, click the plus and minus buttons in the bottom-right corner of the Maps window, or press the ⌘+plus and ⌘+minus shortcuts. To move around the Maps window, click and drag the map in the desired direction.



TIP

Teachers and parents, take note: A virtual flyby of a famous site in Maps is a valuable (and cool) resource. Look for a 3D Flyover Tour option in the Sidebar at the left side of the window (or in the Info panel) when you're viewing famous tourist sites!

Switching Views in Maps

A traditional printed map offers you only one view, which may be perfectly fine for determining a route but provides no visual interest. (The word *banal* comes to mind.) Maps, on the other hand, offers three types of views, each of which offers certain advantages:

- » **Default (or Map) mode** is a familiar line map with streets and highways marked. Default mode, which is just like an old-fashioned paper map, is best for planning a road trip.
- » **Satellite mode** is a photographic overhead view without streets or highways marked, which is great for getting panoramic views of your neighborhood or a location and its surroundings. (Note that if you zoom far enough out in Satellite view, Maps presents the Earth as a globe!)
- » **Transit mode** displays public-transportation routes and bus, subway, and train schedules. Note, however, that Transit information isn't available in every location.

To select your view, click the Map Mode Menu button in the toolbar (it resembles a folded map) or press ⌘+1 for Default Map, ⌘+2 for Transit, or ⌘+3 for Satellite. Figure 7-5, shown earlier in this chapter, illustrates Satellite view, whereas Figure 7-7 shows off the same location in Default view.



TIP

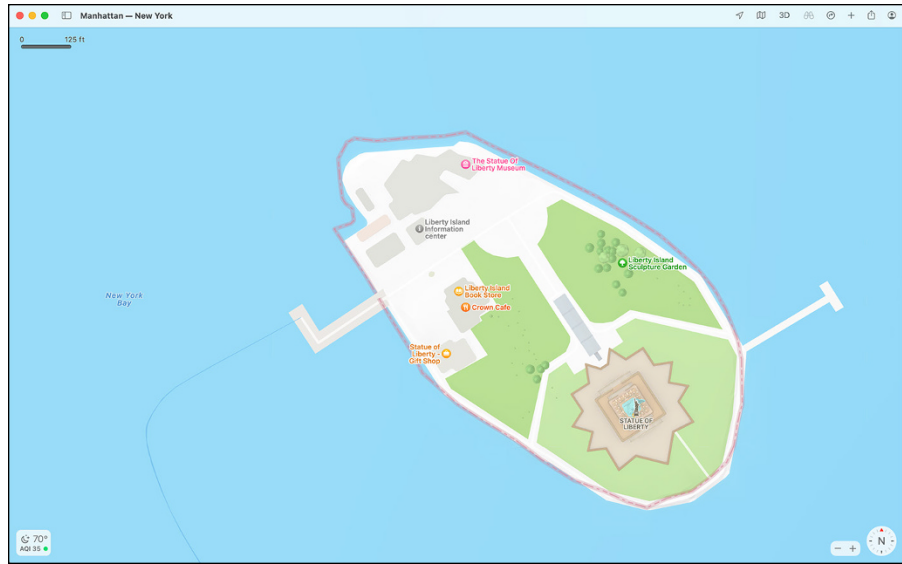
Have I mentioned the 3D map yet? No special glasses are required! For additional visual thrills, you can angle the Maps display with a slight 3D effect — nothing quite as grand as a 3D TV, but it does help add depth to Satellite view. To toggle 3D, press ⌘+Shift+1 or click the 3D Map icon in the toolbar.



TIP

By default, Maps is oriented with north at the top of the screen, but if you need to change the orientation, click the red compass arrow in the bottom-right corner of the screen and drag it in the desired direction. To return to having north at the top of the screen, press ⌘+1 or choose View ⇨ Snap to North.

FIGURE 7-7:
Standard view
reminds me of an
auto GPS unit.



Getting Directions Over Yonder

My primary use for a map is to get directions from one point to another, and Maps doesn't disappoint when it comes to navigation. Click the Directions button in the toolbar (which looks like an arrow in a circle) to display the panel you see in Figure 7-8, and you're ready to plot your course.

Follow these steps to get directions between two addresses:

- 1. In the Start box, type the starting address.**

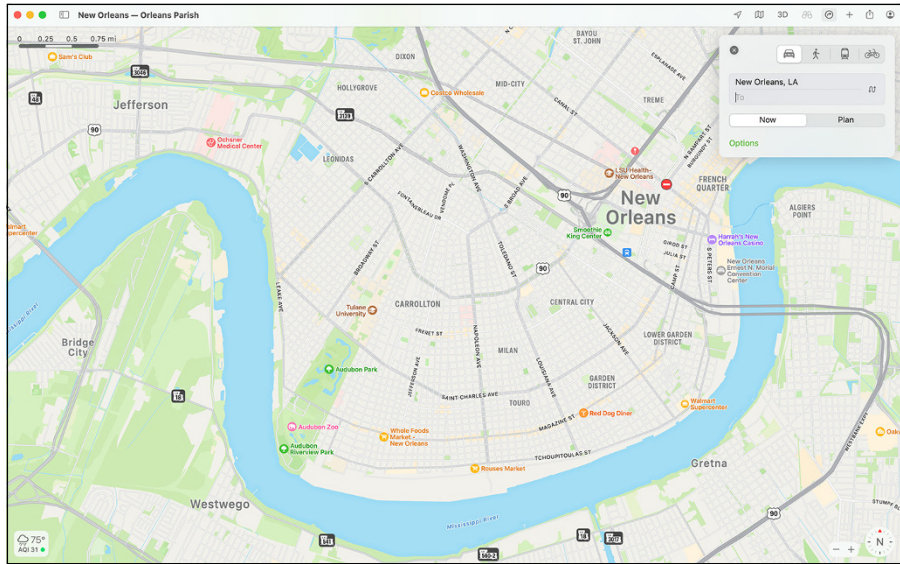
As you type, Maps provides a pop-up list of suggestions taken from your recent locations, as well as addresses from your Contacts database and matching streets from around the globe. To choose one of these suggestions, just click it. To clear the contents of the field, click the X button that appears on the right side of the box.

- 2. Press Tab to move to the End box, and type the destination address.**

Note that your destination doesn't have to be a specific address. **Memphis, TN**, for example, works just fine.

- 3. Click the Drive button for road directions, click the Walk button for walking directions, click the bicycle icon for cycling directions, or display mass-transit information by clicking the Transit button.**

FIGURE 7-8:
The Directions panel is ready to provide directions to your next crawfish boil.



Maps usually offers more than one route for your trip. The first route provided is typically the fastest or shortest, and it appears in bright blue. To view one of the other routes, click a light-blue line, which turns bright blue to indicate that now it's the selected route. (You can see the approximate mileage and time for the selected route in the Directions panel.) Click the arrow next to the option you prefer and you'll see a turn-by-turn list that provides the approximate mileage for each leg of the journey.

You can easily print the route map and directions by choosing **File** ⇨ **Print** (or pressing ⌘+P) and then clicking the **Show Details** button at the bottom of the Print sheet to display all the options.



TIP

If you'd rather create a PDF document with your map and directions, choose **File** ⇨ **Export As PDF**.

Finally, Maps allows you to share your maps and directions by using Mail, Messages, Notes, Reminders, or AirDrop, as well as to send the information directly to your iOS devices. Click the **Share** button at the far-right side of the Maps toolbar and then choose the desired sharing method.

Creating and Using Guides

How many times has a friend or member of your family asked you for an informal “itinerary” to a city or tourist attraction that you know well? Or perhaps you’ve arrived as a stranger to a big city, wondering where to go and what to do. With the

Guides feature in Maps, you have an expert travel resource handy whenever your iMac is near — and you can even create your own Guides for others to use!

As an example, say that you’ve just arrived in New York City and can’t wait to explore the Big Apple. Sure, everyone is familiar with Times Square, the Empire State Building, and the Statue of Liberty, but what else should you see? With Maps, just enter **New** in the Search box and click New York, NY in the list of results. Maps displays New York City and its surroundings, along with the Info panel. Scroll down just a bit in the Info panel and you’ll see some of the top Guides for New York City — in this case, “The Best Pumpkin Patches Near NYC” from *tinybeans*, as shown in Figure 7-9. If you’ve found the Guide that catches your interest, click the thumbnail to display it.

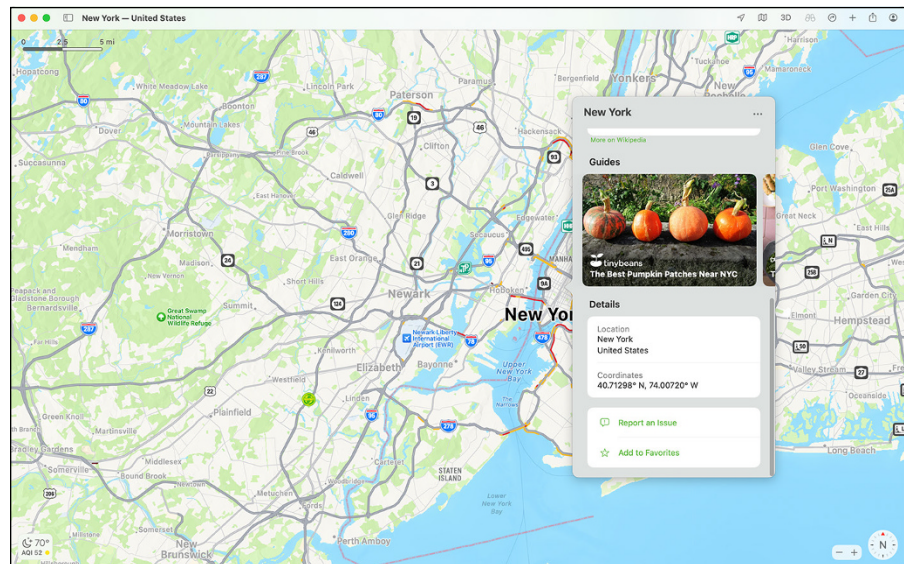


FIGURE 7-9:
Here's a Guide
for pumpkin
lovers in the
Big Apple.

Creating your own Guide is just as easy! You’ll notice a heading in the Maps Sidebar named My Guides. Hover your cursor over this heading and then click the plus sign icon to display the New Guide panel. Here, you can enter a name for your Guide and select an image (or key photo) to appear with the Guide. Press Return to add the Guide to the Sidebar.

Now comes the fun part: Use the Search box to locate a specific location that you want to add to your Guide, whether it be a restaurant, hotel, or landmark. On the Directions panel for that location, click the ellipsis icon (the three dots at the upper right of the panel), choose Save to Guide, and click the name of the Guide you just created. Note that the entry for your Guide now indicates that the Guide includes one place, and Maps will keep track of how many places you include.



TIP

To share a Guide with others, click the Guide entry in the Sidebar and then click the Sharing icon in the Maps toolbar. You can send a link to your Guide via Messages, Mail, Notes, Reminders, or by using AirDrop.

Catching Up on News

Are you a current events junkie like I am? Before the arrival of the Internet, I used to remain glued to my TV, absorbing the latest information from the news channels — heck, I even subscribed to an old-fashioned *newspaper*! (To be honest, I still do, but it's the online edition of my hometown paper.) If news is your passion, let me introduce you to Monterey's News app, shown in Figure 7-10.



FIGURE 7-10:
All the news
that fits,
News displays!

The News window includes a number of items to help in your perusal:

- » **Toolbar:** This familiar strip of buttons allows you to share stories and mark favorites with a single click.
- » **Sidebar:** The News Sidebar makes it easy to navigate among topics, news sources, and stories you've saved. You can display or hide the Sidebar from the View menu, or you can click the Show/Hide Sidebar button in the toolbar.



TIP

Although the items in the Sidebar change over time (as News “learns” your preferences and you add channels), you can click the Edit link at the top of the Sidebar to remove items whenever you like.

- » **Content pane:** Here’s where News displays its content. Similarly to a web page in Safari, you can click on an item title or accompanying image to load the entire story. When a single story occupies the Content pane, a left arrow appears at the far left side of the toolbar; when you’re ready to return to the item list, just click the arrow.
- » **Share button:** If you’d like to share a link to the displayed story within a Mail message, social media post, or a Message, click the Share button to display the pop-up menu. You can also create a new Reminder or Note from the story. (The Share button appears only when you’re reading a story, so it doesn’t appear in Figure 7-10.)



TIP

Are you rushed for time? To save a story you’re reading in the Sidebar for later, press ⌘+S. News adds the story under the Saved Stories heading in the Sidebar.

Using Favorites and Channels

As I mention earlier, News actually “learns” what type of stories you like as you use it and will present stories that it thinks will interest you in the Sidebar (under the “Suggested” heading). However, there are two News features that help you focus even more on certain topics and news sources: *favorites* and *channels*.



REMEMBER

Many channels require that you pay a subscription fee (either through Apple or the provider themselves) before you can view the content — for example, the *Washington Post* and *Wired* magazine. Of course, you can always find plenty of free content within News, but don’t be surprised if a premium channel is off-limits unless you subscribe.

News allows you to mark a specific topic as a favorite, indicating that you’d like to see more stories covering similar subjects. To mark a story you’re reading as a favorite, press ⌘+L (for Loved Story) or click the Favorites button on the toolbar. If, on the other hand, you’d like to avoid seeing similar stories in the future, press ⌘+D (for Dislike Story) or click the Dislike button on the toolbar.

Within News, you can specify a news source as a channel, such as *Bloomberg* or *BBC News*. They will appear in the News Sidebar under the “Channels & Topics” heading. The topics you’ve marked as Favorites appear under the same header. To choose channels or topics, click File on the News menu bar and click Discover

Channels & Topics. When you see a news source or a topic you'd like to monitor, click it (which makes the Favorites heart icon turn red). After you click Done, you see that your channel and topic selections are added to the Sidebar under the "Channels & Topics" heading. To stop following a channel or topic, display the channel or topic in the Content pane and click File ⇨ Follow Channel/Topic to remove the check mark.



TIP

If you'd like to block all the stories from a specific channel or topic, display it in the Content pane and click File ⇨ Block Channel/Topic. You can edit your Block list from the File menu as well.

3

Connecting and Communicating

IN THIS PART . . .

Surf the web with ease using Apple's Safari browser.

Sync documents and data automatically using iCloud.

Share your iMac with other users safely.

Join or create a wireless network with your iMac.

Hooking up printers, scanners, PhotoBooth, Messages, and FaceTime.

- » Introducing the Safari window and controls
- » Visiting websites and moving between sites
- » Configuring a home page and Start Page
- » Bookmarking, downloading, surfing, and printing web pages
- » Protecting your privacy on the web

Chapter 8

Let's Go on Safari!

I proudly surf the web via a lean, mean — and *fast* — browser application. That's Safari, of course, and it keeps getting better with each new version of macOS. Safari delivers the web the right way, without the wait. You'll find that features have been added to Safari that no other browser offers, such as the Reading List, which allows you to easily select articles and pages for later perusal.

If you need a guide to Safari, this chapter is yours. Sure, you can start using Safari immediately, but wouldn't you rather read a few pages so that you can surf like a power user?

Within these pages, I show you how to use those other controls and toolbar buttons in Safari — you know, the ones in addition to the Forward and Back buttons. You discover how to keep track of where you've been and where you'd like to go.

Pretend You've Never Used This Thing

Figure 8-1 illustrates the Safari window. You can launch Safari directly from the Dock, or you can click the Safari icon in Launchpad.

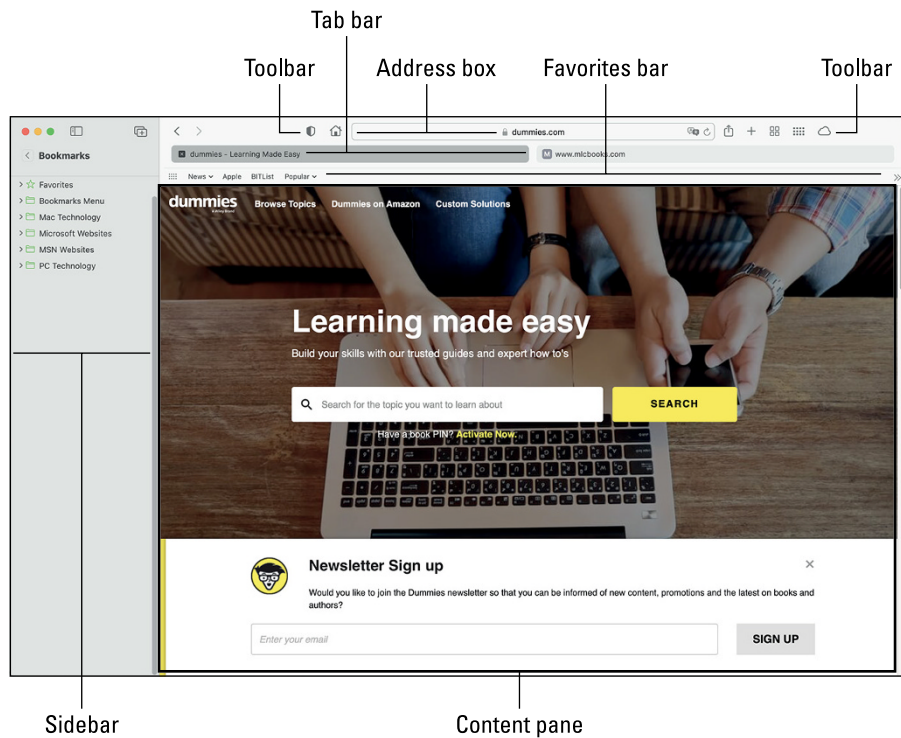


FIGURE 8-1:
Safari at a glance.

These are the major sections of the Safari window:

- » **The toolbar:** Here are the most-often-used commands for tasks such as navigation, sharing content, and searching Google (or Yahoo!, or DuckDuckGo, or Bing). Also, here is where you can type or paste the addresses of websites that you'd like to visit. (Note that the toolbar can be easily customized, so your toolbar icons will differ from those I use, shown in Figure 8-1.)
- » **The Favorites bar:** Consider this bar to be a toolbar that allows you to jump directly to your favorite websites with a single click (or two). I show you later, in the section "Adding and Using Bookmarks," how to add sites to and remove sites from your Favorites bar. For now, remember that you can toggle the display of the Favorites bar by choosing View ⇨ Hide/Show Favorites Bar or pressing ⌘+Shift+B.
- » **The Tab bar:** This toolbar allows you to quickly switch among multiple web pages that you've loaded, using what appear to be old-fashioned file-folder tabs (something familiar; familiar is good). To hide or display the Tab bar, choose View ⇨ Hide/Show Tab Bar. You can also pin sites to the Tab bar permanently (see the sidebar "Power users pin sites," later in this chapter).



TIP

» **The Sidebar:** The Sidebar pane allows you to organize and read your bookmarks, Reading List, and shared links. To hide or display the Sidebar, choose View ⇨ Hide/Show Sidebar or press ⌘+Shift+L.

» **The Content pane:** Congratulations! At last, you've waded through the pregame show and reached the area where web pages are displayed. The Content pane can be scrolled, and when you minimize the Safari window to the Dock, you get a *thumbnail* (minimized) image of the Content pane.

The Content pane often contains underlined text and graphics that transport you to other pages when you click them. These underlined words and icons are *links*, and they zip you right from one area of a site to another area (or to a different site altogether). You can tell when your pointer is resting on a link because it changes to that reassuring pointing-finger hand. Handy! (Sorry about that.)

» **The Status bar:** The Status bar displays information about what the pointer is resting on, such as the address of a link or the name of an image; it also updates you about what's happening while a page is loading. To hide or display the Status bar, choose View ⇨ Hide/Show Status Bar or press ⌘+/ (forward slash).

Visiting Websites

Here's the stuff that virtually everyone over the age of 5 knows how to do . . . but I get paid by the word, and some folks might not be aware of the many ways to visit a site. You can load a web page by using any of these methods:

» **Click the Address box.** If you're not viewing your Start Page display, click the Address box to display a scrolling thumbnail list of your Favorites and most frequently visited sites. Click a thumbnail to jump to that page immediately. That's about as simple as life gets!

» **Type (or paste) a website address in the Address box on the toolbar and press Return.** If you're typing an address, and Safari recognizes the site as one that you've visited in the past, it "helps" by autocompleting the address for you. Press Return if you want to accept the suggested site. If the site is a new one, just keep typing.

The Safari Address box also acts as a *smart address* field, displaying a new pop-up menu of sites that match the text you enter. Safari does this by using sites taken from your History file and your bookmarks, as well as sites returned from Google, Yahoo!, DuckDuckGo, or Bing. If the site you want to visit appears in the list, click it to jump there immediately.



WARNING

- » **Click a Bookmarks or Favorites entry.** Bookmarks appear in the Sidebar and on the Bookmarks menu, whereas Favorites appear on the Favorites bar.
- » **Click a tab for a pinned site.** Pinned tabs appear as icons at the left end of the Tab bar.
- » **If the Home button appears on your toolbar, click the button to go to the home page that you specify.** Read more on this in the upcoming section “Configuring Your Home Page and Start Page.”
- » **If the Start Page button appears on the toolbar, click it to open the Start Page display.** Safari displays a wall of page icons from your Favorites, your most frequently visited sites, your Reading List, suggestions from Siri, and your iOS shared bookmarks. You can jump to a site by clicking the desired icon.
- » **Click an item you saved earlier on the Sidebar’s Reading List tab.** To display items in your list, click the button bearing the eyeglasses icon at the top of the Sidebar.
- » **Click a page link in Apple Mail or another Internet-savvy application.** These links are typically highlighted or underlined to make them easier to see.
Never click a link in an email or open an attachment unless you know and trust the sender!
- » **Click a page link on another web page.** By default, Safari opens the new page in a separate tab.
- » **Select a web address in a document and choose Services ⇨ Open Page in Safari.** Safari automatically loads and displays the page.
- » **Type a search term in the Address box.** By default, Safari uses Google as a search engine, but you can also use Yahoo!, Bing, or DuckDuckGo if you prefer. To set the default search engine, choose Safari ⇨ Preferences; then, on the Search tab of the Preferences dialog, make a choice from the Search Engine drop-down list. (You can switch to another engine by clicking the magnifying-glass icon that appears before you start typing in the Address box.)

Click the Address box, type the contents that you want to find, and press Return. Safari presents the search results page in Google for the text you entered. (In case you’ve been living under the Internet equivalent of a rock for the past several years, *Google* (<https://www.google.com>) is the preeminent search site on the web. People use Google to find everything from used auto parts to ex-spouses.) Of course, if you’ve chosen a different default search engine, Safari displays results from that engine instead.
- » **Click a Safari page icon on the Dock or in a Finder window.** Drag a site from your Favorites bar (or drag the icon from the left side of the Address



TIP

box), and drop it at the right end of the Dock. Clicking the icon that you add launches Safari and automatically loads that site.

This trick works only on the end of the Dock to the right of the vertical line.

If you minimize Safari to the Dock, you'll see a thumbnail of the page with the Safari logo superimposed on it. Click this thumbnail on the Dock to restore the page to its full glory.



TIP

Speaking of full glory, Safari supports the same full-screen mode as many other Monterey applications. Click the Zoom/Full Screen button in the top-left corner of the Safari window to switch to full-screen mode, or press the `⌘+Control+F` shortcut (a good shortcut to memorize because it works with virtually all Monterey-compatible applications). To make things convenient for you, the toolbar, Favorites bar, and Tab bar remain. To exit full-screen mode, press `Esc` or the `⌘+Control+F` shortcut again.

Navigating the Web

A typical web-surfing session is a linear experience. You bop from one page to the next, absorbing the information you want and discarding the rest. After you visit a few sites, however, you may find that you need to return to where you've been or head to the familiar ground of your home page. Safari offers these navigational controls on the toolbar:

- » **Back:** Click the Back button (the left-facing arrow) on the toolbar to return to the last page you visited. Additional clicks take you to previous pages, in reverse order. The Back button is disabled if you haven't visited at least two sites.
- » **Forward:** If you've clicked the Back button at least once, clicking the Forward button (the right-facing arrow) takes you to the next page (or through the pages) where you originally were, in forward order. The Forward button is disabled if you haven't used the Back button and haven't navigated to another page.



TIP

Safari supports several trackpad gestures. You can swipe in either direction with two fingers to move backward and forward, for example, just as you'd move with the Forward and Back buttons. To zoom in and out on the Content pane, you can double-tap the trackpad or pinch with two fingers — yes, just like on an iPhone. (Ever get the notion that someday we'll have a single box called "The Device" that does it all?)



REMEMBER



WARNING

- » **Home:** Click this button (look for the little house) to return to your home page.

Not all these buttons and controls may appear on your toolbar; you may not see many of these toolbar controls unless you add them yourself. To display or hide toolbar controls, choose View ⇨ Customize Toolbar. The sheet that appears works just like the Customize Toolbar sheet in a Finder window: Drag the control you want from the sheet to your Safari toolbar, or drag a control that you don't want from the toolbar to the sheet. As with most buttons and controls in Mac applications, if you hover your pointer over an unfamiliar button on the toolbar, Safari displays a tooltip to identify the button for you.

- » **Show/Exit Tab Overview:** A click of this toolbar button displays all the tabbed sites you've opened, as well as the iCloud tabs from Safari on your other Macs, PCs, and iOS devices.

- » **AutoFill:** If you fill out lots of forms online — when you're shopping on websites, for example — you can click the AutoFill button (which looks like a little text box and a pen) to complete these forms for you. You can set what information is used for AutoFill by choosing Safari ⇨ Preferences. Click the AutoFill toolbar button at the top of the Preferences dialog to specify the information Safari will automatically insert in forms.

To be honest, I'm not a big fan of *automatically* releasing *any* of my personal information to *any* website, so I don't use AutoFill. If you do decide to use this feature, make sure that the connection is secure (look for the padlock icon in the Address box), and read the site's Privacy Agreement page first to see how your identity data is treated. *Never* enter credit-card numbers or personal information on a website without a secure connection!

- » **Start Page:** Click this button to display the Start Page screen, which I discuss earlier. If you're having trouble finding it, the button bears a tiny, fashionable grid of squares.
- » **Zoom:** Shrink or expand the text on the page, offering smaller, space-saving characters (for the shrinking crowd) or larger, easier-to-read text (for the expanding crowd). To do so, click one of the Zoom buttons, which are labeled with a small and large letter A, respectively. (From the keyboard, you can press ⌘+= (equal sign) to expand and ⌘+- [hyphen] to shrink.)
- » **Bookmarks:** Click this button (which carries the Favorites symbol sandwiched between two horizontal lines) to display or hide the Favorites bar.
- » **Stop/Reload:** Click Reload (a circular arrow in the Address box) to *refresh* (reload) the contents of the current page. Although most pages remain static, some pages change their content at regular intervals or after you fill out a form or click a button. By clicking Reload (look for the curved arrow in the Address box), you can see what's changed on these pages. (I use Reload every

hour or so on CNN.com, for example.) While a page is loading, the Reload button turns into the Stop button — with a little X mark — and you can click it to stop the loading of the content from the current page. This feature is a real boon when a download takes *foorrewerr*, which can happen when you're trying to visit a popular or slow website. Using Stop is also handy if a page has very large graphics that are likely to take a long time to load.

- » **Sidebar:** Click this toolbar button at the left end of the Address box to hide or display the Safari Sidebar. You'll find the complete description of the Sidebar in the upcoming sections "Adding and Using Bookmarks" and "Working with the Reading List."
- » **History:** Click this button, which bears a clock symbol, to display or hide the History list, which I discuss in "Using History," later in this chapter.
- » **Mail:** Click this button (bearing an envelope icon) to send an email message with a link to the current page, just as though you clicked the Share button and chose Email This Page from the drop-down menu. Safari automatically opens Apple Mail (or your default email application) and creates a new message with the link already in the body. *Shazam!*
- » **Print:** Click this convenient button to print the contents of the Safari window. (Dig that crazy printer icon!)
- » **Website Preferences:** Click this button to display (or change) the preferences settings you've selected for this specific website. You can elect to use the Reader whenever possible to prevent most advertisements from appearing (more on this feature in the section titled "Working with the Reading List," later in this chapter), set the Zoom level, and enable or disable the Auto-Play feature for videos that contain an audio track.
- » **Privacy Report:** Click this button to display the number of web trackers contacted by the site you're currently visiting, as well as the trackers contacted by the specific page you're viewing.
- » **iCloud Tabs:** Click this button to see a scrolling list of just the iCloud Tabs you've set on your iOS devices, PCs, and other Macs running Safari. Click an entry in the list to jump directly to that page.
- » **Share:** If you have an iPhone or iPad, you're probably familiar with this button, which carries a rectangle-and-arrow symbol. Click the Share button to send the current page (or a link to it) to various destinations, including your Reading List, an email message, or your Notes or Messages applications. You can also add a bookmark to the current page by clicking the Share button. Figure 8-2 illustrates the Share button in action.

FIGURE 8-2:
The Share button
makes it easy to
spread goodness
and light!



Configuring Your Home Page and Start Page

Choosing a home page is one of the easiest methods of speeding up your web surfing. But a large percentage of the iMac owners with whom I've talked have never set their own home pages; instead, they simply use the default home pages provided by their browsers. Declare your independence! With Safari running, take a moment to follow these steps and declare your freedom to choose your own home page:



TIP

1. In Safari, display the web page that you want to become your new home page.

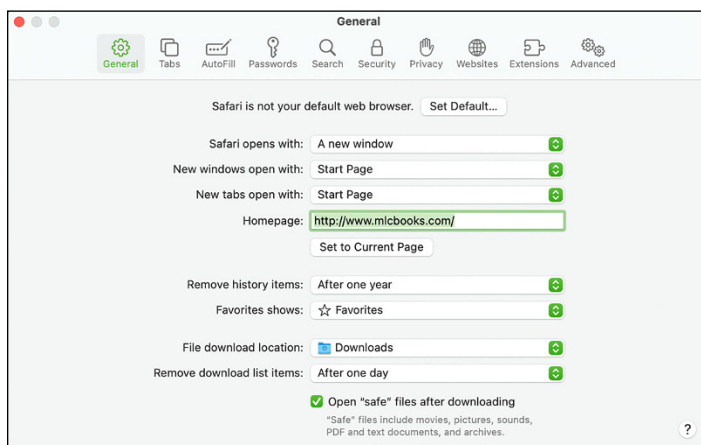
I recommend selecting a page with few graphics or a fast-loading popular site.

2. Choose Safari ⇨ Preferences or press ⌘+, (comma).
3. Click the General tab of the Preferences dialog.

You see the settings shown in Figure 8-3.

4. Click the Set to Current Page button.
5. Click the Close button to exit the Preferences dialog.

FIGURE 8-3:
Adding your own
home page is an
easy change you
can make.



Alternatively, click the New Windows Open With pop-up menu and choose Empty Page if you want Safari to open a new window with a blank page. This choice is the fastest one for a home page.



TIP

Visit your home page at any time by clicking the Home button on the toolbar. If it doesn't appear on your toolbar, you can add it by choosing View ⇨ Customize Toolbar.

Apple provides you with a default Start page based on your Favorites, Reading List, History, and iCloud bookmarks, but you can modify the appearance and what sections appear by clicking the Settings icon at the lower-right corner of the Start page. Safari displays a pop-up menu with check boxes for each section or feature; to remove a section from the Start page, disable the corresponding check box. If you enable the final check box, Background Image, Safari also displays a series of preview thumbnails. Click an image to use it as your Start page background, or click the thumbnail with the plus sign to select your own. To exit the Settings menu, click any open area of the Start page.

Adding and Using Bookmarks

No doubt about it: Bookmarks make the web a friendly place. As you collect bookmarks in Safari, you're able to jump from one site to another with a single click of the Bookmarks menu or the buttons on the Favorites bar.

To add a bookmark, first navigate to the desired page and then do any of the following:

» **Choose Bookmarks ⇄ Add Bookmark.**

Safari displays a sheet where you can enter a name and description for the bookmark and choose where it appears (Favorites bar, a Bookmarks folder, or the Bookmarks menu).

» **Press the ⌘ +D keyboard shortcut.**

Again, the sheet requests a name and location.

» **Drag the icon next to the web address from the Address box to the Favorites bar.**

This trick works with other applications besides Safari, including in a Mail message or Messages conversation. Drag the icon from the Safari Address box to the other application window, and the web page link is added to your document.



TIP

You can also drag a link on the current page to the Favorites bar, but note that doing this adds a bookmark only for the page corresponding to the link — not the current page.

To jump to a bookmark, do one of the following:



TIP

» **Choose it from the Bookmarks menu.** If the bookmark is contained in a folder, which I discuss later in this section, hover your pointer over the folder name to show its contents; then click the bookmark.

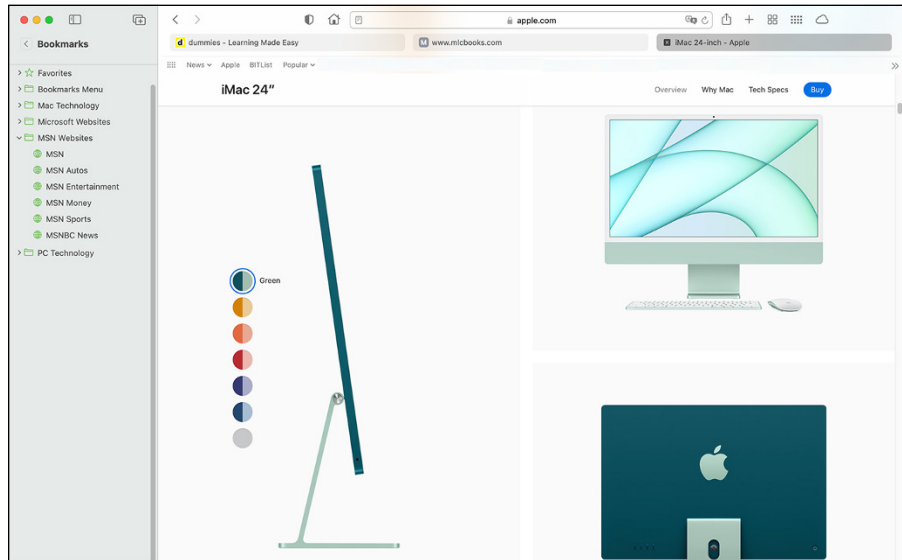
» **Click the bookmark on the Favorites bar.** If you've added a great number of items to the Favorites bar, click the More icon (which bears the >> icon) at the edge of the Favorites bar to display the rest of the buttons.

» **Click the Show Sidebar button on the Safari toolbar,** click the Bookmarks button on the Sidebar, and then click the desired bookmark. The Sidebar (shown in Figure 8-4) displays all your bookmarks, allowing you to review each collection at your leisure.

» **Choose Bookmarks ⇄ Edit Bookmarks** or press ⌘+Option+B to open the Bookmark list. For those who prefer more information (and more onscreen elbow room) while selecting or organizing their bookmarks, the Bookmark list is the cat's meow. It displays both the name and web address of each bookmark in your collection.

The more bookmarks you add, the more unwieldy the Bookmarks menu and the Sidebar can become. To keep things organized, choose Bookmarks ⇨ Add Bookmark Folder, and in the resulting dialog, type a name for the new folder. With folders, you can organize your bookmarks as *collections*, which appear in the column on the left side of the Sidebar; as folders in the Bookmark list; and as menus on the Bookmarks bar. (Collections also appear as separate submenus on the Bookmarks menu on the Safari menu bar.) You can drag bookmarks into the new folder to help reduce clutter.

FIGURE 8-4:
The Sidebar's
Bookmarks tab
puts all your
bookmarks in
easy reach.



To delete a bookmark or a folder from any of these locations, right-click the icon next to the entry and choose Delete from the shortcut menu.



If you have other Macs or iOS devices using the same Apple ID, Safari can share your bookmarks and Reading List selections across all Safari applications, including your iPad and iPhone! (It's a neat feature for those of us who rely heavily on bookmarks while surfing.) You can configure what Safari shares through iCloud from the Apple ID pane in System Preferences.

SAFARI THE TRANSLATOR

I'm excited about the Safari Translation feature that debuted in macOS Big Sur, and with good reason — you can visit a foreign-language site and Safari can translate entire pages at one time, rather than a single sentence or a paragraph! If the language is recognized and can be translated, Safari will display a message in the Address box. Click the Translate icon that appears at the right of the Address box — it looks like two speech bubbles from your favorite cartoon — and choose Translate to English from the menu. To return the page to its original content, click the Translate icon again.

There are limitations, of course: At this time, Safari recognizes only English, Spanish, German, Chinese, French, Russian and Portuguese. (Safari will identify whether it recognizes the language on a page.) The Translation feature also requires an Internet connection, but that's required for surfing the web anyway. (No big deal there.)

I look forward to further improvements to this feature as Safari continues to mature. A world of new foreign web sites is now ours to peruse!

Working with the Reading List

Now that you know all about bookmarks, I want to introduce another method of loading, saving, and retrieving specific pages in Safari. This method is hiding in the now-familiar confines of the Safari Sidebar!

The Sidebar's Reading List tab allows you to save entire pages for later perusal. From the keyboard, press ⌘+Shift+L to display the Sidebar, and click the Reading List button. Click Bookmarks ⇨ Add to Reading List or press ⌘+Shift+D to add the current page to the list, or hover your pointer over the left end of the Address box and click the circular icon with the plus sign that appears. Oh, and don't forget that you can click the Sharing icon on the toolbar and choose Add to Reading List from the drop-down menu to achieve the same victory.

When you click one of those entries in the Reading List and then click the Show Reader View icon (it looks like a tiny page) that appears at the left end of the Address box, the real magic begins! If you click it, the Reader panel appears, displaying text articles free of advertisements and silly pop-ups. And if an article is continued over multiple web pages, the Reader panel automatically stitches them together to form a continuous block of text. (Think of an e-book displayed in Books on your iMac and you get the idea.) Note that not all web pages support Reader View because of formatting and text issues, so the Show Reader View icon may not always appear.

To delete an item from the Reading List, right-click the item and choose Remove Item from the shortcut menu.



REMEMBER

If the Show Reader View icon appears in Safari's Address box — and you're *not* using the Reading List — don't panic! Because the page you're reading contains text articles, Safari is offering to display it in the Reader panel. (If a page has nothing to display in the Reader panel, the icon disappears.) To display the page in the Reader panel, click the Show Reader View button in the Address box. To return to your mundane browsing experience, click the Reader icon again.



TIP

If you're as big a fan of Reader View as I am, you'll be thrilled to learn that you can turn on this feature for every page on a website! When Reader View is the default, every page on a website that's compatible with the Reader panel automatically displays in Reader view. (I always set all my news websites — such as CNN and Macworld — to default to Reader view.) When you've navigated to the desired website, click the Website Preferences button on the toolbar (if you've added it), or choose Safari ⇨ Settings for This Website. Click the Use Reader When Available check box to enable that feature, and you're good to go!

Downloading Files

A huge chunk of the fun you'll find on the web is downloading images and files. If you've visited a site that offers files for downloading, you typically click the Download button or the download-file link, and Safari takes care of the rest. While the file is downloading, feel free to continue browsing or even to download additional files; the Downloads status list helps you keep track of what's going on and when everything will finish transferring.

To display the Downloads status list from the keyboard, press ⌘+Option+L. You can also click the Download button in the top-right corner of the window to display the Downloads list.

By default, Safari saves any downloaded files to the Downloads folder (which I like and use) on your Dock. To specify the location where downloaded files are stored (to scan them automatically with an antivirus program, for example), follow these steps:

1. **Choose Safari ⇨ Preferences or press ⌘+, (comma).**
2. **Click the General tab of the Preferences dialog (refer to Figure 8-3).**
3. **Click the File Download Location pop-up menu and choose Other.**

Safari displays a standard Open dialog, allowing you to choose the destination.

4. **Navigate to the location where you want to store the files.**
5. **Click the Select button.**
6. **Click the Close button to exit Preferences.**

To download a specific image on a web page, move your pointer over the image, right-click, and choose Save Image As from the shortcut menu. Safari prompts you for the location where you want to store the file.

You can choose to automatically open files that Safari considers to be safe — things like movies, text files, and PDF files that are *very* unlikely to store a virus or a damaging macro. By default, the Open “Safe” Files After Downloading check box is selected on the General tab of the Safari Preferences dialog. If you’re interested in preventing *anything* you download from running until you’ve checked it with your antivirus application, you can deselect the check box and breathe easy.



TIP

Luckily, Safari has matured to the point where it can seamlessly handle most multimedia file types that it encounters. If you’ve downloaded a multimedia file and Safari doesn’t seem to be able to play or display it, however, try loading the file in QuickTime Player. QuickTime Player is the Swiss Army knife of multimedia players, able to recognize a huge number of audio, video, and image formats. To launch the Player, click the Spotlight search icon and then type **QuickTime Player**.

Using History

To keep track of where you’ve been, you can display the History list by clicking the History menu in Safari. To return to a page in the list, just choose it from the History menu. Note that Safari also arranges older history items by the date when you visited a site, so you can easily jump back a couple of days to that page you forgot to bookmark!

Safari also searches the History list automatically when it fills in an address you’re typing. That’s the feature I mention in “Visiting Websites,” earlier in this chapter.

To view your Start Page display, choose Bookmarks ⇨ Show Start Page, or click the Start Page button at the far-left end of the Favorites bar or on the Safari toolbar (if you’ve added it).



TIP

You can add a site to your Start Page manually by dragging a bookmark from the Sidebar to the Start Page icon on the Favorites bar, or by dragging a link or URL address from another application to the Start Page icon on the Favorites bar. (A plus sign appears next to your pointer to indicate the addition.) To rearrange

screens in the Start Page display, just drag a screen thumbnail to the desired location.

If you're worried about security and would rather not keep track of where you've been online, find out how to clear the contents of the History file in the upcoming section "Handling ancient history."

Tabs Are Your Browsing Friends

Safari also offers *tabbed browsing*, which many folks use to display (and organize) multiple web pages at one time. If you're doing a bit of comparison shopping for a new piece of hardware among several online stores, for example, tabs are ideal.

When you hold down the ⌘ key and click a link or bookmark, a tab representing the new page appears at the top of the Safari window. Just click the tab to switch to that page. You create and display the tab by holding down Shift+⌘. (If you don't hold down ⌘, things revert to business as usual, and Safari replaces the contents of the current tab with the new page.)

You can also open a new tab by clicking the New Tab button in the toolbar or pressing ⌘+T. To move among multiple tabs, simply click the desired tab header. If you're finished with a page, you can remove a tabbed page by hovering your pointer over the tab and clicking the X button that appears.



TIP

Trackpad fans will appreciate Safari's two gestures that control tabs. With multiple tabs active, you can do these things:

- » Pinch to display them all in the Tab Overview display (shown in Figure 8-5).
- » With the Tab Overview open, swipe with two fingers to move among tabs.

To display your tabs in Tab Overview without a trackpad, click the Show Tab Overview button that appears at the right end of the Safari toolbar. From All Tabs view, you can click any tab thumbnail to switch to that tab. (iCloud Tabs shared from your other Macs and iOS devices appear at the bottom of the Tab Overview display.) To close a tab in Tab Overview, move your pointer over the thumbnail and click the X button that appears in the thumbnail's top-left corner. To close the Tab Overview display, click the Hide Tab Overview button at the right end of the Safari toolbar.

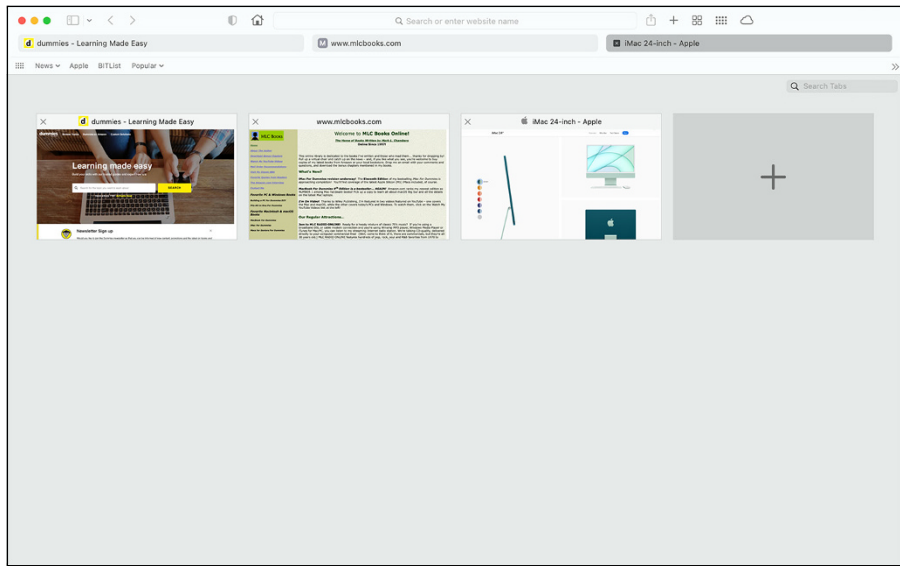


FIGURE 8-5:
Hang on, Martha;
we've struck tabs!



TIP

All Tabs view also displays the iCloud Tabs you've set on your other Macs and iOS devices.

To fine-tune your tabbed browsing experience, choose Safari ⇨ Preferences to display the Preferences dialog, and click Tabs. From here, you can specify whether a new tab or window automatically becomes the active window in Safari and whether you want to switch tabs by pressing ⌘+1 through ⌘+9.



TIP

If you open a page that plays audio — as background music or as part of a video shown on the page — you can click the speaker icon that appears on the tab header to mute that audio. (Think really, *really* irritating video advertisements.) To unmute the audio, click the speaker icon again. You can also display the Settings for this Website sheet to disable autoplay of videos with sound across all the pages on a website. Choose Safari ⇨ Settings for This Website, click the Auto-Play drop-down list in the resulting dialog, and choose Stop Media with Sound to banish those irritating videos from the current website.

macOS Monterey also introduces *tab groups*, which work somewhat like bookmark folders — they allow you to organize, save, and instantly load a number of tabs as a group! If you open a set of tabs often, this really comes in handy (for example, I often open the same shopping sites to compare prices and features on a purchase).

To create a new tab group, click the Tab Group button at the top of the Sidebar; if the Sidebar is hidden, click the Tab Group drop-down menu (which appears as a down-arrow icon at the left side of the toolbar). From either location, you can create a new empty tab group or create a tab group with the tabs that are currently open. You can also create tab groups from the File menu.

POWER USERS PIN SITES

Safari also offers *pinned tabs*, which allows you to jump to a specific page. Pinned sites hang out at the left end of the Tab bar, usually sporting a recognizable symbol taken from the site itself. Unlike the standard tabs that I discuss in this section, however, pinned tabs are updated automatically in the background from the moment you launch Safari, which is perfect for continuously changing sites such as Facebook and Twitter.

To set a pinned tab, navigate to the page you want to pin and choose Window ⇨ Pin Tab. The pinned tab is added at the far-left end of the Tab bar, and you can click it at any time to return to that page.

To remove a pinned tab, click the tab to switch to that page and choose Window ⇨ Unpin Tab.

To select an existing tab group, you can click the desired group in the Sidebar, or if the Sidebar is hidden you can use the Tab Group drop-down menu.

macOS even shares tab groups you've created with your other Macs and iOS devices, so you can spread the convenience around!

Printing Web Pages

If you've encountered a page that you'd like to print, follow these steps:

1. **Display the desired page.**
2. **Choose File ⇨ Print or press ⌘+P.**
3. **In the Print dialog, select the number of copies you want to print.**
4. **Specify whether you'd like to print the entire page, only the current page, or a range of pages.**
5. **Click Print.**



TIP

A quick word about printing a page in Safari: Some combinations of background and text colors might conspire to render your printed copy worthless. In a case like that, use your printer's grayscale setting (if it has one), or click the Show Details button at the bottom of the Print sheet and deselect the Print Backgrounds check box (which can save you quite a bit of ink or toner). Alternatively, you can simply click and drag to select the text on the page, press ⌘+C to copy it, and paste

the text into TextEdit, Microsoft Word, or Pages, where you can print the page on a less-offensive background while keeping the text formatting largely untouched. You can also save the contents of a page as a PDF file by choosing File ⇨ Export as PDF or clicking the PDF pop-up menu at the bottom of the Print sheet. Finally, if the page is available in Reader view, you can print it from there and avoid most color conflicts!



TIP

If you'd rather mail the contents of a web page to a friend, click the Share button and choose Email This Page from the drop-down menu. If you've added the Mail button to your toolbar, one click does the job. Mail loads automatically, complete with a prepared email message. Just address the message to the recipients and click Send.

Protecting Your Privacy

No chapter on Safari would be complete without a discussion of security, against both outside intrusion from the Internet and prying eyes around your iMac. Therefore, this last section covers protecting your privacy.

Although it's diminutive, the padlock icon that appears to the left of the website's name in the Address box when you're connected to a secure website means a great deal! A *secure site* encrypts the information that you send and receive, making it much harder for those of unscrupulous ideals to obtain private data, such as credit-card numbers and personal information. You can click the padlock icon (next to the site name) to display the security certificate in use on that particular site. A secure site web address begins with the prefix `https:` instead of `http:`. (The extra *s* stands for *secure*. A Good Thing.)

Yes, there are such things as bad cookies

First, a definition of this ridiculous term. A *cookie* — a small file that a website automatically saves on your Mac's drive — contains information that the site will use on your future visits. A site might save a cookie to preserve your site preferences for the next time or (as with shopping on Amazon.com) to identify you automatically and customize the offerings that you see.

In and of themselves, cookies aren't bad things. Unlike a virus, a cookie file isn't going to replicate itself or wreak havoc on your system, and only the original site can read the cookie that it creates. But many folks don't appreciate acting as a

gracious host for a slew of snippets of personal information (not to mention that some cookies have highly suggestive names, which can lead to all sorts of conclusions; end of story).

You can opt to disable cookies or set Safari to accept cookies only from the sites you choose to visit. To change your Cookie Acceptance Plan (CAP, for those who absolutely crave acronyms), follow these steps:

1. **Choose Safari ⇨ Preferences.**
2. **Click the Privacy tab of the Preferences dialog.**
3. **Click Block All Cookies.**



REMEMBER

If a site's cookies are blocked, you might have to take care of things manually, such as by providing a password on the site that used to be read automatically from the cookie.



TIP

Feeling nervous about the data stored by the websites you visit? You can always delete *all* that stored information with a single click. On the Privacy pane of the Safari Preferences dialog, click the Manage Website Data button; then click the Remove All button. You'll be asked to confirm your draconian decision.

The Privacy pane also includes the Prevent Cross-Site Tracking check box, which works . . . *sometimes*. Unfortunately, it's up to a particular website whether to honor Safari's request for privacy. Also, some sites — such as Amazon.com — use tracking legitimately to keep track of your likes and purchases each time you return. Apple includes Intelligent Tracking Prevention to Safari; this feature is automatic and works behind the scenes, helping prevent unwanted intrusion into your browsing history. If you're especially worried about leaving a trail of breadcrumbs behind you on the web, I recommend selecting this check box.



TIP

You can also check any site you visit for active trackers. Click the Privacy Report icon on the Safari toolbar and you'll see totals for the number of trackers contacted by both the site (as a whole) and the current page.

Finally, you can use the Websites tab of Safari Preferences to limit websites' access to your iMac's Location Services feature, which can pinpoint your current location. Facebook's website, for example, uses Location Services if you allow it to do so. Access can be set through prompting, or you can deny access to Location Services for all websites.

Banishing pesky iCloud Keychain passwords

I'm the world's biggest critic of *keychains*, which Monterey uses to automatically provide all sorts of login information throughout the system. In Safari, for example, the password information is automatically entered for you whenever a website you've approved requires you to log in.

To be more specific, I'm sure that many readers will adopt *iCloud Keychain*, which stores password and credit-card information for Safari and wirelessly distributes that information automatically to other Macs and iOS devices that use the same Apple ID. Apple even says that the passwords generated by iCloud Keychain are more complex and harder to crack, which *sounds* more secure, right?

I'd rather keep a pet piranha in a cereal bowl than use this feature! Why? Whenever you're logged in, *anyone* who's using your iMac gets control of your online persona (in the form of your passwords to secure websites). Safari, like an obedient puppy, automatically provides access to sites with stored keychain passwords.



REMEMBER

If you'd like to take the far-less-convenient-but-*much*-safer, old-fashioned route of remembering your passwords yourself, follow my lead: Visit the Apple ID pane in System Preferences, click the iCloud entry on the left side of the dialog, and deselect the Keychain check box to turn off the iCloud Keychain feature.

Now that I've warned you thoroughly, I feel better about mentioning the Passwords tab of Safari's Preferences dialog for those who *do* decide to use iCloud Keychain. On the Passwords tab, you can view the iCloud Keychain information that Safari uses and remove a specific password or all passwords from your iCloud Keychain.



TIP

You can also manage your Safari passwords from the Passwords pane in System Preferences.

Handling ancient history

As you might imagine, your History file leaves a very clear set of footprints indicating where you've been on the web. To delete the contents of the History menu, choose History ⇨ Clear History (at the bottom of the History menu).

Safari also allows you to specify an amount of time to retain entries in your History file. Open the Safari Preferences dialog, click the General tab (refer to Figure 8-3), and then make a choice from the Remove History Items pop-up menu

to specify the desired amount of time. Items can be rolled off daily, weekly, biweekly, monthly, or yearly. You can also turn off automatic removal.

Setting notifications

In Monterey, Safari can allow websites you've approved to send you messages through Notification Center. The Websites tab of Safari's Preferences dialog controls which sites are given this functionality. To prevent a website from sending notifications, click the Notifications entry in the list on the left side of the dialog and choose Deny from the drop-down menu next to the offending site. You can also remove a website from the list by clicking it and then clicking the Remove button.

Avoiding those @*!^%\$ pop-up ads

I hate pop-up ads, and I'm sure that you do, too. To block many of those pop-up windows that advertise everything from low-rate mortgages to "sure-thing" Internet casinos, open the Safari Preferences dialog, click the Websites tab, and select the Pop-up Windows entry in the list on the left side. Now you can allow or block pop-up ads for each website you visit!

- » Using your iCloud Drive
- » Sharing documents with iOS devices by using Handoff
- » Expanding your Desktop with Sidecar
- » Setting iCloud preferences
- » Managing iCloud storage

Chapter 9

Expanding Your Horizons with iCloud

Readers often ask me to name my favorite reasons that they should switch platforms. In other words, why should a Windows user who thinks all is well move to the Apple universe? I always mention the facts that Apple makes superior hardware and that Monterey is a much better operating system than Windows 10. My favorite selling point is *innovation*. Apple comes up with the best ideas first, and everyone else plays catch-up.

Here's the perfect example: The folks at Apple got tired of synchronizing their iOS devices with their computers over USB cable. Remember those archaic days? When you took a photo with your iPhone or created a new document with your iPad, your new additions just sat in their original locations until you had a chance to sync your device with your iMac. But with Apple's iCloud functionality, your stuff gets *automatically* synchronized and backed up across the Internet!

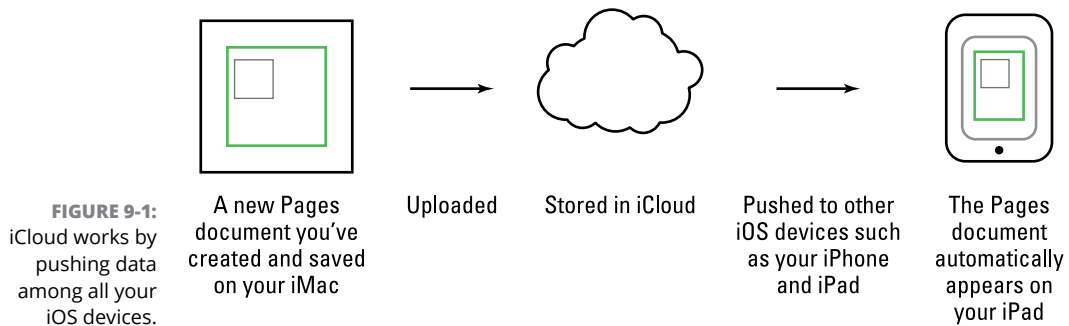
In this chapter, I save you the trouble of researching all the benefits of iCloud. Heck, that's one of the reasons you bought this book, right?

So How Does iCloud Work, Anyway?

All of today's iOS devices can display or play the same media: photos, music, books, TV shows, and such. Heck, iOS devices (your iPhone, iPad, and iPod touch) can even share applications. Therefore, it makes sense to share all your digital media effortlessly across these devices, and that's what iCloud is all about. Apple calls this synchronization *pushing*.

Here's how the pushing process works. Imagine that you just completed a Pages document on your iMac (an invitation for your son's birthday party), but you're at the office and need to get the document to your family so that they can edit and print it from your son's iPad.

Before iCloud, you had to attach the document to an email message or upload it to some type of online storage (such as Dropbox or Microsoft's OneDrive); then a family member had to download and save the document to the iPad before working with it. With iCloud, you simply save the document on your iMac to the Pages folder on your iCloud Drive, and macOS automatically pushes the document to the iPad (using the same Apple ID). Your document appears on the iPad, ready to be opened, edited, and printed — and it appears as well on any other devices that use the same Apple ID. Figure 9-1 gives you an idea of what's happening in the background when one of your devices pushes data with iCloud.



I'll admit that Windows eventually implemented a similar process with OneDrive. You can save documents within Office 365 to OneDrive and access them on other PCs and devices. Ah, but iCloud isn't limited to storing just your files and folders! Monterey can also automatically synchronize your email accounts, Calendar, and Contacts entries with other iOS devices across the Internet, so staying in touch is much easier (no matter where you are or which device you happen to be using at the moment).

Apple also throws in 5GB of free online storage that you can use for all sorts of things — not only digital media files, but also documents that you’d like to save online for safekeeping. Items you buy through the iTunes Store, iBooks Store, or App Store — music, video, podcasts, books, and applications — don’t count against your 5GB limit. (More on how you can expand that 5GB limit with iCloud+ later in the chapter.)



REMEMBER

To join the iCloud revolution, you need an Apple ID. If you didn’t create one during initial Monterey setup — or you haven’t already created one for your iPhone or iPad — you can create an Apple ID from the App Store.



TIP

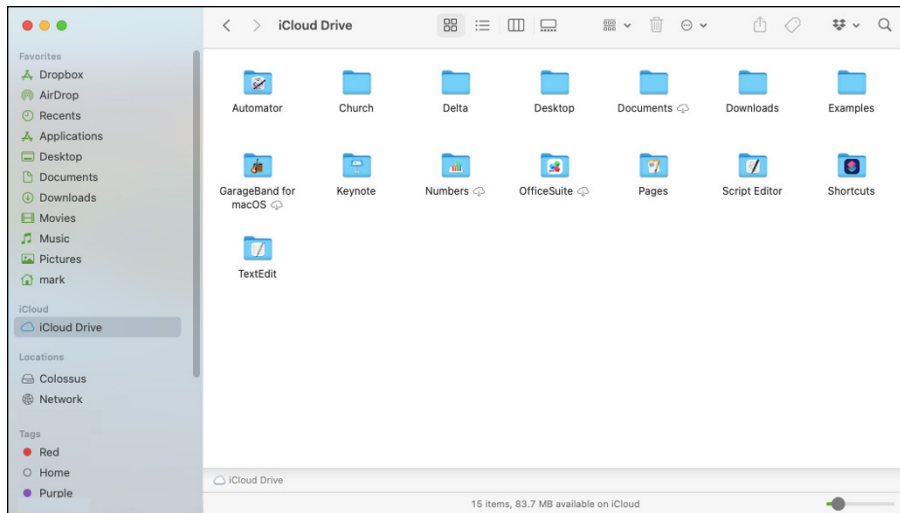
You can also access your documents through the web at <https://www.icloud.com>. Log in with your Apple ID and password to send mail; access your contacts and calendar; edit your notes and reminders; locate your devices; and use online versions of Photos, Pages, Numbers, and Keynote. (Note that you may be prompted to enter a security code from an Apple device the first time you log in to iCloud on the web.)

Moving, Saving, and Opening iCloud Documents

iCloud online storage for your documents is definitely neat. Your iCloud Drive functions much like other popular online storage services such as Dropbox and Microsoft OneDrive, allowing you to save documents, load documents, and move files to and from your internal drive with ease by using a Finder window. In fact, iCloud Drive keeps things tidy for you: If you move a file from your iCloud Drive to your local drive, it’s also deleted automatically from iCloud Drive on your other Macs and iOS devices that use the same Apple ID. (Monterey prompts you for permission first, of course.)

Figure 9–2 illustrates my iCloud Drive in action. You can access your iCloud Drive from the Finder window’s Sidebar. Note that iCloud folders are automatically created for supported applications, such as Pages and Numbers, allowing you to click the corresponding iCloud folder from the application’s Open dialog. In other words, *both* your iCloud Drive and the application-specific iCloud folder are available within the application’s Open dialog. It’s about as convenient as you can get.

FIGURE 9-2:
Each of these
iCloud folders can
joyously store
documents.



Putting Handoff to Work

If you're like me, your favorite moment in a team track event is the all-important handoff of the baton from one runner to the next. Handoff is the perfect name for this macOS feature, because it transfers what you're doing on your iOS devices to matching applications on your Mac!

Suppose that you're using Maps on your iPhone, and you realize that you'd rather view the location on your iMac's larger screen (as well as print it from the USB printer connected to the Mac). If you're within Bluetooth-signal range of your iMac, Handoff is ready to go: An icon for the macOS version of Maps automatically appears at the left end of the Dock in Monterey. One click of that icon, and your aluminum supercomputer opens Maps and displays the same location!

You're not restricted to just one application. Each time you open an application that Handoff supports (such as Safari or Mail), macOS offers you the chance to open the matching application on your iMac and displays the current data from the iOS app. All this is trouble free; there's nothing to configure or set.

Caveats? Only three at this writing:

- » **Bluetooth is required.** Bluetooth networking must be turned on for both the iOS device and the iMac for Handoff to work, and the iOS device must be within a 30-foot radius of your iMac. (That's the maximum distance over which Bluetooth hardware can broadcast; walls and other obstructions reduce that range.)

- » **You need the right hardware.** To use Handoff, you need a 2012-model iMac or later that includes Bluetooth LE hardware.
- » **iOS 8 or later is a must.** Handoff is compatible only with iOS devices running iOS 8 or later.

To start using Handoff, open the General pane in System Preferences and enable the Allow Handoff Between this Mac and Your iCloud Devices check box.

Handoff works in the other direction as well, allowing you to pick up where you left off on your iMac application by transferring the active session to your iPhone or iPad. Swipe the icon that appears on your iOS device to start the ball rolling.



TIP

Your old friends Copy and Paste can even be used to share text, video, or images betwixt your iMac and your iOS devices (or another Mac). This feature is called Universal Clipboard, and it allows you to copy items on the source device and paste them on the destination device! The process is automatic: Just copy the item as you normally would, let iCloud do all the technical stuff behind the scenes, switch to the other device, and paste the item. (Sorry, Microsoft: Only Macs and iOS devices need apply.)

Expanding Your Horizons with Sidecar

Do you own a late-model iPad running iOS version 13 or later? If so, rejoice! Monterey includes a feature called *Sidecar*, which allows your iPad to act as a secondary display for your iMac. You can use Sidecar to extend your Monterey Desktop (giving you more screen real estate for applications and Finder windows), or you can use the Apple Pencil input device to turn your iPad into a drawing tablet.

To turn Sidecar on, click the Control Center icon in the Finder Menu bar and click the AirPlay icon that appears in the Sound tile; then choose your compatible iPad from the menu that appears. If you decide on a wired connection, you'll need a USB-C cable that can connect to your iPad. As long as your iPad is within 30 feet of your iMac, however, you can connect wirelessly by using Bluetooth.

Configuring iCloud

You control all the settings for iCloud from Monterey's Apple ID pane in System Preferences (shown in Figure 9-3). Click the System Preferences icon on the Dock and then click the Apple ID icon. (If you're prompted to sign in, enter your Apple

ID and your password.) Click the iCloud entry in the list on the left side of the window to display the iCloud panel.

FIGURE 9-3:
The iCloud pane
appears in
System
Preferences.



Most of the check boxes on the iCloud panel control whether a particular type of data — such as a Contacts entry, Keychain password, Mail message, or calendar entry in Calendar — is pushed to all your iOS devices. (If an Options button appears next to an entry, you can click it to specify additional settings.)

Note, however, that you can enable three other unique features from this pane:

- » **Photos:** Click the Options button and enable the My Photo Stream check box to allow your iMac to receive photos from your iOS devices automatically. Take a photo with your iPhone, for example, and that image is immediately pushed to your iMac and iPad. On the iMac, however, Photo Stream goes one step further: The photos appear automatically in Photos in a special album titled Photo Stream. To store *all* your photos in iCloud, enable the iCloud Photos check box. (If you have a large number of photos, you may have to buy



REMEMBER

additional iCloud storage space to use the iCloud Photo Library feature.) You can also enable Shared Albums, which allows you to share photos with others from Photos.

To turn on iCloud Photos from within Photos, choose Photos ⇨ Preferences, click the iCloud button, and select the desired check box.

» **Hide My Email:** Click the Options button to generate unique iCloud Mail email addresses that you can use to forward messages to your private email accounts. (In other words, you no longer have to provide your private email address to individuals, websites, or organizations that may turn out to be less than legitimate.) If you're security-conscious like me, this is A Big Deal because it allows you to continue communications through email without disclosing your actual email address.

» **Find My Mac:** Talk about Buck Rogers! Imagine locating a lost or stolen iMac from your iPhone or iPad. Now think about this: With Find My Mac, you can even lock or completely wipe your Mac's hard drive *remotely*, preventing unauthorized use and erasing your private data! After you access your iMac from another iOS device, you can play a sound, send a message to be displayed onscreen, remotely lock the machine, or remotely wipe the drive. To use this feature, click the check box next to Find My Mac to enable it; then click the Options button and make sure that both the settings are turned on. (Remember that you must enable Find My on each device you want to locate.)

After you wipe the drive, you can't locate your iMac again.



WARNING

Managing Your iCloud Storage

Apple knows that you're curious about how much space you've taken up in your personal iCloud. To monitor your iCloud storage, click the Manage button in the bottom-right corner of the iCloud panel. On the sheet that appears, shown in Figure 9-4, you can see how much space you're using for document and data storage.

Click the data type in the left column, and iCloud displays the amount of storage space that's being used for that data. In Figure 9-4, I'm checking the amount taken by my iCloud Photo Library. Other items that might appear on this sheet include Mail and selected iPad and iPhone apps that support iCloud.

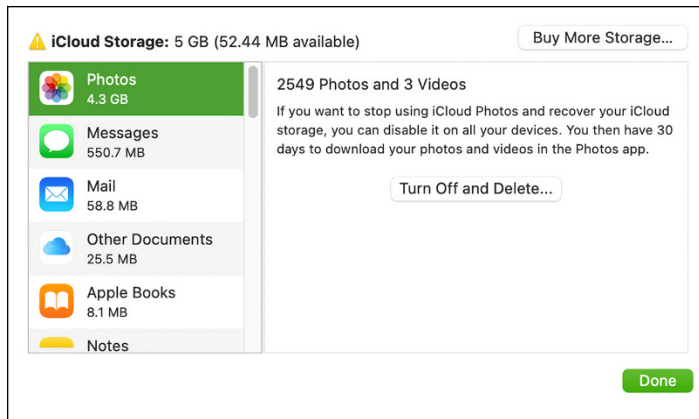


FIGURE 9-4: Checking on your iCloud storage.



TIP

If you find yourself running out of iCloud storage space, delete any stored item by selecting it in the list on the left; then follow any instructions that appear on the right side of the sheet.

And if you need more elbow room than 5GB, Apple is happy to provide 50GB, 200GB, or even a whopping 2TB of additional storage for a monthly subscription fee of 99 cents, \$2.99, or \$9.99, respectively. Click the Manage button on the iCloud panel and then click the Buy More Storage button to subscribe.

- » Understanding access levels
- » Adding, editing, and deleting user accounts
- » Restricting access and limiting accounts
- » Logging in, sharing, and encrypting

Chapter **10**

Creating a Multiuser iMac

Everybody wants a piece. (Of your iMac, that is.)

Perhaps you live in a busy household with kids, significant others, grandparents, and a wide selection of friends, all of them clamoring for a chance to spend time on the Internet, take care of homework, or enjoy a good game.

On the other hand, your iMac might occupy a classroom or a break room at your office — someplace public, yet everyone wants their own Private Idaho on the iMac, complete with a reserved spot on the internal drive and their own hand-picked attractive Desktop background.

Before you throw your hands up in the air in defeat, read this chapter and take heart! Here, you find all the step-by-step procedures, explanations, and tips to help you build a *safe* multiuser iMac that's accessible to all.

(Oh, and you still get to use it, too. That's not being selfish.)

Once Upon a Time (an Access Fairy Tale)

Okay, so you don't have Cinderella, Snow White, or that porridge-loving kid with the trespassing problem. Instead, you have your brother Bob.

Every time Bob — you know, the only guy on the planet still using an ancient flip phone — visits your place, it seems he needs to do “something” on the Internet, or he needs a moment with your iMac to bang out a quick message with his web-based email application. Unfortunately, Bob's forays onto your Mac always end up changing stuff, such as your Desktop settings, Contacts database, and Safari bookmarks.

What you need, good reader, is a visit from the Account Fairy. Your problem is that you have but a single user account on your system, and macOS Monterey thinks that Bob is *you*. By turning your aluminum supercomputer into a multiuser system and giving Bob his own account, Monterey can tell the difference between the two of you, keeping your druthers separate!

With a unique user account, Monterey can track all sorts of things for Bob, leaving your computing environment blissfully pristine. A user account keeps track of stuff such as

- »» Contacts cards
- »» Safari bookmarks and settings
- »» Desktop settings (including background images, screen resolutions, and Finder tweaks)
- »» Music libraries, just in case Bob brings his own music (resigned sigh)

Also, Bob gets his own reserved Home folder on your iMac's internal drive, so he'll quit complaining about how he can't find his files. Oh, and did I mention how user accounts keep others from accessing *your* stuff? And how you can lock Bob out of where-he-should-not-be, such as certain applications (including Messages and Mail)? Heck, you can even lock Bob out of specific websites (including that off-shore Internet casino site he's hooked on)!

User accounts affect just about everything you can do in macOS and on your iMac. The moral of my little tale? A Mark's Maxim to the rescue:



MARK'S
MAXIM

Assign others their own user accounts, and let Monterey keep track of everything. Then you can share your iMac with others and still live happily ever after!

Big-Shot Administrator Stuff

Get one thing straight right off the bat: *You* are the administrator of your iMac. In network-speak, an *administrator* (*admin*, for short) is the one who has the power to Do Unto Others, creating new accounts, deciding who gets access to what, and generally running the multiuser show. In other words, think of yourself as the monarch of macOS (the king or queen, not the butterfly).



TIP

I always recommend that you have only one (or perhaps two) accounts with administrator-level access on any computer. This way, you can be assured that no one can monkey with your Mac while you're away from the keyboard. So why might you want a second admin account? Well, suppose that you're away from your iMac. Think "daughter takes it with her on a trip to Europe." You might need to assign a second administrator account to a *trusted* person who knows as much about your iMac as you do. (Tell 'em to buy a copy of this book.) That way, if something breaks or an account needs to be tweaked in some way, the other person can take care of it while you're absent — but without getting access to your personal data. Don't forget that if necessary, you can always log in to your second admin account and change the password to guarantee security!

In the following sections, I explain the typical duties of a first-class iMac administrator.

Deciding who needs what access

The two most common user account levels are

- » **Admin (administrator):** See the preceding section.
- » **Standard:** Perfect for most users, these accounts allow access to just about everything but don't let the user make drastic changes in Monterey or create new accounts.



REMEMBER

Both Admin and Standard accounts can be assigned specific limits by you or another admin account, using the Screen Time pane within System Preferences.

Another Mark's Maxim is in order:



MARK'S
MAXIM

Assign other folks standard-level accounts and then decide whether each new account needs to be modified to restrict access. Never assign an account admin-level access unless you deem that access to be truly necessary.

Standard accounts are quick and easy to set up, and I think they provide the perfect compromise between access and security. You'll find that standard access allows your users to do just about anything they need to do with minimum hassle.

Accounts are highly configurable, so you can make sure that your kids don't end up trashing the internal drive, sending junk mail, or engaging in unmonitored chatting. (*Note:* Attention, all parents, teachers, and anyone who designs a single public-access account for a library or organization: This means *you*.)

Adding users

All right, Mark. Enough pregame jabbering. Show this good reader how to set up new accounts! Your iMac already has one admin-level account for you (created during the initial Monterey setup process). You need to be logged in to that account to add a user. To add a new account, follow these steps:

1. In the Users & Groups pane of System Preferences, click the New User button (plus sign) at the bottom of the accounts list.

The empty user record sheet shown in Figure 10-1 appears.

If the New User button is disabled and you can't click it, click the padlock in the bottom-left corner of the System Preferences pane and enter your password to unlock the Users & Groups pane.



TIP

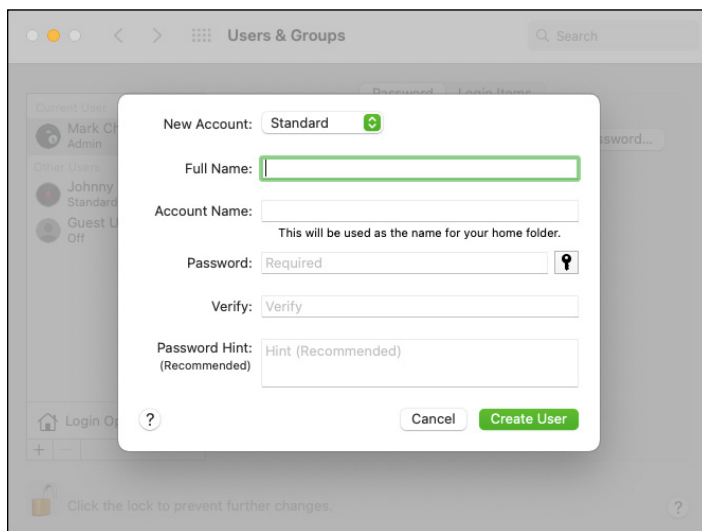


FIGURE 10-1:
Fill out these
fields, and you
have a new user.



TECHNICAL
STUFF

2. Choose the access level for this user from the New Account pop-up menu.

By default, the user receives a standard-level account. You can also choose an administrator account or a sharing-only account.

The sharing-only account allows the user to copy or open shared files from your iMac remotely (from another computer), but that user can't directly log in to your Mac.

3. In the Full Name text box, type the name you want to display for this account (both in the Current User list and on the Login screen); then press Tab to move to the next field.



TIP

macOS automatically generates an *account name* in the Account Name field for use as your screen and buddy name in Messages and various network applications. The account name is also the name of the folder that macOS creates on the computer's internal drive for this user. You can keep the default account name or type a new one, but this name can't contain any spaces.

4. Type the password for the new account; then press Tab.

Click the button with the key icon next to the Password field, and Monterey is happy to display Password Assistant, complete with a suggestion. Open the Suggestion pop-up menu to see additional suggestions. You can choose the password's length and choose among several types: letters and numbers; numbers only; completely random; or even FIPS-181-compatible (government-quality). Password Assistant automatically copies the password you're considering into the Password and Verify text boxes.

As always, when you enter or verify a password, macOS displays bullet characters for security.

5. Type the password in the Verify text box and press Tab.

6. (Optional) If you decide to use the password-hint feature, you can enter a short sentence or question in the Hint text box.

The hint is displayed after three unsuccessful attempts to enter the account's password.



WARNING

From a security standpoint, password hints are taboo. (I *never* use 'em. If someone is having a problem logging in to a computer I administer, you'd better believe I want to know *why*.) Therefore, despite the recommendation that Monterey shows here, I strongly recommend that you skip this field. If you decide to offer a hint, *keep it vague!* Avoid hints like "Your password is the name of the Wookiee in *Star Wars*." And don't embed the password in the hint!

7. Click the Create User button to finish and create the account.

The new account shows up in the Current User list and the Login screen.

Each user's Home folder has the same default subfolders, including Movies, Music, Pictures, Public, and Downloads. A user can create new subfolders within their Home folder at any time.



TIP

You may want to create a single standard-level account for an entire group of people to use. Perhaps you want to leave the iMac in kiosk mode in one corner of the office, or everyone in a classroom will use the same account on the Mac. Keep your one admin-level account close to your bosom, and create a standard-level account for the Unwashed Horde. (There's also an option to create a Guest account if your iMac will be used by others only infrequently — you'll find out more in the upcoming sidebar titled "Working with the Guest account.")

Here's one more neat fact about a user's Home folder: No matter what the account level, most of the contents of a Home folder can't be viewed by other users. (Yes, that includes admin-level users. This way, everyone who uses your iMac gets their own little area of privacy.) In the Home folder, only the Public folder can be accessed by other users — and only in a limited fashion. (Read all about Home folders in Chapter 3.)

Modifying user accounts

Next, consider the basic modifications you can make to a user account, such as changing existing information or selecting a new picture to represent that user's unique personality.

To edit an existing account, log in with your admin account, display the System Preferences window, and click Users & Groups to display the account list. Then follow these steps:

1. **In the list on the left side of the window, click the account you want to change.**



REMEMBER

If the accounts in the list are disabled and you can't select one, you must unlock the Users & Groups pane. Click the lock in the bottom-left corner of the System Preferences pane and type your password, if prompted.

2. **Edit the settings you need to change.**

Examples include temporarily enabling administrator rights for an account (by selecting the Allow User to Administer This Computer check box) and changing the account password (by clicking the Change Password/Reset Password button).

3. **Click the round *picture well* (the circle that displays the image) to specify the thumbnail image that appears in the Login list next to the account name.**

Apple provides several good images in the Suggestions collection. Just click a thumbnail to select it. You can also drag a new image from a Finder window or the Photos window and drop it into the picture well. Monterey adds emojis, memojis, and simple monograms as choices for your image.

Note that some of these choices are available only when you're using an Admin-level account:

- **To choose an image from the default set of macOS icons:** Click the picture well, click the Suggestions entry at the left (see Figure 10-2), click the desired image, and then click Save.
- **To choose an image from your Photos collection:** Click the Photos entry at the left, click the desired image, and then click Save.

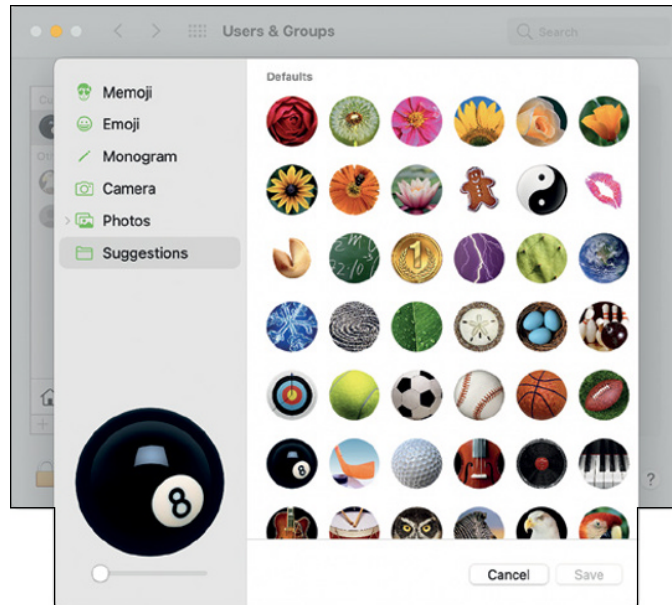


FIGURE 10-2: Choose the image that best represents a user.

Alternatively, you can click the picture well and then click the Camera entry to grab a picture from your iMac's built-in FaceTime HD camera. When you're set to take the photo, click the camera icon and then click Done to accept it. *Most cool.* (You can also use Photo Booth to take an account image.)

4. **After you make your changes, press $\text{⌘}+\text{Q}$ to save them and close the System Preferences window.**



TIP

Standard-level users have some control of their accounts; they're not helpless, after all. Standard users can log in, open System Preferences, and click Users & Groups to change the account password or picture as well as the Contacts Card assigned to them in the Monterey Contacts application. All standard users can also set up login items, which I cover in "Setting up login items and managing access," later in this chapter.

Every account on your iMac can be customized. Understandably, some settings are accessible only to admin-level accounts, and others can be adjusted by standard-level accounts. In the following sections, I introduce you to the things that can be enabled (or disabled) in a user account.

Note, however, that users with limits set may not have access to Account Settings, so they can't make changes. (Read about this topic in the upcoming section "Managing an account's access settings.")

I banish thee, mischievous user!

Not all user accounts last forever. Students graduate, coworkers quit, kids move out of the house (at last!), and Bob might even find a significant other who has a faster broadband connection. (Or he might finally invest in an iPhone.) We can only hope.

Anyway, no matter what the reason, you can delete a user account at any time. Log in with your admin account, display the Users & Groups pane in System Preferences, and then follow these steps to eradicate an account:

1. **In the user list on the left side of the window, click the account you want to delete.**
2. **Click the Delete User button (which bears the Minus Sign of Doom).**

macOS displays the confirmation sheet shown in Figure 10-3.

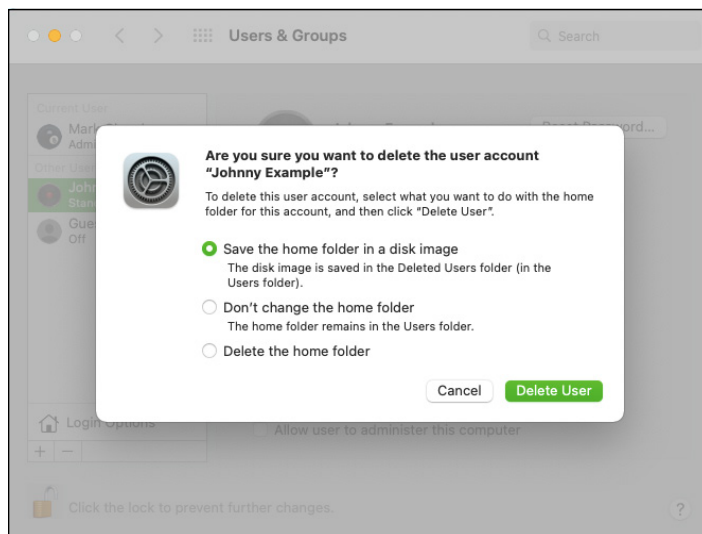


TIP

Note that the contents of the user's Home folder can be saved as a disk image in the Deleted Users folder (just in case you need to retrieve something). Alternatively, you can choose to leave the deleted user's Home folder as is, without removing it, but naturally you won't regain any space, even though the user account is deleted.

If you're absolutely sure that you won't be dating that person again, select the Delete the Home Folder radio button (which doesn't save anything in the Deleted Users folder). You regain all the drive space that was being occupied by the contents of the deleted user's Home folder.

FIGURE 10-3:
This is your last chance to save the stuff from a deleted user account.



3. To delete the account, click **Delete User**; if you're not sure, click the **Cancel** button to abort and return to the Accounts list.

Time once again for a Mark's Maxim:



Always delete unnecessary user accounts. Otherwise, you're leaving holes in your iMac's security.

WORKING WITH THE GUEST ACCOUNT

The *Guest* account is a convenient method of granting someone temporary access to your iMac. In fact, your guest doesn't even need a password to log in. Your Guest account has all the attributes of a standard account, so the visitor has little chance of accidentally (or purposely) damaging your system. Nevertheless, after the guest user logs out, the Guest account is "flushed," and all the data and files that person created in the account are deleted automatically, allowing the next guest to start with a clean slate.

By default, the Guest account is disabled. To turn this feature on, open System Preferences, click Users & Groups, and then select the Guest User entry in the list. (You may have to click the Lock icon in the bottom-left corner of the Users & Groups pane and provide your admin password before you can continue.) Click the check box titled Allow Guests to Log In to This Computer to enable the Guest account.

(continued)

(continued)

Oh, and don't forget that you can manage access for the Guest account using the Screen Time pane in System Preferences, just as you can for any other standard-level account. This feature should come in handy if your child has a slumber party coming up this weekend.

Setting up login items and managing access

Every account on your iMac can be customized. Understandably, some settings are accessible only to admin-level accounts, and others can be adjusted by standard-level accounts. In the following sections, I introduce you to the things that can be enabled (or disabled) in a user account.

Automating with login items

Login items are applications or documents that can be set to launch or load automatically as soon as a specific user logs in, such as Apple Mail or Contacts. In fact, a user must be logged in to add or remove login items. Even an admin-level account can't change the login items for another user.



REMEMBER

A user must have access to the Users & Groups pane in System Preferences to use login items. As you see in the following section, a user can be locked out of System Preferences, which makes it more difficult for login items to be deleted for that account. (Go figure.) Therefore, if the account is limited and access to System Preferences has been turned off, an administrator must enable the account's access to System Preferences, allowing the restricted user to delete login items.

To set login items for your account, follow these steps:

1. **Click the System Preferences icon on the Dock and then click the Users & Groups icon.**
2. **Click the Login Items tab to display the settings shown in Figure 10-4.**

It bears repeating: You can change the Login Items for only the account that's currently logged in, so be sure that the desired account appears below the Current User heading in the list on the left side of the dialog.
3. **Click the Add button (with the plus sign) to display a file-selection sheet.**
4. **Navigate to the application you want to launch each time you log in, click it to select it, and then click Add.**

If you're in the mood to drag and drop, just drag the applications you want to add from a Finder window and drop them directly into the list.

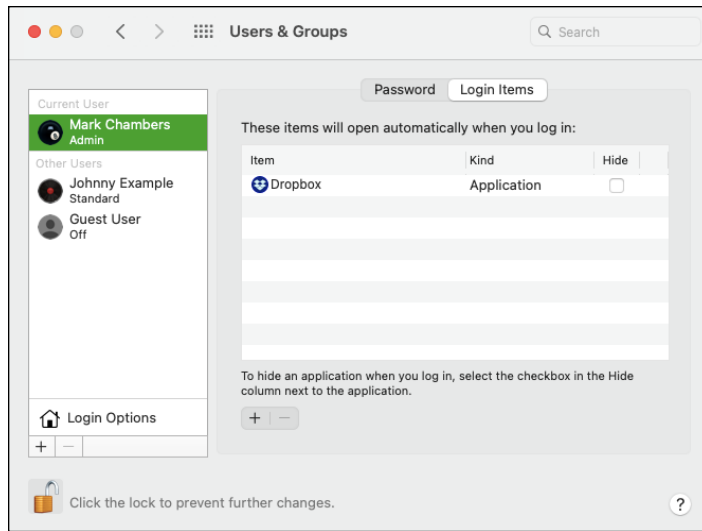


FIGURE 10-4:
Add apps to your
Login Items list.

5. Press **⌘+Q** to quit System Preferences and save your changes.



TIP

If the application is running at the moment, you can take an easy shortcut to avoid these steps: Simply right-click the application icon on the Dock and choose Options ⇨ Open at Login from the shortcut menu.

Login items are launched in the order in which they appear in the list, so feel free to drag the items into any order you like.



TIP

It's a good idea to limit the amount of login items, especially on older Macs. Login items may be automatic and convenient, but too many of them can dramatically slow the boot process each time you start your iMac. No one wants to wait 3 minutes before starting to work or play!

Managing an account's access settings

Any account on your iMac can be limited or restricted as necessary. You can restrict access to many places in Monterey and your iMac's applications. Note that you can use Screen Time with your administrator account as well.



REMEMBER

In short, limits and restrictions come in handy for preventing users — family members, students, coworkers, friends, or the public at large — from damaging your files, your software, or macOS Monterey itself.

To display the access controls for a standard account, start here:

1. **Log in by using your Administrator account.**
2. **Open System Preferences and click the Screen Time icon.**
The Screen Time pane appears.
3. **Click the Options item at the bottom of the list on the left side of the pane.**
4. **Click the Turn On button in the top-right corner of the pane to enable Screen Time.**
5. **Click the Use Screen Time Passcode check box to enable it and specify a passcode when prompted.**
6. **Click the red Close button in the top-left corner of System Preferences to close the window and save your changes.**
7. **Log in using the account you want to manage (by logging out of your administrator account or using Fast User Switching) and return to the Screen Time pane in System Preferences.**
8. **Select Downtime on the left side of the pane to display the schedule settings shown in Figure 10-5.**

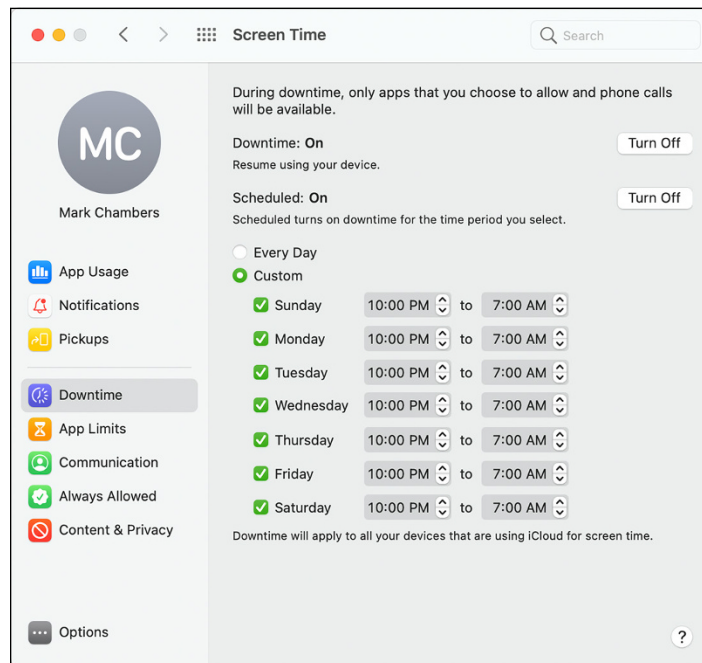


FIGURE 10-5:
You can schedule
downtime for
restricted
accounts.

To set a downtime schedule, click the Turn On button in the top-right section of the pane; then use the controls on the right side of the pane to specify whether the schedule applies every day or on a specified range of days. Monterey restricts the use of your Mac according to your settings.

9. Select App Limits on the left side of the pane to limit the time spent on specified applications.

When you click the Turn On button in the top-right section of the pane, you can limit the use of all applications to a certain amount of time or click the Add button (which bears a plus sign) to specify certain applications to add to the list. To change the amount of time allowed, click the application to select it and then click Edit Limit. To remove a limited application, click it to select it and then click the Delete button (which bears a minus sign).

10. Click Always Allowed on the left side of the pane to specify applications and Contact entries that can be used at any time.

The selected applications and Contacts entries will always be available, even during downtime (and after limits on application use have been reached).

11. Click Content & Privacy on the left side of the pane to set restrictions on purchases through Apple Stores as well as age-appropriate content.

12. Click the Stores tab of the Content & Privacy pane and make the desired changes.

Specify whether the user can use the iTunes Store and the iBook Store, and (if desired) restrict the user's ability to install applications, delete applications, or authorize in-app purchases.

13. Click the Content tab of the Content & Privacy pane (shown in Figure 10-6) to choose ratings limits.

Ratings limits are available for applications, movies, TV shows, books, and music across all the content available in Monterey. (This feature is some powerful stuff, parents!) Monterey offers three levels of control for websites from this screen:

- **Unrestricted Access:** Select this radio button to allow unfettered access for this user.
- **Limit Adult Websites:** You can allow Safari to automatically block websites that it deems to be adult. To specify sites that the automatic "adult filter" should allow or deny, click the Customize button.
- **Allowed Websites Only:** Choose this radio button to specify which websites the user can view. To add a website, click the Customize button, click the Add (plus sign) button, and respond to the prompt for a title and the website address.

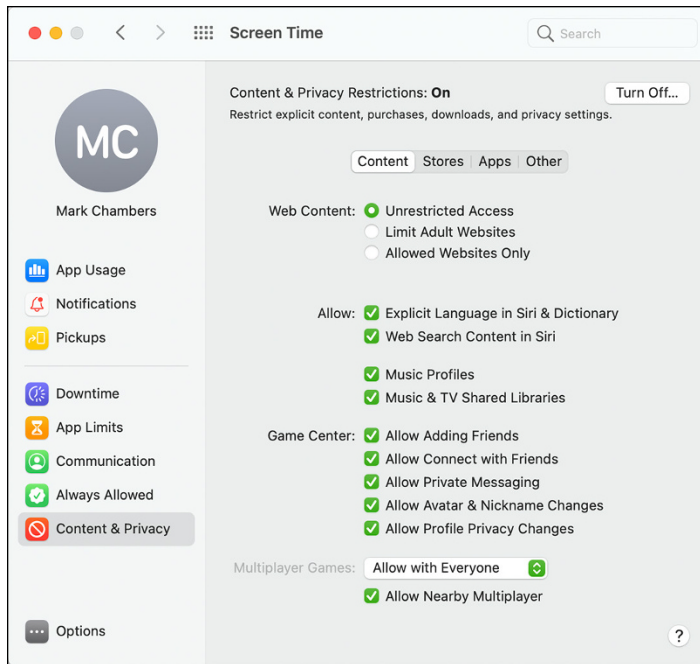


FIGURE 10-6: Monterey keeps track of content to protect your kids.

14. Click the **Other** tab to set restrictions on a range of Monterey features.

Take note: If you want to prevent the user from removing the restrictions you've set within Screen Time, don't forget to disable the Account Changes check box on the Other tab! (Disabling this check box locks the settings throughout Screen Time, requiring the passcode you set up in Step 5 to unlock them.)

15. Click the red Close button in the top-left corner of System Preferences to close the window and save your changes.



TIP

Would you like to set up a public-access iMac? You can also change the Automatic Login account from the Users & Groups pane. Click the Login Options button in the User list, click the Automatic Login pop-up menu, and choose the account that automatically logs in when macOS starts. On the confirmation sheet that appears, enter the account's password and click OK. I've made it clear elsewhere that Automatic Login is *not* a good security feature in most cases, but it can be a good feature if you're preparing an iMac for public use. If you set Automatic Login to your public standard-access account, macOS automatically uses the correct account if the Mac is rebooted or restarted.



REMEMBER

You can always choose **Apple ⇨ Log Out** to log in under your own account, or use the Fast User Switching feature, which I describe in the next section.

Tackling Mundane Chores for the Multiuser iMac

When you're hip to user accounts and the ways you can change them, you can turn to topics that affect all users of your iMac. These topics include how users log in, how they can share information with everyone else on the computer, and how each user account can be protected from unscrupulous outsiders with state-of-the-art encryption. (Suddenly, you're James Bond! I told you that Monterey would open new doors for you.)

Logging in and out of Monterey For Dummies

Hey, how about the login screen itself? How do your users identify themselves? It's time for another of my "shortest books in the *For Dummies* series" special editions. (The title is practically longer than the entire book.)

Exploring your login options

Monterey offers four methods of logging folks in to your multiuser iMac, all of which you can access by clicking the Login Options button in any admin account:



MARK'S
MAXIM

- » **Name and Password login:** This screen is the most secure type of login screen you'll see in Monterey, requiring you to type your account username and password. (A typical hacker won't know all the usernames on your iMac.) Press Return to complete the process.

When you enter your password, you see bullets rather than your password because Monterey displays bullet characters to ensure security. Otherwise, someone could look over your shoulder and see your password.

- » **Keep your iMac secure: Use the Name and Password login method, and always choose a password that's tough to guess.**
- » **List login:** This login screen offers a good middle of the road between security and convenience. Click your account image in the list and type your password when the login screen displays the password prompt. Press Return to continue.
- » **Fast User Switching:** This feature allows another user to log in while the previous user's applications are still running in the background. This feature is perfect for a fast email check or a scan of your eBay bids without forcing

someone else off the iMac. When you turn on Fast User Switching, Monterey displays the active user's name at the right end of the Finder Menu bar.

To switch to another account:

1. **Click the current user's name in the Finder menu (see Figure 10-7).**

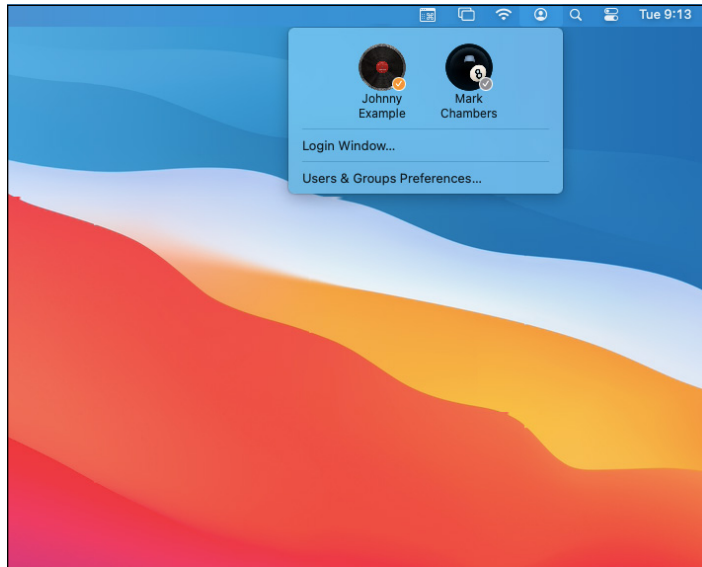


FIGURE 10-7:
The Fast User
Switching menu,
unfurled for all
to see.



WARNING

2. **Choose the name of the user who wants to log in.**

Monterey displays the login window, just as though the Mac had been rebooted.

The previous user's stuff is still running, so you definitely shouldn't reboot or shut down the computer!

To switch back to the previous user:

1. **Click the username on the Finder menu again.**

2. **Choose the previous user's name.**

For security, Monterey prompts you for that account's login password.

» **Auto Login:** This option is the most convenient method of logging in but offers no security whatsoever. Monterey automatically logs in to the specified account when you start or reboot your iMac.



WARNING

I strongly recommend that you use Auto Login only if

- Your iMac is in a secure location, such as your home or a locked office. If you're on the road, you and your data need the protection of a name and password login!
- You can guarantee that you're the only one using your iMac. *Period.*
- You're setting up a public-access Mac kiosk, in which case you want your iMac to log in with the public account.



WARNING

Working in a public environment? *Never* set an admin-level account as the Auto Login account. This is the very definition of an SDI (Supremely Dumb Idea).

Changing your login settings

To set up a username/password or list login, open System Preferences; click the Users & Groups icon; and then display the Login Options settings in the Users & Groups pane, as shown in Figure 10-8. (If necessary, click the lock icon in the bottom-left corner to confirm your access.)

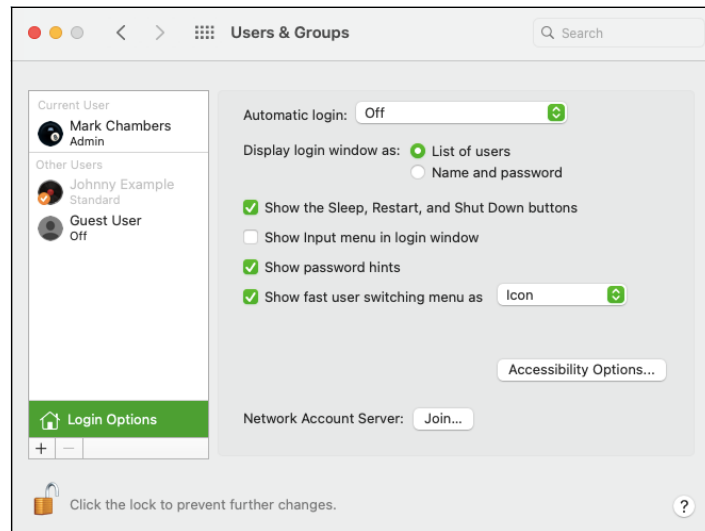


FIGURE 10-8: Configure your login settings from the Login Options pane.

Here's a rundown of key login settings:

- » **Automatic Login:** To set Auto Login, click the Automatic Login pop-up menu and choose the account that Monterey should use.
- » **Display Login Window As:** Select the List of Users radio button for a list login screen, or select the Name and Password radio button to require your users to type their full names and passwords.
- » **Show Fast User Switching Menu As:** Select this check box to enable Fast User Switching. Click the pop-up menu to specify how accounts should appear on the Finder menu (as full names, short names, or account icons).

Logging out

Logging out of Monterey all the way without Fast User Switching is a cinch. Just choose  ⇨ Log Out or press ⌘+Shift+Q. A confirmation dialog appears that automatically logs you off in 1 minute. And that 1 minute is important, because if someone walks up and clicks Cancel, they'll be using your iMac with your account! Therefore, it's a good idea to bypass the confirmation dialog by pressing Option while choosing Log Out from the menu (or by adding the Option key to the keyboard shortcut). Your iMac returns to the login screen, ready for its next victim. Heed this Mark's Maxim:



MARK'S
MAXIM

Always click the Log Out button in the logout confirmation dialog before you leave your Mac (or use the Option key to bypass the confirmation dialog), and double-check to make sure that the logout completes successfully.

Interesting stuff about sharing stuff

You may wonder where shared documents and files reside on your iMac. That's a good question. Like just about everything in Monterey, the answer is simple: The Users folder on your iMac has a Shared folder within it. To share a file or folder, place it in the Shared folder.



TIP

You don't have to turn on file sharing in the Sharing pane of System Preferences to use Shared folders on your iMac. File sharing affects only network access to your machine by users of other computers.

Each user account on your iMac also has a Public folder in that user's Home folder. The Public folder is a read-only folder that other users on your iMac (and across the network) can access. They can only open and copy the files it contains. (Sorry, they can't create new documents or change existing documents created by other users.)

Encrypting your Home folder can be fun

Allowing others to use your Mac always incurs a risk — especially if you store sensitive information and documents on your computer. Although your login password should ensure that your Home folder is off limits to everyone else, consider adding an extra level of security to prevent even dedicated hackers from accessing your stuff. Have one forgetful moment in an airport or classroom, and your personal and business data is suddenly within someone else's reach. Adequate security is a Supremely Good Thing!

To this end, Monterey includes *FileVault*, which automatically encrypts the contents of your iMac's drive. Without the proper key (in this case, your login password, your Apple ID, or the FileVault recovery key), the data stored on your drive is impossible for just about anyone to read. (I guess that the FBI or CIA would be able to decrypt it, but they're not likely to be problems at your place!)

The nice thing about FileVault is that it's transparent to you and your users. In other words, when you log in, Monterey automatically decrypts your encrypted files and folders. You won't know that FileVault is on the job (which is how computers are *supposed* to work).

To turn on FileVault protection for a specific account, follow these steps:

1. **Click the System Preferences icon on the Dock and then click the Security & Privacy icon.**
2. **On the Security & Privacy pane, click the FileVault tab.**
3. **Click the Turn On FileVault button.**
4. **Specify whether your iCloud (Apple ID) account can be used to reset your password and unlock your disk; then click Continue.**

For most iMac owners, the Allow My iCloud Account to Unlock My Disk option is probably fine, but if you're security-conscious, or if you've shared your iCloud account information with others, click the radio button titled Create a Recovery Key and Do Not Use My iCloud Account.

5. **If you decide to create a separate recovery key, write down the FileVault recovery key displayed by Monterey and store it in a safe place.**



TIP

To avoid making mistakes, you can capture an image of your screen by pressing ⌘+Shift+3. The screen shot appears on your Desktop as an image file. You can open that file and print a copy, or even copy an image file to a USB flash drive or another computer on your network for safekeeping. (Naturally, you'll delete the image after it's been printed or copied elsewhere.)



WARNING

I love the FileVault feature and use it on all my Macs running Monterey. Yet a risk is involved (insert ominous chord here). To wit: *Do not forget your login and iCloud account passwords (or make DOGGONE sure that you or your Admin user has access to a copy of that all-important FileVault recovery key)!* macOS displays a dire warning for anyone who's considering using FileVault: If you forget these safeguards, you can't retrieve any data from your iMac's drive. Even the smartest Apple support technician will tell you that nothing can be done. As Jerry Reed used to say, "It's a gone pecan" (with *pecan* pronounced Southern style, as "puh-kahn").

- 6. If necessary, click Enable User, provide the login password for each user on your account, and then click Continue.**



REMEMBER

Each user on your iMac has to be enabled to use the Mac after FileVault has been turned on. If you don't know the login passwords for the other user accounts on your system, you have to ask each person to provide their password to continue. (If an account isn't enabled, that person can't access anything on the hard drive after it has been encrypted.)

- 7. Click the Restart button on the confirmation screen.**

Your iMac automatically reboots and begins the encryption process. You can continue to use your Mac normally during encryption.

You're done!

- » Considering the benefits of a network
- » Choosing between wired and wireless networks
- » Sharing an Internet connection
- » Gathering the stuff you need to network
- » Making the network connection
- » Using your network
- » Protecting your iMac with a firewall

Chapter **11**

Working Well with Networks

In my opinion, network access ranks right up there with air conditioning and the microwave oven. Like other “I can’t imagine life without them” kinds of technologies, it’s hard to imagine sharing data from your iMac with others around you without a network. I guess you could still use a *sneakernet* (the old-fashioned term for running back and forth between computers with a floppy disk), but these days, Apple computers don’t even *have* floppy drives. (Even with a high-capacity USB-C external drive, a sneakernet is still a hassle — and somewhat of a security risk to boot.)

Nope, networking is here to stay. Whether you use a network to share an Internet connection, challenge your friends to a relaxing game of World War II battlefield action, or stream your MP3 collection to other computers, you’ll wonder how you ever got along without one. In this chapter, I fill you in on all the details you need to know to get your svelte iMac hooked up to a new (or existing) network.

What Exactly Is the Network Advantage?

If other members of your family have computers, or if your iMac is in an office with other computers (*including* those rascally PCs), here's just a sample of what you can do with a network connection:

- » **Share an Internet connection.** This is *the* major reason why many families and most small businesses install a network. Everyone can simultaneously use the same digital subscriber line (DSL), fiber, or cable Internet connection on every computer on the network. Although your iMac can do the sharing chores by itself — I show you how in this chapter — most folks either buy a stand-alone router as a sharing device or rent one as part of their Internet service.
- » **Share a printer.** You say your fellow employee — or, even worse, your big sister — has a great printer connected to her computer? Luckily, that printer can be shared with anyone across your network.
- » **Copy and move files of all sizes.** Need to get a Keynote presentation from one Mac to another? With a network connection, you can accomplish this task in just seconds. Otherwise, you'd have to copy that file to a USB flash drive, use AirDrop, or use an external hard drive. A network connection makes copying as simple as dragging the project folder from one Finder window to another. (Or you could use your iCloud Drive. Your choice!)
- » **Share documents across your network.** Talk about a wonderful collaboration tool! You can drop a Microsoft Word document or Keynote presentation file in your Public folder (or save it in your iCloud Drive) and ask for comments and edits from others in your office (or around the planet).
- » **Communicate with friends and family.** Use the Messages app to send and receive instant messages (including folks using smartphones), or enjoy a video chat using FaceTime.
- » **Stream music and video.** With macOS Monterey, you can share your audio and video media collection on your iMac with other Macs and PCs (and even devices such as an Apple TV or an AirPlay speaker system) on your network. Your eyes and ears can't tell the difference! Using a network connection, you can also watch streaming TV and movies from services such as Netflix and Hulu.
- » **Play multiplayer games.** Invite your friends over, and tell 'em you're hosting a *LAN party* (the technonerd term for a large gathering of game players connected through the same network, all playing the same multiplayer game). Alternatively, you can play most of today's games remotely, challenging other players across the Internet — a great feature if you're stuck in a hotel room for the evening. (Or, as many iMac owners discovered, if you're quarantined at home during a pandemic.)

If your iMac isn't within shouting distance of an existing network, or if you don't plan on buying any additional computers, you may not need to create a network. A lone iMac hanging out in your home with no other computers around should need a network only for Internet access.



If you have just your iMac and an Internet connection through a high-speed fiber/cable modem, and you have no plans to add another computer, wireless equipment, a network printer, or a mobile device, a network probably isn't necessary.

Should You Go Wired or Wireless?

After you decide that you indeed need a network for your home or office, you have another decision to make: Should you install a *wired* network (running cables between your computers) or a *wireless* network? Heck, should you throw caution to the wind and build a combination network with both wireless and wired hardware?

Your first instinct is probably to choose a wireless network for convenience. After all, this option allows you to eliminate running cables behind furniture, in the walls, or in your office ceiling. Ah, but I must show you the advantages of a wired network as well. Table 11-1 gives you the lowdown to help you make up your mind.

TABLE 11-1 Wireless versus Wired Networks

Factor	Wireless Networks	Wired Networks
Speed	Moderate	Much faster
Security	Moderate	Better
Convenience	Better	Worse
Compatibility	Confusing standards	Easier to understand
Cables	Few (or none)	Required

As I see it, here are the advantages of choosing a wired versus a wireless network setup:

- » **Wired:** Using a wired network offers two significant perks over a wireless network:
 - **Faster speeds:** In general, wired networks that are compatible with your iMac are many, many times faster than the fastest 802.11ax wireless connections.



WARNING



WARNING

The performance of a wireless connection can be compromised by interference (from impeding structures, such as concrete walls, and from household appliances, such as some smartphones and microwave ovens) as well as by distance. A wireless network can also slow down because of interference from other wireless networks, especially in densely populated areas. Wired networks have no such problems as long as you keep your cables to lengths of 25 feet or less.

- *Better security:* A wired network doesn't broadcast a signal that can be picked up outside your home or office, so it's more secure.

Hackers can attack through your Internet connection, though, even if you're using a wired network. Hence the final section of this chapter, "USE YOUR FIREWALL!"

» **Wireless:** A wireless connection really has only one advantage, but it's a big one: *convenience* (which in this case is another word for *mobility* for all your networked devices). Laptop owners crave this independence — a freedom that desktop computer owners can only dream about.

Accessing your network anywhere within your home or office — without cables — is easy. Connecting a wireless printer is a breeze.

GRAFTING WIRELESS ACCESS TO A WIRED NETWORK

Maybe you're caught in the middle when trying to choose between wired and wireless networking. Or perhaps you're already using a wired network with your iMac but are thrilled by the idea of sitting on your deck in the sunshine, checking your email on your MacBook, untethered. By combining both technologies, you can get the faster transfers of a wired network among all the computers in your office and the freedom you crave. In fact, your cable or DSL Internet provider may offer a combo router that provides both wired and wireless connections.

In my home office, I use a wireless base station that includes a built-in wired switch. My family gets all the convenience that a wireless network offers, and everyone can connect to the Internet from anywhere in our house. On the other hand, my office computers have the faster performance and tighter security of a wired network. *Sassy indeed!*

Be a Pal: Share Your Internet!

It's time to see what's necessary to share an Internet connection. In the following sections, I cover two methods of connecting your network to the Internet. (And before you open your wallet, keep in mind that you might be able to use your iMac to share your broadband connection across your network!)



WARNING

Naturally, sharing an Internet connection should be done only with those devices and computers that you trust and consider to be secure (typically, only the hardware within your home network).

Using your iMac as a sharing device

Because your iMac has built-in wireless hardware, you can use your Mac to provide a shared Internet connection across a simple wireless network by using a broadband DSL or cable connection.



REMEMBER

When your iMac is functioning as an Internet-sharing device, it uses Monterey's built-in Internet-connection-sharing feature to get the job done, *but your iMac must remain turned on to allow Internet sharing*. I show you how to do this in the later section "Network Internet connections."

Using a dedicated Internet-sharing device

You can also choose to use a dedicated Internet-sharing device (often called an *Internet router*) to connect to your cable, fiber, or DSL modem. You do have to buy this additional hardware, but here's the advantage: Your iMac doesn't have to remain turned on just so that everyone can get on the Internet. (Most Mac owners prefer this method of sharing.)

As I mention earlier, Internet routers usually include wired or wireless network connections, and many include both.

Setting up an Internet router is usually a simple matter, but the configuration depends on the device manufacturer and usually involves settings in System Preferences that vary according to the router model. Grab a diet cola, sit down with the router's manual, and follow the installation instructions you find there. (In some cases, you must set up your cable or DSL modem as a bridge between your ISP and your router, which should be covered in your modem and router manuals as well.)



TIP

Most Internet routers offer a DHCP server, which automatically assigns Internet protocol (IP) addresses, and I *strongly* recommend that you turn on this feature! (You can read more about DHCP in the sidebar “The little abbreviation that *definitely* could.”)

What Do I Need to Connect?

Most *normal* folks (whom I define as those who have never met a network system administrator and couldn’t care less) think that connecting to a network probably involves all sorts of arcane chants and a mystical symbol or two. In the following sections, I provide you the shopping list you need to set up a network or connect to a network that’s already running.

Wireless connections

Today’s iMac computers come complete with built-in AirPort Extreme wireless hardware, so if you already have an older AirPort Extreme or Express Base Station (or another brand of base station), you’re all set. Otherwise, hold on tight while I lead you through the hardware requirements for wireless networking.



REMEMBER

The maximum signal range — and effectiveness — of any wireless network can be impeded by walls or electrical devices, such as microwave ovens and some wireless phones, all of which can generate interference.

Connecting an iMac to an existing wireless network

Connecting an iMac to an existing wireless network requires no extra hardware, because your hardware is built in. (Whew. That was easy!)

Using a base station to go wireless

If you decide that you want to build your own wireless network, you eschew cables, or you want to add wireless support to your existing wired network, you need a *base station*. (If you do have an existing wired network, the base station can act as a bridge between computers using wireless hardware and your wired network, allowing both types of computers to talk to each other.) Such a wireless base station will have either

- » A port that can connect to your existing wired network’s switch
- » A full built-in switch for wired connectivity (which means that you can sell your old wired Ethernet switch to your sister in Tucson)

And, of course, a base station can simply act as a central switch for your wireless network (with no support for a wired network).

You can choose either a used Apple Base Station or a boring 802.11ax or 802.11ac generic wireless base station, but the Apple hardware requires less configuration and tweaking. (Sounds like a Mark's Maxim!)



MARK'S
MAXIM

If you don't want the hassle of tweaking PC hardware to accommodate your iMac, buy Apple hardware and software.

APPLE BASE STATION MODELS

Unfortunately, Apple no longer sells its line of wireless base stations, but a used Apple Base Station from eBay or a garage sale still makes a great addition to your system, and it's well worth bargain-hunting! Your iMac can work with three of these legacy Apple Base Station models for wireless networking:

- » **AirPort Extreme:** I recommend using AirPort Extreme if your network needs an enhanced antenna, which provides greater range.
- » **AirPort Time Capsule:** Apple's *Time Capsule* unit (an external wireless backup unit) isn't just a wireless remote hard drive. It can also act as a full AirPort Extreme Base Station. In fact, the wireless specifications for a Time Capsule unit and an AirPort Extreme Base Station are almost identical.
- » **AirPort Express:** I recommend using AirPort Express if you want to
 - **Carry your wireless base station with you.** Express is much smaller than the other Apple Base Station models. (Think "party on the patio" or a LAN gaming get-together at a friend's house.)
 - **Extend the range of your existing wireless network.** If your network signal fades by the pool or potting shed, consider adding an AirPort Express at the edge of your current range to extend the reach of your wireless network.
 - **Connect your home stereo or speakers for wireless music streaming using AirPlay.** You can connect a pair of speakers to your AirPort Express and use AirPlay to play music from your iMac's Music library. (Heck, you're not limited to playing the music on your iMac. You can also stream music from your iPhone or iPad!)



REMEMBER

The 802.11ac standard used by the legacy AirPort Extreme Base Station and AirPort Time Capsule devices delivers a connection that's several times faster than older 802.11b/802.11g/802.11n standards. The 802.11ax hardware that comes with the latest iMacs is also compatible with *all* the older standards — 802.11b/a/g/n/ac — so I highly recommend that you stick with 802.11ax (where available) or 802.11ac in the future. Both standards play well with others, and provide better performance to boot!

Installing an Apple Base Station is simple. Follow these steps:

1. **If you have a DSL or cable modem, connect it to the WAN (wide-area network) port on the base station with an Ethernet cable.**
2. **If you have an existing wired Ethernet computer network with a switch or router, connect it to the Ethernet LAN (local-area network) port on the base station with an Ethernet cable.**
3. **If you have a USB printer, connect it to the USB port on the base station.**



TIP

I cover the steps for sharing a printer in the later section “Sharing a network printer.”

4. **Connect the power cable.**
5. **Switch on your base station.**
6. **On your iMac, run the installation software provided by Apple.**

USING NON-APPLE BASE STATIONS

If any company other than Apple manufactured your wireless base station, the installation procedure should be quite similar. Naturally, you should take a gander at the manufacturer's installation guide just to make sure, but I've added many brands of these devices, and I used the same general steps for each one. (As I mention earlier, I recommend using legacy Apple wireless hardware with your iMac whenever possible because the software installation process is easier, but a typical non-Apple base station will work just fine!)



TIP

It's always a good idea to invest in non-Apple hardware that explicitly supports macOS. That way, you're practically guaranteed both documentation and support for the Mac, and possibly even installation software!

Joining a wireless network

As far as I'm concerned, the only two types of base stations are Apple and non-Apple, which includes all 802.11ax, 802.11ac, and 802.11n base stations and access points. Both types of base stations use the same method to connect.

To join a wireless network, follow these steps on each Mac with wireless support:

1. Click the **System Preferences** icon on the Dock.
2. Click the **Network** icon.
3. In the **Connection** list on the left, select **Wi-Fi**.
4. Select the **Show Wi-Fi Status in Menu Bar** check box.
5. Click the **Apply** button.
6. Press **⌘ +Q** to quit **System Preferences** and save your settings.
7. Click the **Wi-Fi status icon** (which looks like a fan) on the **Finder's menu bar**, and choose an existing network connection that you'd like to join.

The network name is the same as the network name you chose when you set up your base station.

8. **If you set up a secure network, enter the password you assigned to the network during setup.**

By the way, security is always A Good Thing. I strongly recommend that you enable the password-encryption features of your Apple or third-party base station while installing it. (Luckily, the Apple Base Station setup application leads you through this very process.) In the words of an important Mark's Maxim:



MARK'S
MAXIM

Keep uninvited guests out of your network! Use your base station's security features and encrypt your data by using WPA2 encryption!

Some wireless networks may not appear in your Wi-Fi menu list. These are *closed networks*, which can be specified when you set up your base station. You can't join a closed network unless you know the exact network name (which is far more secure than the base station simply broadcasting the network name). To join a closed network, follow these steps:

1. Click the **Wi-Fi status icon** (which looks like a fan) on the **Finder's menu bar**, and choose **Join Other Network**.
2. Type the network's name.
3. If the network is secured with **WPA/WPA2**, **WPA2/WPA3**, **WEP**, or **Dynamic WEP encryption** (the security standards for protecting your data through encryption), click the **Security pop-up menu**, and choose which type of encryption is being used.

I recommend avoiding WEP and Dynamic WEP encryption whenever possible. Your best bet is WPA2 or WPA3 encryption. These types are the current standards for home wireless networks, so always choose one of them when available.

4. Enter the network password, if required.

To disconnect from a Wi-Fi network, click the Wi-Fi menu and then choose Turn Wi-Fi Off or connect to another wireless network. In other words, if you choose another available wireless network from the Wi-Fi menu, your iMac automatically drops the previous connection. (You can be connected to only one wireless network at a time, which makes Good Sense.)

TRANSFERRING FILES THE EASY AIRDROP WAY

AirDrop is the local Mac-to-Mac file transfer feature built into macOS Monterey, and it couldn't be easier to use. No setup and no passwords are involved! But it comes with three caveats:

- AirDrop works only with Macs running Mac OS X Lion and later.
- AirDrop uses the Bluetooth and Wi-Fi hardware built into today's MacBooks and desktops, so don't forget to turn on both Bluetooth and Wi-Fi first. (If you're displaying either wireless status icon on your Finder Menu bar, click the icon and choose Turn On. AirDrop will also prompt you to turn either wireless system on when necessary.)
- You have to be within Wi-Fi signal range of another Mac to use AirDrop. Note, however, that the two computers *don't* have to be using the same Wi-Fi network. (My iMac uses a wired connection to my network, but because the iMac has internal Wi-Fi hardware, I can use AirDrop to send files to my MacBook Air.) Because AirDrop uses a Wi-Fi connection, file transfers are significantly slower (and less secure) than they'd be over a wired Ethernet network.

To use AirDrop to transfer files to another Mac, both users should click the AirDrop icon in any Finder window's Sidebar to join the AirDrop group. After a short delay, you see the account pictures for all Macs within signal range and with AirDrop open. Just drag the files you want to transfer to the person's picture. Both you and the recipient are prompted for confirmation before the transfer begins. When the transfer is complete, the files you sent are saved in the recipient's Downloads folder.

When you're done using AirDrop, just close the Finder window displaying the account pictures (or click another location on the Finder window's Sidebar) to exit the AirDrop group. (Don't forget that you have to reopen AirDrop if someone wants to send you files. I leave my AirDrop Finder window open and minimized to the Dock.)

Wired connections

If you own a current iMac 24" model with an M1 processor and you didn't order the Gigabit Ethernet option, your machine didn't come from Apple with a wired Ethernet port onboard. But you can add a USB-C/Thunderbolt-to-Ethernet connector that allows you to use a wired network. After you add the connector to your system, you can follow along without any problem. You just connect the hardware and configure the connection. Don't forget that you also need cables and an inexpensive Ethernet switch. (If you're using an Internet router or other hardware-sharing device, it almost certainly has a built-in four- or eight-port switch.)

Making a connection to a wired network

As I mention earlier, the current crop of 24" M1 iMacs can be ordered from Apple with an Ethernet 10/100/1000 port (which looks like a slightly oversize telephone/modem jack), while both the 21.5" and 27" iMac models already come equipped with an Ethernet port that's ready to accept a standard Ethernet Cat5/Cat5E/Cat6 cable with RJ-45 connectors. (If your 24" M1 iMac is limited to USB or Thunderbolt, connect a Thunderbolt- or USB-to-Gigabit-Ethernet adapter to your iMac and you're also in business.)

If you're connecting to an existing wired network, you need a standard Cat5/Cat5E/Cat6 Ethernet cable of the necessary length. I recommend a length of no more than 25 feet, because longer cables are often subject to line interference (which can slow or even cripple your connection). You also need a live Ethernet port from the network near your iMac. Plug the cable into your iMac and then plug the other end into the network port.

Wired network hardware

If you don't know your switch from your NIC, don't worry. Here, I describe the hardware you need for your wired network.

WIRED NETWORK COMPONENTS

If you're building your own wired network, you need

» **A switch:** This gizmo's job is to provide more network ports for the other computers in your network. Switches typically come in four- and eight-port configurations.



TIP

As I mention earlier in this chapter, most Internet routers (sometimes called *Internet-sharing devices*) include a built-in switch. So if you've already invested in an Internet router, make doggone sure that it doesn't come equipped with the ports you need before you go shopping for a switch. Many wireless base

stations also include a built-in switch, and you can even connect a separate switch for additional ports.

» **Ethernet cables:** Exactly how many cables you need is determined by how many computers and other devices (such as a network printer) you're connecting. If you're working with a Gigabit Ethernet system, you need Cat5E or Cat6 cables. Cat6 cables provide better performance but are more expensive.



TIP

Naturally, if you're using a broadband Internet connection, you also have a DSL, fiber, or cable modem. These boxes always include a port for connecting to your wired Ethernet network. If you have one of the new breed of *wireless* modems, which act as wireless base stations, don't panic. A wireless modem should also have a wired port for connecting to your existing switch.

WIRED NETWORK CONNECTIONS

After you assemble your cables and your router or switch, connect the Ethernet cables from each of your computers to the router or switch, and then turn on the device. (Most need AC power to work.) Check the manual that comes with your device to make sure that the lights you're seeing on the front indicate normal operation. (Colors vary by manufacturer, but green is usually A Good Color.)

Next, connect your cable, fiber, or DSL modem's Ethernet port to the WAN port on your switch with an Ethernet cable. If your modem isn't already on, turn it on now, and check for normal operation.

When your router or switch is powered on and operating normally, you're ready to configure macOS for network operation. Just hop to the upcoming section "Connecting to the Network." (How about that? Now you can add network technician to your rapidly growing computer résumé!)

Joining a wired Ethernet network

After all the cables are connected, and your central connection gizmo is plugged in and turned on, you've essentially created the hardware portion of your network. Congratulations! Now you need a beard and suspenders (common equipment for the network-guru stereotype).

With the hardware in place, it's time to configure Monterey. In this section, I assume that you're connecting to a network with an Internet router or switch that includes a DHCP server. (Jump to the sidebar "The little abbreviation that *definitely* could" for more on DHCP.)

Follow these steps on each Mac running macOS that you want to connect to the network:

1. Click the **System Preferences** icon on the Dock.
2. Click the **Network** icon.
3. In the **Connection list** on the left, select **Ethernet** (or **Thunderbolt Ethernet**, if you're using an adapter).

The entry may also be named Ethernet 1, depending on the Mac model you're configuring. Make sure that you select the Ethernet entry that does *not* carry the Wi-Fi fan symbol.

4. Click the **Configure IPv4** pop-up menu and choose **Using DHCP**, as shown in Figure 11-1.

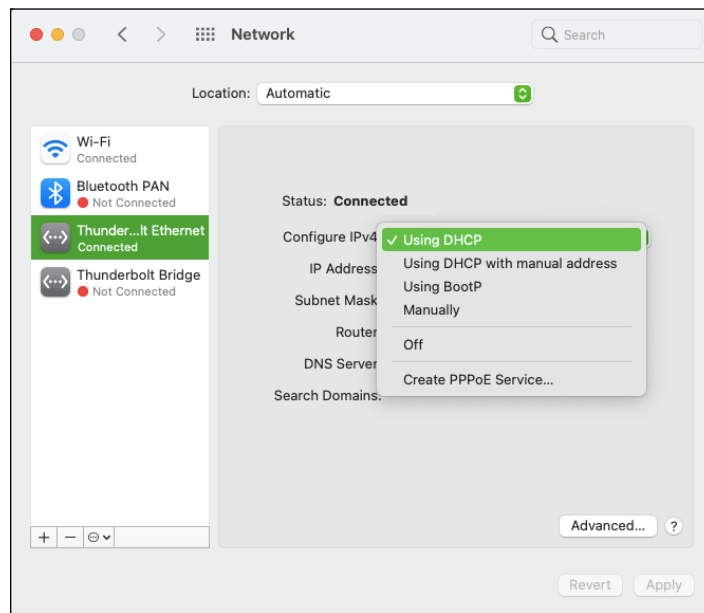


FIGURE 11-1:
All hail DHCP, the
magic networking
fairy!

5. Click the **Apply** button.

The Apply button is grayed out in the figure because my status (in this dialog) is Connected.



Enjoy the automatic goodness as macOS connects to the DHCP server to obtain an IP address, a subnet mask, a gateway router IP address, and a Domain Name System (DNS) address. (Without a DHCP server, you'd have to add all this stuff manually. Ugh.)

A few seconds after clicking the Apply button, you should see the information. You might also notice that the DNS Server and Search Domains fields are empty. Fear not. macOS is really using DNS server and domain information provided by the DHCP server.

6. Press ⌘ +Q to quit System Preferences and save your settings.

You're on!

Connecting to the Network

All right! The hardware is powered up, the cables (if any) are installed and connected, and you've configured Monterey. You're ready to start (or join) the party. In the following sections, I show you how to verify that you're connected, as well as how to share data and devices with others on your network.

THE LITTLE ABBREVIATION THAT DEFINITELY COULD

You know, some technologies are just *peachy*. (So much for my über-tech image.) Anyway, these well-designed technologies work instantly; you don't have to fling settings around like wrapping paper on Christmas Day, and every computer can use them: Mac, Windows, Linux, and even the laptops used by funny-looking creatures from Roswell, New Mexico.

Dynamic Host Configuration Protocol (DHCP for short) is about as peachy as it gets. This protocol enables a computer to automatically get all the technical information necessary to join a network. Let me hear you say, "*Oh, yeah!*" Virtually all network devices can use DHCP these days, including Internet routers, switches, and (go figure) macOS. Today's networking hardware and operating systems provide a DHCP server, which flings the proper settings at every computer on the network all by itself. Your iMac just accepts the settings and relaxes in a placid networking nirvana.

In this book, you can bet the farm that I assume you want to use DHCP and that your network hardware supports it (which is a virtual certainty with today's hardware). That way, I don't spend 30 pages leading you through the twisting alleyways of manual network settings.

If you're connecting to an existing network, tell the network administrator that you're taking the easy route and using DHCP. A warning, however: Adding more than one DHCP server on a single network will cause a civil war, and your system will lock up tight. Therefore, before adding hardware with a DHCP server to an existing network, ask your network administrator to ensure that you aren't making a mistake.



TIP

You can use the macOS Wireless Diagnostics application at any time to check on the condition of your wireless connection and network. Click the Spotlight search icon on the Finder's menu bar and type **Wireless Diagnostics** in the Spotlight Search box; then click the app to launch it. The onscreen instructions will guide you through the diagnostic process.

Sharing stuff nicely with others

It works! By golly, it works! Okay, now what do you *do* with your all-new shiny chrome-plated network connection? Ah, my friend, let me be the first to congratulate you and the first to show you around! In the following sections, I cover the most popular network perks. (The good news is that these perks work with both wired and wireless connections.)

Network Internet connections

If your DSL, fiber, or cable modem plugs directly into your iMac (rather than into a dedicated Internet-sharing device or Internet router), you might ponder just how the other computers (or iPhones or iPads) on your network can share that spiffy high-speed broadband connection. If you're running a wireless network, it comes to the rescue!

Follow these steps to share your connection wirelessly:

1. Click the **System Preferences** icon on the Dock.
2. Click the **Sharing** icon.
3. Click the **Internet Sharing** entry in the **Services** list to the left of the pane.
4. From the **Share Your Connection From** pop-up menu, choose **Ethernet**.
5. Select the **Wi-Fi** check box (in the **To Computers Using list**).
6. Select the **On** check box next to the **Internet Sharing** entry in the **Services** list.

Monterey displays a warning dialog stating that connection sharing could affect other computers on your network. If you intend to share the Internet

connection provided on an existing network at your home or office that you didn't set up, contact your network administrator first! (It's best to avoid sowing chaos and disorder.)

7. **Click Start in the warning dialog to continue.**
8. **Click the Close button to exit System Preferences.**



REMEMBER

Sharing an Internet connection (without an Internet router or dedicated hardware device) through macOS requires your iMac to remain on continuously. Remind others in your office or home that that cool orange iMac *must* remain on; otherwise, they'll lose their Internet connection!

Don't forget — you don't need to configure Internet sharing if your DSL, fiber, or cable modem connects to a dedicated sharing device or router. That snazzy equipment automatically connects your entire network to the Internet.

Network file sharing

You can swap all sorts of interesting files with other Macintosh computers on your network. When you turn on File Sharing, Monterey allows all Macs on the network to connect to your iMac and share the files in your Public folder. (Note that sharing across a network is different from sharing a single computer among several people. I cover that environment in Chapter 10.)

Follow these steps to start sharing files and folders with others across your network:

1. **Click the System Preferences icon on the Dock.**
2. **Click the Sharing icon.**
3. **Select the On check box next to the File Sharing service entry to enable the connections for Mac and Windows sharing.**

Other Mac users can connect to your computer by choosing Go from the Finder's menu bar and choosing the Network menu item. The Network window appears, and your iMac is among the choices. If the other Macs are running Monterey, your iMac's shared files and folders appear in a Finder window, listed below the Shared heading on the Sidebar.

Windows 10 users should head to the Network panel. Those lucky Windows folks also get to print to any shared printers you've set up. (The following section covers shared printers.)

4. **Click the Close button to exit System Preferences.**



TIP

Monterey conveniently reminds you of the network name for your iMac at the top of the Sharing pane.

Sharing a network printer

I love describing easy procedures, and sharing a printer on a Mac network ranks high on the list! You can share a printer that's connected to your iMac by following these simple steps:

1. Click the **System Preferences** icon on the Dock.
2. Click the **Sharing** icon.
3. Select the **On** check box next to the **Printer Sharing** service entry.
4. In the list on the right side of the **System Preferences** window, select the check box next to the printer you want to share.
5. Click the **Close** button to exit **System Preferences**.

A printer you share automatically appears in the Print dialog on other computers connected to your network.

Use Your Firewall!

Yep. That's an exclamation point at the end of that title, pardner. It's that important.

The following Mark's Maxim, good reader, isn't a request, a strong recommendation, or even a regular Maxim. Consider it to be an *absolute command* (right up there with "Pay your taxes!").



MARK'S
MAXIM

Turn on your firewall now.

When you connect a network to the Internet, you open a door to the outside world. As a consultant to several businesses and organizations in my hometown, I can tell you that the outside world is chock-full of malicious individuals who *dearly love* to inflict damage on data and would like to take control of your iMac for their own purposes. Call 'em hackers, call 'em delinquents, or call 'em something I can't repeat, but *don't let 'em in!*

Monterey comes to the rescue again with the built-in firewall in macOS. When you use the firewall, you essentially build a virtual brick wall between yourself and the hackers out there (both on the Internet and within your local network). Follow these steps:

1. Click the **System Preferences** icon on the Dock.
2. Click the **Security & Privacy** icon.

- 3. Click the Firewall tab.**
- 4. Click the Turn On Firewall button to activate your firewall.**
- 5. Click the Firewall Options button.**
- 6. Select the check box titled Automatically Allow Built-In Software to Receive Incoming Connections.**
- 7. Select the check box titled Automatically Allow Downloaded Signed Software to Receive Incoming Connections.**
- 8. Select the Enable Stealth Mode check box.**

This important feature prevents hackers from trolling for your iMac on the Internet — or, in normal-speak, searching for an unprotected computer — so it's much harder for them to attack you.
- 9. Click OK.**
- 10. Click the Close button to exit System Preferences.**

Monterey even keeps track of the Internet traffic that you *do* want to reach your iMac, such as printer and file sharing. When you activate one of the network features described in the earlier section “Sharing stuff nicely with others,” Monterey automatically opens a tiny hole (called a *port* by net types) in your firewall to allow just that type of communication with your Mac.

If you decide to turn on printer sharing (as described in the preceding section), for example, Monterey automatically allows incoming print jobs over the network from other computers.

You can also add ports for applications that aren't on the firewall's Allow list, such as third-party instant-messaging clients and multiplayer-game servers. Depending on the type of connection, Monterey often displays a dialog prompting you for confirmation before allowing certain traffic, so you probably won't need to do anything manually.

You *can* manually add a program to your list of allowed (or blocked) firewall ports, however. Follow these steps:

- 1. Click the System Preferences icon on the Dock.**
- 2. Click the Security & Privacy icon.**
- 3. Click the Firewall tab and then click the Firewall Options button.**
- 4. Click the Add button (which carries a plus sign).**

Monterey displays a standard file-browsing sheet.

- 5. Browse to the application that requires access to the outside world — or the application that you want to block from outside communication — and click it to select it.**
- 6. Click the Add button on the File sheet.**

The application appears in the Firewall list. By default, it's set to Allow Incoming Connections.
- 7. If you want to block any communications coming into the application, click the Allow Incoming Connections pop-up menu, and choose Block Incoming Connections instead.**
- 8. Click the Close button to exit System Preferences.**

- » Adding a printer or a scanner to your system
- » Using Photo Booth
- » Chatting with Messages
- » Connecting with friends and family using FaceTime

Chapter **12**

Hooking Up with Handy Helpers

This chapter is all about getting interesting things into — and out of — your iMac. Some of the devices I mention are mundane and pretty easy to take care of, such as scanners and printers. Then I might surprise you with something new to you, such as your iMac's built-in FaceTime HD video camera, which gives you the ability to place and receive video and audio calls to friends and family on their Macs, iPhones, and iPads. You can send and receive instant messages from your friends as well, whether they have Macs, iOS devices, or smartphones from another manufacturer.

Heck, I also show you how to turn your iMac into an old-fashioned photo booth, just like the expensive models at your local mall or amusement park. Think “iMac selfies” at your next party — complete with outrageous effects!

Connecting Printers

All hail the USB port! It's the primary connection point for all sorts of goodies. In this section, I concentrate on adding a local USB printer and the basics of adding a network printer to your system. (Find more on connecting a wireless Bluetooth printer in the Bluetooth Bonus Chapter at www.dummies.com.)

USB printers

Connecting a USB printer to your iMac is duck soup. Don't you wish all things in life were this easy? You may very well be able to skip most of the steps in this section, depending on whether your printer came with an installation disc. (Virtually all printers do, of course, but you might have bought yours used, say, from eBay.)



TECHNICAL
STUFF

Your printer needs to be fully supported within macOS:

- » If the software is designed for earlier versions of macOS (say, Yosemite 10.10 or El Capitan 10.11), it probably works with Monterey.
- » I always recommend visiting the manufacturer's website to download the latest printer driver and support software *before* you install your printer. That way, you know that you're up to date. (Don't forget to check the Read Me file that accompanies your new software to make sure that no new system requirements have come about!)



WARNING

Save and close open files and applications before installing your printer. You may have to restart your iMac to complete the installation.

The physical connections for your printer are pretty simple:

- » Make sure that your printer's USB cable is plugged into both your iMac and the printer itself. (Naturally, you'll use one of the iMac's USB ports on the back of the computer unless you've already added a USB hub to expand your external horizons.)
- » After the USB connection is made, plug the printer into an AC wall socket, and turn it on.



REMEMBER

Don't forget to add the paper, check the ink or toner cartridge(s), and remove all the packing material from your printer! Oh, and did I mention that many printers aren't supplied with cables? Check the printer's box to see if a cable is included before you buy.

Additional printer installation steps depend on whether you have the manufacturer's installation software for your printer.

Sure, I've got the install software

I'll be honest here: I recommend that you always visit the manufacturer's website first to download the latest version of the macOS installation software for your printer. (I show you how in the section titled "Downloading software" in a page or two.)

However, if that's not possible (and if your printer comes with its manufacturer's installation disc *and* if you have an external optical drive connected to your iMac), follow these steps when everything is connected and powered on:

1. Insert the installation disc into the iMac's optical drive.



TIP

Don't have an optical drive? Download the printer's installation software from the manufacturer's website as a disk image file (ending with the extension .dmg) or as a ZIP archive (ending with the extension .zip), and simply double-click that file. Depending on the file type, macOS displays it on your Desktop just as though it were an external drive, or it expands the software into a new folder. Now you can follow along with the rest of the steps in this procedure.



TIP

The disc contents usually appear in a Finder window. If they don't, double-click the installation disc icon on the Desktop to open the window.

2. Double-click the installation application to start the ball rolling.

3. Follow the onscreen instructions.

Files get copied to your drive.

You may have to restart your iMac.



REMEMBER

You're ready to print!



REMEMBER

Don't forget to visit your printer manufacturer's website on a regular basis to check for any driver updates for your particular model.

Whoops, I've got diddly-squat (software-wise)

Didn't get an installation CD? Try installing the printer without software, or download the software from the manufacturer's website.

INSTALLING WITHOUT SOFTWARE

If you didn't get an installation CD with your printer (or you can't locate the installation software to download), you may be lucky enough that your printer's driver was included in your installation of macOS. First, press ⌘+P within an application to display the Print dialog, where you can check whether the printer you connected is already recognized.

If it's not displayed, here's how to check for that pesky driver after you connect the printer and switch it on:

1. Open the System Preferences window.

2. Click the Printers & Scanners icon.

3. Check the Printer list on the left side of the window to see whether your printer has been added automatically within macOS.

If your printer appears here, dance a celebratory jig. You can close System Preferences and choose that printer from the Print dialog in your applications. (You can even set it as the default from the System Preferences Printers & Scanners pane. Just click the Default Printer pop-up menu to choose your new printer.)

DOWNLOADING SOFTWARE

If you don't have installation software, and your iMac doesn't automatically match your USB printer with a driver, it's time to check the Internet to locate a Monterey-compatible driver for your printer.

Check the manufacturer's website for your printer's software and any additional information for operating your printer under macOS Monterey. Look for:

- » **Special software drivers that the printer may need:** Install any drivers you find *before* you run an installation application. The installation app may not be able to recognize or configure the printer if the driver hasn't been installed.
- » **Technical documents or FAQs covering your printer under Monterey:** I make it a practice to check for FAQ files for every external device I add to my iMac! Although these documents may not qualify as "riveting" reading, they often provide feature descriptions and troubleshooting solutions that you'll find nowhere else.
- » **An installation application:** If the manufacturer offers an installation application for your printer, download and run the application.

Network printers

Your wired or wireless Ethernet network provides a quick and easy way to share any printer that's already connected to your iMac. Follow these steps to share your printers across the network with others:

- 1. Click the System Preferences icon on the Dock.**
- 2. Click the Sharing icon.**
- 3. Select the On check box next to the Printer Sharing service entry.**
- 4. Select the check box next to the local printer that you want to share in the Printers column.**
- 5. Click Close to exit System Preferences.**

In most cases, a printer that you share appears automatically in the Print dialog on other computers connected to your network. Therefore, if you want to access a printer being shared by another Mac across your network, open the Print dialog within your application and click the Printer pop-up menu to choose it.

If the remote printer isn't listed automatically, you can dig a little further. To add a printer that another Mac on your network is sharing to your list of printers, follow these steps:

1. **Click System Preferences on the Dock.**
2. **Click the Printers & Scanners icon.**
3. **Click the Add button (which carries a plus sign).**
4. **Click the Default button on the toolbar.**

macOS displays all the available local shared printers. (You can also connect to a printer with an IP address by clicking the IP Address button on the toolbar.)

5. **Click the desired printer and then click Add.**

Depending on the built-in support within macOS for the printer you're accessing or sharing, you may have to install the driver on your iMac or the other Macs on your network as well.

Connecting Scanners

USB scanners practically install themselves. As long as the model is listed as macOS-compatible and supports the TWAIN device standard (as just about all scanners do), things really *are* plug-and-play. (Not sure whether a scanner is macOS-compatible? Check the system requirements on the scanner's box or on the manufacturer's website.)

If you have the scanner manufacturer's installation disc, go ahead and use it. Most scanners don't require specialized drivers, however, so even that orphan model that you picked up from Uncle Milton last year should work (if it's recognized by macOS). It doesn't hurt to check the manufacturer's website to see whether any of the software has been updated since the disc was produced.



TIP

If macOS doesn't directly support your older scanner, a third-party application maybe able to help. Get thee hence to Hamrick Software at <https://www.hamrick.com>, and download a copy of the latest version of VueScan. This great scanning application supports thousands of scanner models, including several that don't work with Monterey otherwise. At \$50, it's a world-class bargain to boot.

Ready to go? Make sure that your scanner is powered on and connected to your iMac (and that you load a page or photograph to scan). If your scanner's installation disc provided a proprietary scanning application, I recommend that you use that application to test your scanner. In fact, it's Mark's Maxim time!



If your printer or scanner includes bundled applications, try them!

Sure, macOS has the Printers & Scanners pane within System Preferences for printers and the Image Capture application for scanners and digital cameras, but these tools are bare-bones compared with the print manager and image acquisition software that comes bundled with your hardware. I turn to the built-in hardware-handling stuff that comes with macOS only when I don't have anything better.

Hey, I'm not saying that anything's wrong with Image Capture (which is in your Applications folder, in case you need to use it). But don't expect Image Capture to support any specialized features offered by your scanner, such as one-button email or web publishing. You have to use the application especially designed for your manufacturer and model to take advantage of any extras that it offers. In summation: It pays to try all the available scanning software that works with your hardware so that you can use the scanning application that best matches your desired feature set!

For alternatives, many image-editing applications (such as Adobe Photoshop and Photoshop Elements) may offer more scanning features than Image Capture.

Using Photo Booth

Many Apple Switchers and first-time owners quickly notice the tiny square lens and LED light at the top of the iMac's svelte frame. What gives?

Mystery solved, good reader: That's the lens of your iMac's built-in FaceTime HD camera, which allows you to capture video in iMovie, video chat with FaceTime, or snap a quick, fun series of photos or video clips via the Photo Booth application that comes with macOS.

Yes, I know we all have a love-hate relationship with video conferencing as a result of the coronavirus pandemic, but how do you put that FaceTime HD camera to work? I answer that question in the next two sections!

The FaceTime HD camera's indicator light glows green whenever you're taking a snapshot or recording video . . . which, when you think about it, is A Good Thing (especially if you prefer chatting at home in Leisure Mode).



TIP

If you need a quick picture of yourself for use on your web page, or perhaps your user account icon needs an update to show off your new haircut, use Photo Booth to capture images. Although today's digital cameras can produce a much-higher-quality photo, you can't beat the built-in convenience of Photo Booth for that quick snapshot!

To snap an image in Photo Booth, follow these steps:

1. Launch Photo Booth from the Spotlight box or from Launchpad.

To try things out in full-screen mode, choose View ⇨ Enter Full Screen.

2. Choose to take one image, four quick photos as a group, or digital video.

The three buttons in the bottom-left corner of the Photo Booth window allow you to switch among taking one photo, four photos in a row (arranged as a square group, like an arcade photo booth), or a movie clip.

3. (Optional) Click the Effects button to choose an effect you'd like to apply to your image.

Photo Booth displays a screen of thumbnail preview images so that you can see how each effect changes the photo. To move through the thumbnail screens, click the Previous and Next arrow buttons that appear at the bottom of the window.

You can produce some of the simple effects you may be familiar with from Photoshop, such as a black-and-white image or a fancy colored-pencil filter, but you can also play with some mind-blowing distortion effects and even very convincing faux thermal and X-ray cameras!

You can always launch your favorite image editor afterward to use a filter or effect on a photo (such as the effects available in the Photos application), but Photo Booth can apply these effects automatically as soon as you take the picture.

4. (Optional) Click a thumbnail to apply the desired effect.

When you choose an effect, Photo Booth automatically closes the Effects display.



TIP

To return the display to normal, click the Normal thumbnail, which appears in the center. (Um, that would be Paul Lynde's spot, for those of you old enough to remember *Hollywood Squares*.)

5. Click the red Camera button.

The image (or video clip) appears in the filmstrip at the bottom of the window.

Photo Booth keeps a copy of all the images and clips you take in the filmstrip so that you can use them later. After you click a photo or film clip in the filmstrip, the

familiar Share button appears in the bottom-right corner of the window, inviting you to take any of a series of actions, including:

- » Sending the photo in an email or as a Messages attachment
- » Saving the photo directly to Photos
- » Using the photo to create a new Notes entry
- » Using the image as your macOS user account icon



TIP

To delete an image from the Photo Booth filmstrip, click the offending photo and then click the X button that appears in the top-left corner of the thumbnail.

WHO NEEDS A FANCY GREEN SCREEN?

Ever admired the animated background behind your favorite TV weather prognosticator? You probably already know that you don't need an expensive green-screen backdrop (and time spent in a video-editing application) to create the same effect. Instead, use Photo Booth to create those outrageous images and video clips! Photo Booth provides a surprising array of visual effects you can use.

Within Photo Booth, click the Effects button to start the ball rolling and then click the right arrow next to the Effects button until you reach the series of thumbnails with names like Hologram, Pop Art, Fish, and Rollercoaster. These are the animated backgrounds. Click a background, and Photo Booth asks you to step outside the frame for a second so that your iMac can detect the patterns behind you. When the background animation begins, step back into the frame, and capture your image or video clip. (Just as you do with a real green-screen backdrop, you get the best results if you shoot your images and video in front of a blank white wall.)

You're not limited to the Apple animated backgrounds: Use your own image or video clip by choosing one of the eight predefined User Backdrop thumbnails.

Conversing with FaceTime

With Apple's FaceTime technology, you can video-chat with owners of iOS devices and Macs, and if they can run the FaceTime app, they're guaranteed to have the right video hardware. But wait: With new features in Monterey, you can even invite folks without an Apple device to join you!



REMEMBER

You can use either a Wi-Fi or cellular connection to use FaceTime, and your iMac requires either a wired or Wi-Fi connection to the Internet.

To launch FaceTime, click the Launchpad icon on the Dock, and click the jaunty-looking video camera icon. (Naturally, you can also use Spotlight to launch the application; or, if the FaceTime icon appears on your Dock, it's just one click away.) The first time you use the application, you have to enter your Apple ID and your email address. The folks you chat with on the other end use that same email address to call you via FaceTime. (You can call iPhone owners by using their telephone numbers.)

After you sign in, you can initiate a call with any contact by clicking the New FaceTime button near the top of the FaceTime window and typing the desired name, email address, or phone number. Click the email or telephone number that FaceTime should use, click the FaceTime button at the bottom of the dialog, and then the connection process begins.

Apple isn't satisfied with providing access to your Contacts list, however. You can use the Recent Calls list (which appears along the left side of the window) to choose a contact whom you've called or attempted to call, or who has called you within the recent past. Entries in the Recent Calls list are sorted by date, starting with the most recent. As you hover your cursor over an entry in the list, you can click the Video icon that appears to start a video FaceTime call with that person. Click the Info icon (which looks like the letter *i* in a circle) to display that person's Contact information or start an audio-only FaceTime call.

To start a group FaceTime call, click the New FaceTime button and click more than one of the suggested Contacts. Alternatively, click in the To field and type the first letter or two of each name to search your Contacts; then click the desired person. Click FaceTime to begin the session, with each person appearing in their own video tile within the FaceTime window.

When the call is accepted, you see a large video window with a smaller picture-in-picture display. The video of the other person(s) fills the large window, and the video that you're sending appears in the small display. Click the End icon to end the FaceTime call.



TIP

If you'd like to chat with folks who don't have an Apple device, or you'd like to send an invite through the web, click the Create Link button at the top of the Recent Calls list. FaceTime creates a link that you can send through Messages or Mail (or you can copy the link to your Clipboard and paste it into other apps). After you've sent the link, click the FaceTime Link entry in the Recent Call list and click Join. Those wanting to join the conversation should open their web browsers and paste that link to connect; you'll have a chance to approve each person before they're allowed to join.

Sending Instant Messages Across the Network

“If I can FaceTime or send an email, why use Messages?” When family and friends want to communicate with you by using their computers, they could certainly use Mail or FaceTime — but video and email may not be convenient (or as fast), and you’d miss that communication. Messages allows you to plug into the popular world of Internet instant messaging, which many Mac owners used before through various sources, like AOL or Google, or iMessages (between Apple computers and devices).

Sending a text message to another person is practically instantaneous — hence the name — and you can switch to an audio chat (sound only) or a video chat (using FaceTime) if the other person has a compatible device.

When you first run Messages, you’ll be prompted to use the Messages account that you’ve created on your iPhone or iPad. If you don’t have either of those devices, you can create a Messages account using your Apple ID. (Messages creates an iMessage instant messaging account, which you can use to send and receive text messages between your Mac and iOS devices like your iPhone and iPad.) If you’ve already set up SMS and MMS text messaging on your iPhone, those messages are also shown in Messages, and you can reply to them within the application as well!



REMEMBER

Your iMac must be signed in to the same iCloud account as your iPhone to send and receive SMS or MMS messages.

To send a new message, click the Create New Message icon in the Messages toolbar, or press Command+N. Messages prompts you to type a name from your Contacts list that contains an instant message address, or enter an email address or telephone number if the recipient isn’t in your Contacts list. Now type your text in the entry box at the bottom of the window.



TIP

If you prefer using the Siri voice assistant, you can actually click the Siri icon in the Finder toolbar and say “Send a message to” followed by the person’s name and the message text.

If you want to use bold or italic text, highlight the text and then press ⌘+B for Bold (**B**) or ⌘+I for Italic (*I*). You can also add an *emoji* (a symbol that conveys emotion; in techspeak, also called a *smiley*) to your text: Click the text where you want the emoji to appear, click the Smiley button to the right of the text entry field, and then choose the proper smiley from the list.



TIP

To send a file (such as a photo or a Pages document) to someone during a chat, simply drag the file into the message area.

When your message is perfect, press Return to send it. You'll note that Messages creates an entry (called a *conversation*) in the Sidebar at the left. You can click another conversation at any time to switch to that message exchange, allowing you to communicate with several people (or groups) at one time. (My youngest daughter can keep track of a dozen conversations simultaneously! Luckily, I'm not that popular.)



TIP

Did someone just send you a photo, website link, or News item in a message? You'll find them in the new Shared With You heading within several Apple applications, including Photos, News, TV, Podcasts, and Safari. The heading appears in the Sidebar within these applications, making it ridiculously easy to jump directly to that image, visit that website, or read that News item, all with a single click. Note that each Shared With You entry is marked with the name of the person who sent it.

4

Living the Digital Life

IN THIS PART . . .

Build the digital media library of your dreams with Music and TV.

Create slideshows and share memories with Photos.

Put your moviemaking talents to work with iMovie.

Use GarageBand to compose and record your own music.

- » Playing, organizing, and sharing music with your iMac
- » Ripping and burning CDs
- » Tuning into Internet radio
- » Creating eye candy with Visualizer
- » Setting restrictions
- » Watching movies and TV shows

Chapter **13**

The Multimedia Joys of Music and TV

Sometimes, words just aren't enough. Apple's Music application is that kind of perfection.

To envision how Music changes your iMac, you have to paint the picture with *music* — music that's easy to play, search for, and transfer from device to device. Whether it be classical, alternative, jazz, rock, hip-hop, or folk, I guarantee you won't find a better application than Music to fill your life with . . . well . . . music! (It's pretty doggone obvious how much I appreciate this piece of software.)

With Monterey, Apple has transported the video you watch — both TV shows and movies that you purchase or rent from the iTunes Store — to an application named TV. I provide all the details you need to start watching video on your iMac's spectacular screen.

In this chapter, I lead you through all the features of my absolute favorite Apple applications: Music and TV.

What Can I Play in Music?

Simply put, Music is a media player that plays audio files (and music videos). These files can be in any of many different formats. Music supports these common audio formats:

- » **MP3:** The small size of MP3 files has made them popular for file trading on the Internet. You can reduce MP3 files to a ridiculously small size (albeit at the expense of audio fidelity), but a typical CD-quality, 3-minute pop song in MP3 format has a size of 3–5MB.
- » **AAC:** Advanced Audio Coding is an audio format that's similar to MP3 but offers better recording quality at the same file sizes. However, this format is somewhat less compatible with non-Apple music players and software. (Luckily, you can still burn AAC tracks to an audio CD, just as you can MP3 tracks.) The tracks that you download from the Music Store are in AAC format, and AAC music files are becoming more popular for downloading on the Internet.
- » **Apple Lossless:** Another format direct from Apple, *Apple Lossless* format (also known as ALAC) provides the best compromise between file size and sound quality. These tracks are encoded without loss of quality, although Apple Lossless tracks are somewhat larger than AAC. This format is generally the favorite of discerning audiophiles.
- » **AIFF:** This standard Mac audio format produces sound of the absolute highest quality. This high quality, however, also means that the files are pretty doggone huge. AIFF recordings typically require about 10MB per minute of audio.
- » **WAV:** Not to be outdone, Microsoft created its own audio file format (WAV) that works much like AIFF. It can reproduce sound at a higher quality than MP3, but the file sizes are very large, similar in size to AIFF files.
- » **CD audio:** Music can play audio CDs. Because you don't usually store CD audio anywhere but on an audio CD, file size is no big whoop — but again, 10MB of space per minute of music is a good approximation.
- » **MP2:** A close cousin of the far more popular MP3 format, MP2 is the preferred format in radio broadcasting and is a standard audio format for HDV camcorders. It produces file sizes similar to MP3 format.
- » **Audiobooks:** You no longer need cassettes or audio CDs to enjoy your spoken books. Music can play them for you, or you can send them to your iOS device for listening on the go.
- » **Streaming Internet radio:** You can listen to a continuous broadcast of songs from your favorite Internet radio stations, with quality levels ranging from

what you'd expect from FM radio to the full quality of an audio CD. You can't save the streaming songs within Music, but streaming radio is still great fun. (I run my own station . . . more on MLC Radio later in this chapter.) Unlike services like Spotify, Pandora, and Apple Music, these streaming radio stations are free and don't require a subscription!

Playing Digital Audio Files

Music can play the digital audio files that you download from the Internet or obtain from other sources in the WAV, AAC, Apple Lossless, AIFF, MP2, and MP3 file formats.

After downloading or saving your audio files to your iMac, open Finder, and navigate to wherever you stored the files. Launch Music and click the Songs entry in the Sidebar. (If the Sidebar doesn't appear in your Music window, choose View ⇨ Show Sidebar.) Now you can simply drag the music files (or an entire folder of music) from the Finder window to the list of your songs on the right side of the window. The added files appear in your Music library. You can also drag a song file from a Finder window and drop it on the Music icon on the Dock, which adds it to your Music library as well.

To play a song, just double-click it in the Music list. Alternatively, you can click the track to select it and use the Music interface, which resembles that of a traditional CD player. The main playback controls of Music are Play, Previous, Next, and the Volume slider, as shown in Figure 13-1.

FIGURE 13-1:
The main
playback controls:
Play, Previous,
and Next.



Click the Play button to begin listening to a song. While a song is playing, the Play button toggles to a Pause button. As you might imagine, clicking that button again pauses the music. If you don't feel like messing around with a mouse or trackpad, you can always use the keyboard. The spacebar acts as the Play and Pause buttons. Press the spacebar to begin playback; press it again to stop.

Click the Next button to advance to the next song. The Previous button works like the Next button but with a slight twist: If a song is currently playing and you click the Previous button, Music first returns to the beginning of the current song (just

like an audio CD player). To return to the previous song, double-click the Previous button. To change the volume of your music, click and drag the volume slider.

As with other Mac applications, you can control much of Music with the keyboard. Table 13-1 lists some of the more common Music keyboard shortcuts.

TABLE 13-1 Common Music Keyboard Shortcuts

Press This Key or Key Combination	To Do This
Spacebar	Play the currently selected song if Music is idle.
Spacebar	Pause a playing song.
→	Advance to the next song.
←	Go back to the beginning of a song. Press a second time to return to the previous song.
⌘+↑	Increase the volume of the music.
⌘+↓	Decrease the volume of the music.



TIP

The Music Sidebar is a convenient beast indeed. You can drop the music file(s) on top of a playlist's name in the list, and Music adds it to that particular playlist as well as to the main library. (More about playlists in a bit.) If you drop a folder of songs on top of the Playlists header in the Sidebar, Music creates a new playlist using the name of the folder and adds all the songs in the folder to the new playlist. *Bam!*

If you have an optical drive (either internal or external), playing an audio CD in Music is just as simple as playing digital audio files. Just insert the CD in the drive, start Music by clicking its icon on the Dock, and click the Play button. (Note that your iMac might be set to automatically launch Music when you insert an audio CD.) The other controls I describe in the previous section work just as well with the tracks on an audio CD.

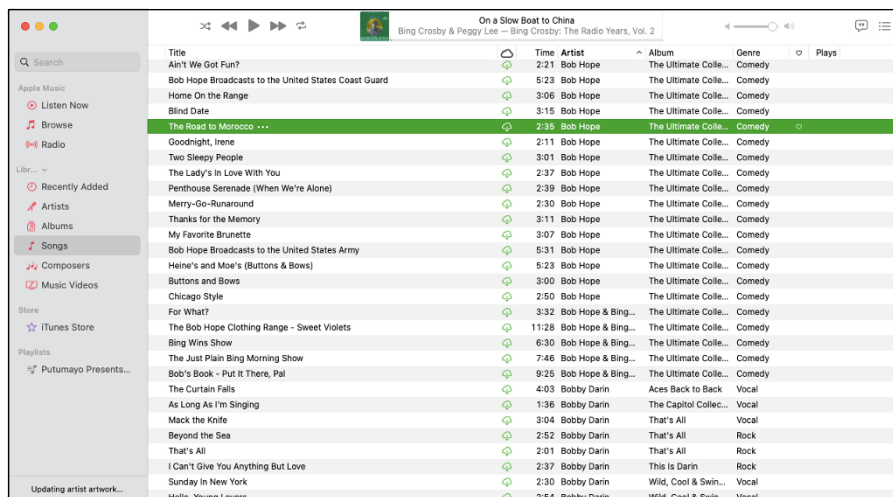


TIP

You can customize the Music Sidebar to display only those media types and criteria that you prefer. (I like the Composers and Music Videos entries to be visible, for example.) To edit the entries in the Sidebar, hover your pointer over the Library heading and click the Edit link that appears; then enable or disable the check boxes next to each heading as desired.

Think of the library as a master list of your audio media. To view the Music library, click the Songs entry in the Sidebar, as shown in Figure 13-2. (Go figure.)

FIGURE 13-2:
The Music library
keeps track of all
your audio files.



REMEMBER

The Music window can play media from a surprising number of sources:

- » **Library:** The Sidebar can display Music, Music Videos, and Audiobooks.
- » **iTunes Store:** I discuss this music source in the final section, “Buying Digital Media the Apple Way.”
- » **Radio and Listen Now:** I discuss Apple Music Radio and Listen Now in the section titled “A New Kind of Radio Station,” later in this chapter.
- » **Shared:** If another Mac or PC on your local network is running Music and is set to sync its library, the songs in that Music library appear on all devices that use the same Apple ID.
- » **Devices:** If an iPod touch is connected, it appears in the Sidebar. (And yes, Virginia, other models of MP3 players from other companies also appear in the list if they're supported in Music.) If you connect an iPhone or iPad to your Mac, it shows up here as well.
- » **Genius:** Choose File ⇨ New ⇨ Genius Playlist to allow Music to automatically create playlists from songs in your Music library. You can also allow Genius to recommend music, movies, and TV shows based on the titles you already have in your Music library. (More on this feature in “Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists,” later in this chapter.)
- » **Audio CD:** A standard audio CD — anything from the Byrds to Justin Timberlake — shows up as an icon if you load the CD into your optical drive.
- » **Playlists:** Think of playlists as folders that you use to organize your music. (More on playlists later in the section titled “Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists.”)



TIP

If you've invested in an Apple TV device, it appears when you click the AirPlay icon in the Music toolbar (which looks like a triangle topped with circular waves at the right side of the playback controls). Choose the Apple TV entry from the list that appears to allow Music to share media with your Apple TV, which in turn sends it to your HDTV.

You can browse your Music library in several ways. By default, the application sorts by *Songs*, but you can choose View ⇨ Sort By to sort by different criteria (including Album, Artist [active in Figure 13-2], Genre, and Time).

If you're using Songs view, the Music library may display information for each song that you add to it, including these items:

- » **Name:** The title of the song
- » **Time:** The length of the song
- » **Artist:** The artist who performs the song
- » **Album:** The album on which the song appears

If any song you're adding doesn't display anything for the title, album, or artist information, don't panic; most MP3 files have embedded data that Music can read. If a song doesn't include any data, you can always add the information to these fields manually. I show you how later, in "Setting or changing the song information manually."

If you'd rather eschew the Music menu system, it's easy to change your sort order by clicking any column heading in the Music library list; Music reorders the list according to that category. Clicking the Artist column heading, for example, alphabetizes your library by artist name. I often click the Time heading to sort my library according to the length of the songs. Oh, and you can drag column titles to reorder them any way you like (except for the check-box column displayed when you're selecting songs to burn, which remains fixed).



TIP

While listening to your music, you can always display the tracks that Music will play next — and even change their order. (Believe me, this feature is great fun for us amateur party DJs.) Choose View ⇨ Show Playing Next to display the list at the right side of the window, and drag selected songs into the perfect order! (You can also click the button with the list icon that appears on the far-right end of the toolbar.)

WILL I TRASH MY COUNT BASIE?

Novice users, take note: Music watches your back when you trash tracks.

Suppose that you delete a song from the library that's located only in the Music folder (which you didn't copy to Music from another location on your drive). That means you're about to delete the song from your iMac, and there'll be no copy remaining on your drive. Rest assured, though, that Music prompts you to make sure you really want to move the file to the Trash. (I get fearful email messages all the time from readers who are loath to delete *anything* from Music because they're afraid they'll trash all their digital music files.)

Remember: If you delete a song from the library that *also* exists elsewhere on your drive (outside the reach of the Music folder), it isn't deleted from that other location on your drive. If you mistakenly remove a song that you meant to keep, just drag it back into Music from the Finder or even from the Trash. 'Nuff said.

Finding songs in your Music library

After your collection of audio files grows large, you may have trouble locating that Swedish remix version of "I'm Your Boogie Man." To help you out, Music has a built-in Search function. To find a song, type some text in the Search box at the top of the Sidebar. While you type, Music tries to find a selection that matches your search text. The search is thorough, showing any matching text from your library, as well as the Apple Music service and the iTunes Store. If you type **Electronic** in the field, Music might return results for the band named Electronic or other tunes that you classified as *electronic* in the Genre field. (The section "Know Your Songs," later in this chapter, tells you how to classify your songs by genre, among other options.)

Removing old music from the library

After you spend some time playing songs with Music, you might decide that you didn't *really* want to add 40 versions of "Louie Louie" to your library. (I prefer either the original or the cast from the movie *Animal House*.) To remove a song from the library, click the song to select it and press the Delete key on your keyboard, or right-click the song entry and choose Delete from Library from the shortcut menu.



TIP

You can also remove a song from the library by dragging it to the Trash on the Dock.

Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists

As I mention earlier, the Music library can quickly become a fearsomely huge beastie. Each library can contain thousands upon thousands of songs. If your library grows anywhere near that large, finding all the songs in your lifelong collection of Paul Simon albums is *not* a fun task. Furthermore, with the library, you're stuck playing songs in the order in which Music lists them.

To help you organize your music in groups, use the Music playlist feature. Typically, a *playlist* is a collection of some of your favorite songs from the library, but playlists can also include media such as movies and audiobooks. You can create as many playlists as you want, and each playlist can contain any number of items. Whereas the Music library lists all available songs, a playlist displays only the items that you add to it. Further, any changes you make in a playlist affect only that playlist, leaving the library untouched.

To create a playlist, you can do any of the following:

- » **Choose File ⇨ New ⇨ Playlist.**
- » **Press ⌘+N.**
- » **Choose File ⇨ New ⇨ Playlist from Selection.** This command creates a new playlist and automatically adds the selected tracks.
- » **Choose File ⇨ New ⇨ Genius Playlist.** Music builds a playlist of songs that are similar in some way (typically by matching the genre of the selection or the beats per minute, but also based on recommendations from other Music members). Note that your iMac needs an Internet connection to create a Genius playlist, and the larger your music library is, the longer it takes Music to build your playlist. You also need to turn on the Genius feature by choosing File ⇨ Library ⇨ Turn on Genius and entering your Apple ID. (Note that Genius playlists sometimes mix tracks containing explicit content with less objectionable material — especially in the comedy and rap genres.)
- » **Drag a folder containing audio files from a Finder window to the Playlists heading in the Sidebar.**

To help organize your playlists, it's a good idea to . . . well, *name* them. (Aren't you glad now that you have this book?) Suppose that you want to plan a party for your polka-loving friends. Instead of running to your computer after each song to change the music, you could create a polka-only playlist. Select and start the playlist at the beginning of the party, and you won't have to worry about changing the music the whole night. (You can concentrate on playing the accordion.) To load a playlist, select it in the Sidebar list; Music displays the songs for that playlist.

The same items can appear in any number of playlists because the items in a playlist are simply pointers to the media in your Music library — not the actual songs themselves. Add and remove them at will to or from any playlist, secure in the knowledge that the items remain safe in your library. Removing a playlist is simple: Select the playlist in the Sidebar and press Delete.



REMEMBER

Removing a playlist doesn't delete any songs from your library.

SOME PLAYLISTS ARE SMARTER THAN OTHERS

You can create a Smart Playlist in the Music Sidebar by choosing File ⇨ New Smart Playlist or by pressing Option+⌘+N.

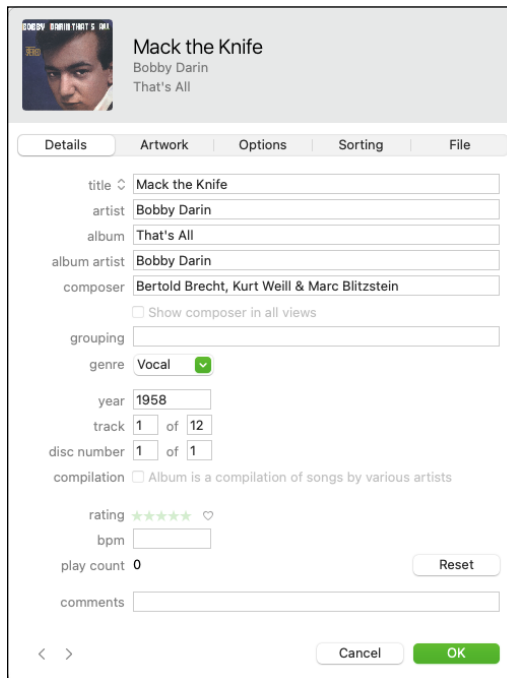
The contents of a Smart Playlist are automatically created from a specific condition or set of conditions that you set via the Smart Playlist dialog. You can limit the track selection by mundane things such as album, genre, or artist; or you can get funky and specify songs that were played last, or by the dates when you added tracks, or even by the sampling rate or total length of the song. Music can even create a playlist packed with songs that are shorter than 3 minutes, so you can fill your iPod touch with more stuff! If you want to add another criterion, click the plus sign on the right side of the dialog, and you get another condition field that allows you to refine your selection even further.

You can choose the maximum number of songs to add to the Smart Playlist or limit the size of the playlist by the minutes or hours of play or the number of megabytes or gigabytes the playlist will occupy. (Again, this feature is great for automatically gathering as much from your KISS collection as will fit into a specific amount of space on a CD.) Select the Live Updating check box for the ultimate in convenience. Music automatically maintains the contents of the Smart Playlist to keep it current with your conditions at all times in the future. (If you remove tracks from a Smart Playlist manually, Music adds other tracks that match your conditions.)

Now think about what all these settings mean when combined. *Whoa*. Here's an example yanked directly from my own Music library. I created a Smart Playlist that selects only those songs in the Rock genre. It's limited to 25 songs, selected by least often played, and live updating is turned on. The playlist is named Tracks I've Gotta Hear because it finds the 25 rock songs (from my collection of more than 10,000 songs) that I've heard least often! After I listen to a song from this Smart Playlist, Music automatically freshens it with another song, allowing me to catch up on the tracks I've been ignoring.

Know Your Songs

Besides organizing your music into Elvis and non-Elvis playlists, Music gives you the option to track your music at song level. Each song you add to the Music library has a complete set of information associated with it. Music displays this information (see Figure 13-3) on the Details tab of the Info dialog:



The screenshot shows the 'Mack the Knife' song details dialog box. The title is 'Mack the Knife', the artist is 'Bobby Darin', and the album is 'That's All'. The composer is 'Bertold Brecht, Kurt Weill & Marc Blitzstein'. The genre is 'Vocal'. The year is '1958'. The track is '1' of '12'. The disc number is '1' of '1'. The compilation checkbox is unchecked. The rating is '★★★★★'. The bpm field is empty. The play count is '0'. The comments field is empty. The 'OK' button is highlighted in green.

FIGURE 13-3:
View and edit
song information
here.

- » **Song Name:** The name of the song
- » **Artist:** The name of the artist who performed the song
- » **Album Artist:** The name of the artist responsible for a compilation or tribute album
- » **Album:** The album where the song appears
- » **Grouping:** A group type that you assign
- » **Composer:** The name of the astute individual who *wrote* the song
- » **Comments:** A text field that can contain any comments on the song

- » **Year:** The year the artist recorded the song
- » **Track:** The position of the song on the original album
- » **Genre:** The classification of the song (such as rock, jazz, or pop)
- » **Disc Number:** The original disc number in a multi-CD set
- » **Play Count:** The number of times you've listened to the song
- » **BPM:** The beats per minute (indicates the song's tempo)

You can display this information by clicking a song name and pressing ⌘+I. The fields appear on the Details tab.

Setting the song information automatically

Each song you add to the Music library may have song information included with it. If you add music from a commercial audio CD, Music connects to a server on the Internet and attempts to find the information for each song on the CD. If you download a song from the Internet, it often comes with some information embedded in the file already; the amount of included information depends on what the creator supplied. (And it's often misspelled as well; think *Leonard Skeenard* instead of *Lynyrd Skynyrd*.) If you don't have an Internet connection, Music can't access the information and displays generic titles instead.

Setting or changing the song information manually

If Music can't find your CD in the online database, or someone gives you an MP3 with incomplete or inaccurate information, you can change the information yourself. Believe me, you want at least the artist and song name! To view and change the information for a song, follow these steps:

1. **Select the song in the Song list or a playlist.**
2. **Press ⌘+I, or choose File ⇨ Get Info.**
3. **Click a field to edit the song's information on the Details tab (refer to Figure 13-3).**



TIP

You can move to the next or previous track in the Music library list or playlist by clicking the Next or Previous button in the bottom-left corner of the dialog.



REMEMBER

The more work you put into setting the information of the songs in your Music library, the easier it is to browse and use Music. Incomplete song information can make it more difficult to find your songs in a hurry. If you prefer, you don't have to change all the information about a song (but it makes life easier later if you do). Normally, you can get away with setting only a song's title, artist, and genre. The more information you put in, however, the faster you can locate songs and the easier they are to arrange. Music tries to help by automatically retrieving known song information, but sometimes you have to roll up your sleeves and do a little work. (Sorry, but some things just can't be automated.)

"What about cover art, Mark?" Well, I'm overjoyed that you asked! Music can try to locate artwork automatically for the tracks you select. (Note that embedding large images can significantly increase the size of the song file.) Follow these steps:

1. **Select the desired songs from the track list.**
2. **Choose File ⇨ Library ⇨ Get Album Artwork.**



TIP

You can set Music to automatically attempt to add album artwork every time you rip tracks from an audio CD (as described in the next section) or when you add songs without artwork to your Music library. Choose Music ⇨ Preferences, and click the Advanced tab of the Preferences dialog; then select the Automatically Update Artwork check box. (By the way, if you buy tracks or an album from the iTunes Store, Apple includes album covers automatically!)



TIP

Want to add album covers to your song info manually? Select one or more songs in the track list, display the Info dialog, and click the Artwork tab. Now launch Safari, visit Amazon.com, and do a search for the same album (or search an online artwork library, such as AllCDCovers.com). Drag the cover image from the web page right into the Info dialog, and drop it in the center of the Artwork square. When you click OK, the image appears on the Artwork tab of the Info dialog.

Ripping Audio Files

You don't have to rely on Internet downloads to get audio files: You can create your own MP3, AAC, Apple Lossless, AIFF, and WAV files from your audio CDs with Music. The process of converting audio files to different formats is called *ripping*. (Audiophiles with technical teeth also call this process *digital extraction*, but they're usually ignored at parties by the popular crowd.) Depending on what hardware or software you use, each has its own unique format preferences.

The most common type of ripping is converting CD audio to MP3 (or AAC) format. To rip MP3s from an audio CD using an external CD or DVD drive, follow these steps:

- 1. Launch Music by clicking its icon on the Dock.**
Alternatively, you can locate Music in your Applications folder or in Launchpad.
- 2. Choose Music ⇨ Preferences.**
- 3. In the Preferences dialog that appears, click the Files tab.**
- 4. Click the Import Settings button that appears at the bottom of the Preferences dialog.**
- 5. Choose MP3 Encoder from the Import Using pop-up menu.**
- 6. Choose High Quality (160 Kbps) from the Setting pop-up menu, and click OK to return to the Preferences dialog; click OK again to return to Music.**

This bit-rate setting provides the best compromise between quality (it gives you better than CD quality, which is 128 Kbps) and file size (tracks you rip will be significantly smaller than audiophile bit rates such as 192 Kbps or higher).

- 7. Load an audio CD into your Mac's optical drive.**

The CD title shows up in the Music Source list (below the Devices heading), which is on the left side of the Music window. The CD track listing appears on the right side of the window.



TIP

If Music asks whether you want to import the contents of the CD into your Music library, you can click Yes and skip the rest of the steps. If you've disabled this prompt, continue with the remaining two steps.

- 8. Deselect the check box next to any song you don't want to import from the CD.**

All songs on the CD have a check box next to their title by default. Unmarked songs aren't imported.

- 9. Click the Import CD button.**

Tweaking the Audio for Your Ears

Besides the standard volume controls that I mention earlier in this chapter, Music offers a full equalizer. An *equalizer* permits you to alter the volume of various frequencies in your music, allowing you to boost low sounds, lower high sounds, or anything in between.

To open the Equalizer, choose Window ⇨ Equalizer or press ⌘+Option+E. Use the leftmost slider (Preamp) to set the overall level of the Equalizer. The remaining sliders represent various frequencies that the human ear can perceive. Setting a slider to a position in the middle of its travel causes that frequency to play back with no change. Move the slider above the midpoint to boost that frequency; conversely, move the slider below the midpoint to reduce the volume of that frequency.

Continue adjusting the sliders until your music sounds the way you like it. In case you prefer to leave frequencies to the experts, the Music Equalizer has several predefined settings to match most musical styles. Open the pop-up menu at the top of the Equalizer window to choose a genre. When you close the Equalizer window, Music remembers your settings until you change them again.

A New Kind of Radio Station

Besides playing back your favorite audio files, Music can also tune in Internet radio stations around the globe. You can add your favorite stations to your playlists. You can also subscribe to the Apple Music Radio feature to create a custom station dedicated to the genres and artists you prefer. This section shows you how to do it all.

DISCOVERING NEW MUSIC WITH LISTEN NOW

Have you ever wondered what great music lies “just out of reach”? Perhaps a buddy hasn’t yet recommended that new band, or there’s an album from one of your favorite artists that you don’t even know exists! If you’re an Apple Music subscriber, just click the Listen Now entry in the Sidebar and start exploring. (And no wasting time trying to guess which new artists may appeal to you.)

Let me explain: Listen Now starts with the music and playlists that you’ve already enjoyed in the past, but it actually “learns” what types of music and mixes you enjoy! Literally, the more you listen, the better it gets at predicting your musical taste. (For example, I’ve been pleasantly surprised by the jazz and techno suggestions that Listen Now has recommended, based on my epic enjoyment of anything from Charlie Parker and Propellerheads.)

Listen Now doesn't deliver just music, however: You'll also find interviews from all sorts of artists, suggested playlists, and even convenient links to artist biographies and additional content in the iTunes Store. (Remember, Listen Now requires an Apple Music subscription.)



TIP

When choosing an Internet radio station, keep your Internet connection speed in mind. If you're using a broadband DSL or cable connection — or if you're listening at work over your company's high-speed network — you can listen to stations broadcasting at 128 Kbps or even higher. The higher the bit rate, the better the music sounds. At 128 Kbps in AAC format, for example, you're listening to sound that's as good as an audio CD.

Tuning in your own stations

To listen to an Internet radio station, you need the station's Internet address.

In Music, choose File ⇨ Open Stream URL or press ⌘+U. In the Open Stream dialog that appears, enter the URL of your desired radio station, and click OK. In seconds, Music tunes in your station and adds the station as an item in your Songs list so that you can listen again in the future with a single click.

Radio stations in your playlists

If you find yourself visiting a particular online radio station often, you'll be glad to know that Music supports radio stations in its playlists. To add a radio station to a playlist from your library, follow these steps:

1. **Click the Songs entry in the Sidebar and locate the radio station you've added to your library.**
2. **Drag the station entry from the Song list to the desired playlist on the left side of the window.**



TIP

If you haven't created any playlists yet, see the section "Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists," earlier in this chapter, to find out how.

HAVE AN ITCH TO HEAR “KUNG FU FIGHTING”?

As you can probably tell from this chapter, music is very important to me. This particular technology author has a preference for a certain hot jam spot: *MLC Radio*, the Internet radio station I've been running for more than a decade now. I call my station a '70s Time Machine because it includes hundreds of classic hits from 1970 to 1979. You hear everything from “Rock and Roll Hoochie Koo” by Rick Derringer to “Moonlight Feels Right” by Starbuck. (Hey, I'm summing up a decade here, so be prepared for both Rush and Captain & Tennille.) The station broadcasts at 128 Kbps (audio CD quality). For the station's Internet address or to ask for help connecting to MLC Radio, visit my website at www.mlcbooks.com!

Creating a custom Music Radio station

Apple Music Radio makes it possible for you to listen to the artists, songs, and genres that you prefer in Music without selecting a specific Internet radio station. To use Apple Music Radio, click the Radio entry below the Apple Music heading in the Sidebar. After you've set up your subscription, type the artist name, song name, or genre in the Search field. (Remember that Apple Music Radio is an Apple Music subscription service, unlike the Internet radio stations I described in the preceding section.)

As you download new music from the iTunes Store (and listen to new artists and genres in Radio), the service learns more about your musical tastes and can automatically play and recommend new music, much like the Genius feature I discuss earlier in this chapter.



REMEMBER

Like Internet radio, the Apple Music subscription service requires an Internet connection — but unlike typical stations, Apple Music also requires an Apple ID.

Your Music Radio station is automatically shared among all your Macs running macOS (as well as any iOS devices you own). In fact, Music is connected closely with the Apple iCloud service. To download a local copy of any iCloud item, simply click the iCloud icon next to the item. After the local copy has been saved to your Mac's drive, the iCloud icon disappears, and you're ready to listen (even without an Internet connection).

iSending iStuff to iPhone and iPad

If you own an iPhone or iPad, you probably already know that these devices can act as your personal music player. You can buy all sorts of applications for these devices at the Music Store. Music even keeps track of these applications as part of your Music library.



REMEMBER

To sync correctly, both your computer and the device *must* share an Apple ID.

You connect your iOS device to any Macintosh or Windows PC that has USB ports by using the included cable. After the device is connected, you can synchronize it with Music. By default, this process is automatic: Your iPhone or iPad and the Music software communicate and figure out what items are in your Music library (as compared with the device's library). If they discover songs, podcasts, and video in your Music library that are missing from your iPod touch, the items automatically transfer to the device. Conversely, if the iPhone or iPad contains stuff that's no longer in Music, the iPod automatically removes those files from its drive.



WARNING

Go back and reread that last sentence: The Apple device *automatically removes* files from its drive. (I'll wait.) Apple added this feature in an effort to be responsive to copyright concerns. The reasoning is that if you connect your iOS device to your friend's computer, you can't transfer songs from the device to that computer. You could always look at it from the marketing perspective as a feature that makes sure your iMac and iOS device are always in total sync. Whatever the case, pay close attention, and read all warning dialogs when connecting to a computer other than your own; otherwise, you might wipe out your iPhone or iPad library.

You can change your settings in the device's Summary pane so Music autosyncs only selected playlists. (Click the device icon in the top-left corner of the window to display the Summary pane.) Or, if you're really nervous, you can choose to manage the contents of your device manually, from the Summary pane.



TIP

If you'd rather lose the cable connection and sync your device wirelessly, you can first connect with a USB cable and then click the device in the Finder window Sidebar. Select the General tab; then enable Show this Device when on Wi-Fi.

SENDING MUSIC ELSEWHERE WITH AIRPLAY

If you're using an AirPort-compatible wireless device (like Apple's wireless AirPod headphones), you can ship your songs right to your remote hardware from Music!

After your AirPlay device is plugged in, click the AirPlay button on the Music toolbar, and you can choose to broadcast the music you're playing in Music across your wireless network. Ain't technology truly *grand*?

Burning Music to Shiny Plastic Circles

Besides being a great audio player, Music is adept at creating CDs. (Of course, your iMac must have an external optical drive to record them.) Music makes the process of recording songs to a CD as simple as a few taps on the trackpad. Making the modern version of a compilation (or *mix*) tape is easier than getting a kid to eat ice cream! If you have an internal or external optical drive, Music lets you burn CDs in one of three formats:

- » **Audio CD:** This format is the typical kind of commercial music CD you buy at a store. Most typical music audio CDs store up to 800MB of data, which translates into about 80 minutes of music.
- » **Data CD or DVD:** A standard computer CD-ROM or DVD-ROM is recorded with the audio files. This disc can't be played in any standard audio CD player even if it supports MP3 CDs, which I discuss next. Therefore, you can listen to these songs only by using your Mac and an audio player, such as Music or a PC running Windows.
- » **MP3 CD:** As does the ordinary computer CD-ROM that I describe, an MP3 CD holds MP3 files in data format. The files, however, are arranged in such a way that they can be recognized by audio CD players that support the MP3 CD format (especially boom boxes, DVD players, personal CD players, and car stereos). Because MP3 files are so much smaller than the digital audio tracks on traditional audio CDs, you can fit as many as 160 typical 4-minute songs onto one disc. You can also play these discs on your Mac via Music.



WARNING

Keep in mind that MP3 CDs aren't the same as the standard audio CDs you buy at the store, and you can't play them in older audio CD players that don't support the MP3 CD format. Rather, this is the kind of archival disc that you burn at home for your own collection or for use in a CD/DVD player or car audio system that supports MP3 discs.

To begin the process, build a playlist (or select an existing playlist that you want to record). If necessary, create a new playlist and add to it whatever songs you would like to have on the CD. (See the earlier section “Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists” if you need a refresher.) With the songs in the correct order, right-click the playlist and choose Burn Playlist to Disc from the shortcut menu to commence the disc-burning process. Select the desired recording format (again, usually Audio CD) in the Burn Settings dialog that appears.



TIP

To save yourself from sonic shock, I always recommend that you enable the Use Sound Check check box before you burn. Music adjusts the volume on all the songs on your audio CD so that they play at the same volume level.

Ready to go? Click Burn and load the blank disc. Music lets you know when the recording is complete.

Feasting on Music Visuals

By now, you know that Music is a feast for the ears, but did you know that it can provide eye candy as well? With just a click or two, you can view mind-bending graphics that stretch, move, and pulse with your music.

To begin viewing Music visuals, choose Window ⇨ Visualizer or press ⌘+T. Immediately, most of your Music interface disappears and begins displaying groovy lava lamp-style animations (like, *sassy*, man). To stop the visuals, press Esc (or press ⌘+T again). The usual sunny aluminum face of Music returns.



TIP

You can still control Music with the keyboard while the visuals are zooming around your screen. See Table 13-1, earlier in this chapter, for a rundown on common keyboard shortcuts.

Exercising Parental Authority

Do young children use your Mac? I'll be honest here: A large amount of content in the iTunes Store (including audio, movies, and even apps) is stuff I don't consider to be suitable for kids. And what about the media that others in the family may decide to share? Such is the world we live in today, and the good folks at Apple recognize that you may not want to inadvertently allow your kids to have access to explicit content.

Luckily, you can use the Restrictions settings in Music to build a secure fence around content that's for grownups only. Heck, you can even banish items from the Sidebar. Figure 13-4 illustrates the Content & Privacy Restrictions panel of the Screen Time pane in System Preferences, where these restrictions are set.

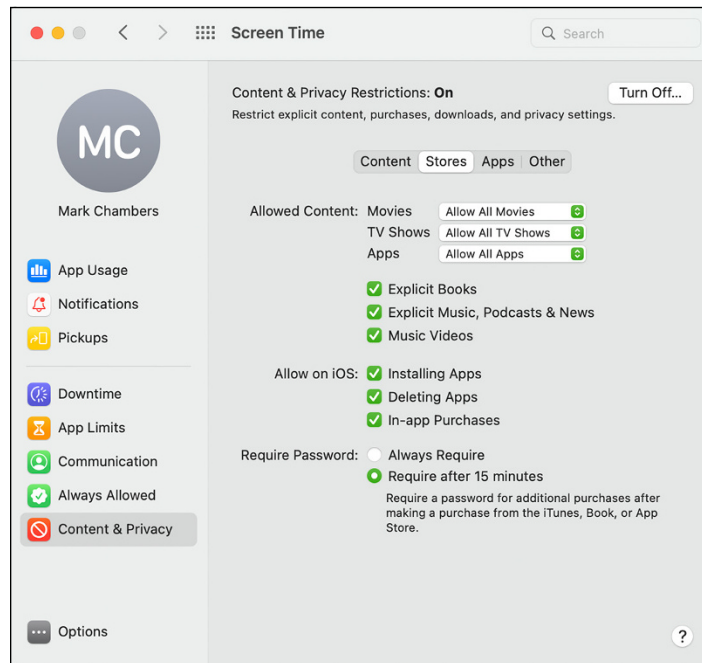


FIGURE 13-4:
Protect your kids
from explicit
content.



REMEMBER

You must enable Screen Time and turn on the Content & Privacy Restrictions to restrict access in Music and TV. To enable Screen Time for an account, log in to that account, display the Screen Time pane in System Preferences, click the Options entry at the left, and click the Screen Time Turn On button. When Screen Time is enabled, you can click the Content & Privacy entry at the left and click the Turn On button.

To restrict access, follow these steps:

1. **Choose Music ⇨ Preferences.**
2. **Click the Restrictions tab of the Preferences dialog.**
3. **Click the Open Screen Time button to display the Content & Privacy Restrictions settings.**

4. Click the Stores tab.
5. Disable any of the check boxes to prevent access to those features.
6. Click any of the Allowed Content pop-up menus to choose the appropriate ratings for that content.

Note that these restrictions apply only to content in the iTunes Store, content that can be downloaded through iCloud, and media shared with your Mac.

7. Click OK.

Watching Video with TV

“But Mark, what about the TV shows and movies you mentioned earlier?” Fear not, good reader. Apple has organized all the video you’ve bought from the iTunes Store into the separate TV application; full-length movies and TV shows are easy to browse and enjoy on your iMac. Or, with an Apple TV unit connected to your home theater system, you can watch those movies and shows from the comfort of your sofa on the other side of your living room, or even from your bedroom on the other side of your house.

Figure 13-5 illustrates the TV window, which is quite similar to the Music window. (Why mess with perfection?) You’ll note the strip of source buttons across the TV toolbar, which make it easy to display all your films and TV shows, as well as top movies or TV shows that you can rent or purchase. (Even content for kids is included!) Note that the Movies, TV Shows, and Kids buttons take you to featured video that you haven’t purchased or rented yet. Some selections are free, but most are pay-to-view. The Library button, however, displays only the video content that you’ve already purchased, so it’s always available.

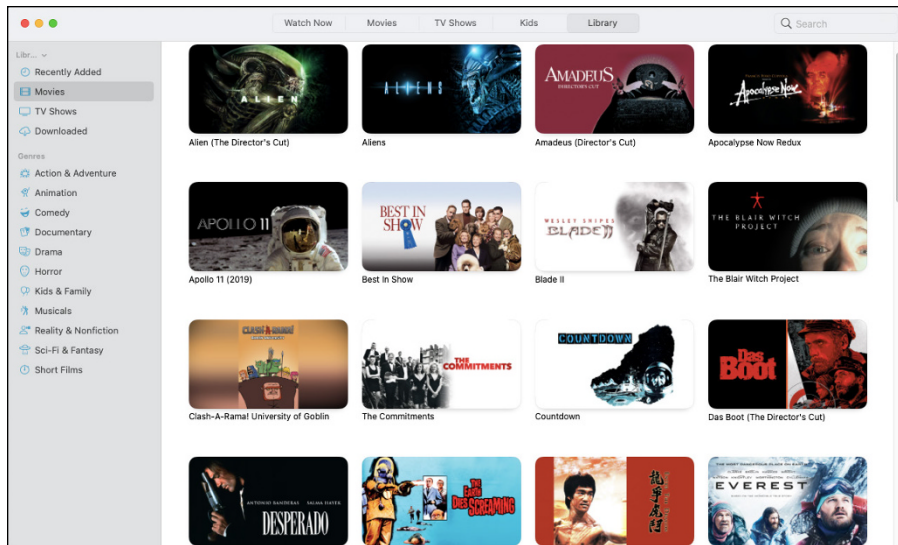


REMEMBER

It’s important to consider all your TV shows and movies as content that you’ll watch within the TV application, especially when Apple has decided to retain your music videos within the Music application. (Somewhat confusing, I know.) That way, you won’t find yourself wondering what to click when you’ve downloaded a new movie.

Watching video in TV couldn’t be simpler. Click the Library button on the TV toolbar and then select either the Movies or TV Shows entry in the Sidebar. (Music videos appear as a Smart Playlist within the Music Sidebar, which I cover in the sidebar “Some playlists are smarter than others,” earlier in this chapter.)

FIGURE 13-5:
My collection of movies appears
in TV.



From your collection, you can do the following:

- » Double-click a video thumbnail. If you interrupted a video by quitting TV, the application continues the video at the point where the application was closed.
- » Drag a QuickTime-compatible video clip from the Finder window to the TV window. (These clips typically include video files ending in .mov, .mv4, or .mp4.)

TV plays video in full-screen mode. Move your pointer to display a control strip at the bottom of the screen, sporting the standard slider bar that you can drag to move through the video (as well as a volume control and Fast Forward/Reverse buttons). You can also pause the video by clicking the Pause button. Icons at the far-right end allow you to jump to specific scenes and select subtitles if desired. To exit the video, press Esc or click the X button in the top-left corner of the screen.



TIP

Films may display an Extras button, which you can click to view additional content, such as deleted scenes.

Buying Digital Media the Apple Way

The hottest spot on the Internet for buying music is the iTunes Store, which you can reach from the cozy confines of Music — that is, as long as you have an Internet connection. If you don't, it's time to turn the page to a different chapter.

Click the iTunes Store entry in the Music Sidebar, and after a few moments, you see the latest offerings, as shown in Figure 13-6. Click a link in the store list to browse according to media type. The Back and Forward buttons at the top of the iTunes Store window operate much the same as those in Safari, moving you backward or forward in sequence through pages you’ve already seen.

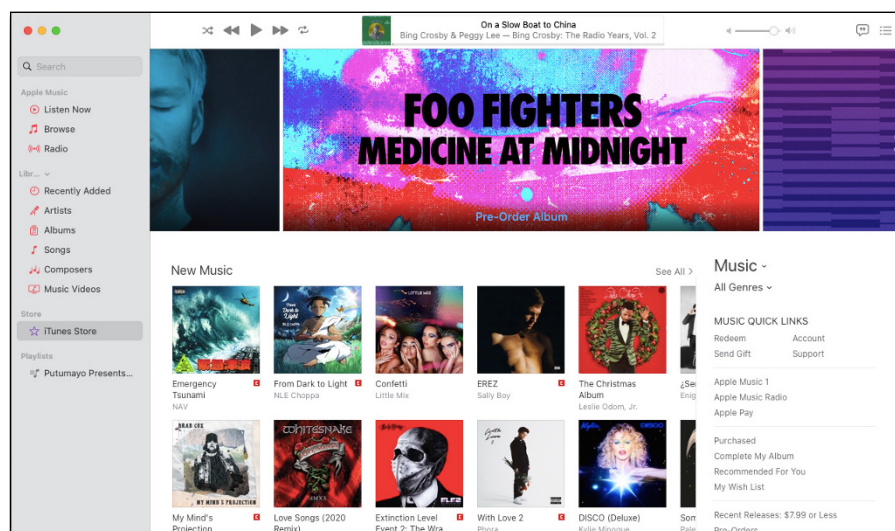


FIGURE 13-6:
The iTunes Store
offers a world of
music for
purchase.

To display the details on a specific album or track, just click it. If you’re interested in buying only certain tracks (for that perfect road-warrior mix), you get to listen to 90 seconds of any track — for free, no less, and at full sound quality. When you’re ready to buy, click the Buy Now button. (At the time of this writing, tracks are usually 99 cents to \$1.29 a pop, and an entire album is typically \$9.99. What a bargain!)

The iTunes Store uses your Apple ID to identify you, and it keeps secure track of your payment information for future purchases. After you use the iTunes Store once, you rarely have to log in or retype your credit card information again (unless you log out after each use for security).

The tracks and files that you download are saved to a separate category in the Sidebar called Recently Added. When the download is finished, you can play them, copy them to other playlists, or burn them to CD or DVD just as you can any other items in your Music library.



TIP

Music can automatically download the media you purchase on another iCloud device (including another Mac and your iPhone or iPad). To set up automatic downloading, choose Music ⇨ Preferences to open the Preferences dialog and then click the General tab. Click the Sync Library check box to enable it; then click OK to save your changes.

- » Importing pictures from your internal drive or digital camera
- » Organizing images with Photos
- » Tweaking the appearance of photographs
- » Sharing photos with your friends

Chapter **14**

Focusing on Photos

For decades now, the Mac has been the choice of professional photographers for working with digital images — which is not surprising, considering the Mac's graphical nature (and the incredible quality of Apple displays)! Apple continues this tradition with *Photos*, its photography tool for the home user that can help you organize, edit, and even publish your photographs. (It sports more features than a handful of Swiss army knives.) After you shoot your photos with a smartphone or a digital camera, you can import them into Photos, edit them, and publish them. You're not limited to photos that you take yourself, either; you can edit, share, and organize all kinds of digital image files, as well as video clips. You can even create a photo album and use the Photos interface to order a handsome softbound or hardbound copy shipped to you, or you can create a slideshow and upload it to YouTube.

In this chapter, I walk you through an overview of what Photos can do. After that, I give you a brief tour of the controls in Photos so that you can see what features are available to you, including those for managing, printing, and publishing your photos.

Delving into Photos

Figure 14-1 shows most of the major controls Photos offers. (Other controls appear automatically when you enter different modes; I cover them in upcoming sections.)

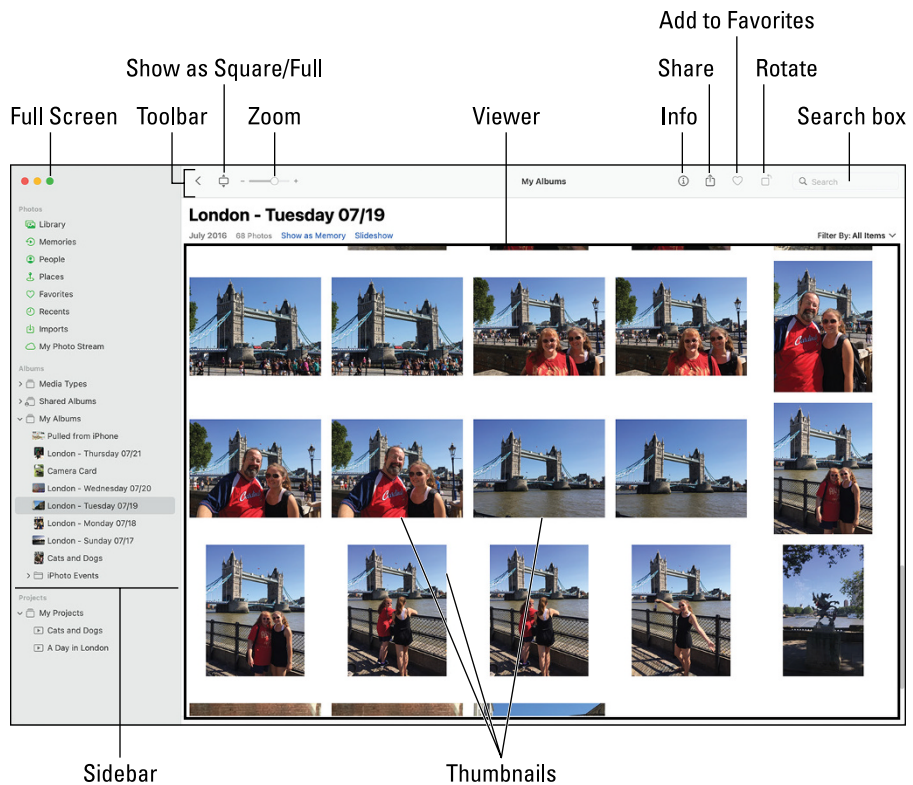


FIGURE 14-1: Photos greets you with an attractive window.

These controls and sections of the window are covered in more detail in the following sections. For now, here's a quick rundown of what you see when you launch Photos and click the Photos mode button in the top center of the screen:

- » **Sidebar:** Like Music and Safari, Photos sports a Sidebar that displays locations and groupings within the application — photos you've recently imported, for example, or specific photo albums and book projects you've created. Switching among your photo library, albums, and projects involves a single click!
- » **Toolbar:** This group of controls determines how many images the Viewer displays and allows you to perform several actions with selected photos.
 - You can display photos by *years*, *months*, or *days* (which cover three cross sections of your photos by when they were taken) or all photos at one time. If the Back button is visible, you can click it to see more images. To zoom in on a specific photo, just click the desired thumbnail. To switch among these groupings, click one of the four view buttons on the toolbar or press ⌘+1 through ⌘+4. Click the All Photos button to return to an overview of your entire library.

- You can create new albums, slideshows, and print projects (such as books, calendars, and cards) from your photos. These new thumbnails appear when you click the Albums and Projects entries on the Sidebar, which makes it much easier to organize your photos.
- You can share selected photos in a slew of ways, including Apple Mail, Messages, and AirDrop networking, as well as popular online sites such as Facebook, Twitter, and Flickr. If you've enabled iCloud Photo Sharing, you can also share photos with your other Macs and iOS devices.
- You can search for specific images. Just click the box and start typing to search by description, title, caption, or even Faces and keywords, which I cover later, in the section "Digging through your library with keywords."



TIP

» **Viewer:** This pane displays the images from your Photos library. You can click and drag or ⌘+click to select photos in the Viewer for further tricks, such as assigning keywords and editing images.

» **Thumbnails:** If you're displaying a single image from your library, you can press Option+S to open and close the Thumbnails pane. The Thumbnails pane allows you to quickly switch to another image by clicking the desired thumbnail — a helpful feature when you're editing several images taken at around the same time.

» **Full Screen:** Click the Full Screen/Maximize button in the top-left corner of the window (or press Control+⌘+F) to switch to full-screen display of your photos. In full-screen mode, you can double-click a thumbnail to view the image in your Mac's entire screen real estate. (The toolbar is still available at any time: Just move your pointer to the top of the screen to display it.) Press Esc to return to windowed mode.



TIP

Choose View ⇨ Always Show Toolbar and Sidebar in Full Screen to prevent the toolbar and Sidebar from disappearing in full-screen mode.

» **Zoom:** Drag this slider to the left to reduce the size of the thumbnails in the Viewer. This technique allows you to see more thumbnails at the same time, which is convenient for making quick visual searches. Drag the slider to the right to expand the size of the thumbnails, making it easier to differentiate details among similar photos in the Viewer. You can also use the Zoom slider when a single image is displayed.

» **Show Thumbnails as Square or Full Aspect Ratio:** This toolbar button is displayed only in the All Photos view. (It bears a box icon with arrows pointing up and down.) Click this button to toggle the thumbnail display between uniform squares (which may not show the entire image) and the full image in reduced size. Full-aspect-ratio format doesn't require any extra space, but some Mac owners prefer uniform squares, as the iPhone and iPad display them.

- » **Add To Favorites:** This toolbar button (which bears a heart icon) appears on the toolbar only while you're viewing or editing a single image. Click the Add to Favorites button to add the item that's currently displayed in the Viewer as a Favorite. (When viewing your library as Moments or Collections, you can also hover your pointer over an item and click the heart symbol that appears in the bottom-left corner of the photo.) You can search for Favorite photos by using keywords, which are covered in "Organizing with keywords," later in this chapter.
- » **Info:** Click this button to display information on the item that's currently displayed in the Viewer.
- » **Share:** Click this button to share the selected photos to your shared iCloud albums on your iPhone, iPad, or iPod touch (they'll appear in the Photo Stream albums on those devices) or to another Mac. You can also add them to a note, attach the photos to a text message, email them, or share them via AirDrop.
- » **Edit:** Here's another button that's displayed on the toolbar only when you view a single image. Click this button to switch to the editing controls within Photos and make changes to the current image. I cover editing in depth in "Edit mode: Removing and fixing stuff the right way," later in this chapter.
- » **Rotate Counterclockwise:** This one is pretty self-explanatory; a click rotates the selected image(s) counterclockwise. People find themselves clicking this button often, which is why Apple designers decided to park it here.
- » **Search:** Click within the familiar confines of the Search box to filter the photos displayed in the Viewer by keyword, description, filename, or date.

Working with Images in Photos

Even a superbly designed image-display and -editing application such as Photos would be overwhelming if everything were jammed into one window. Thus, Apple's developers provide operational modes such as editing and book creation that you can use in the one Photos window. Each mode allows you to perform different tasks.

In this section, I discuss three of these modes — import, organize, and edit — and what you can do when you're in them.

Import images 101

In *import* mode, you're ready to download images and video clips directly from your digital camera — and you're not limited to cameras, of course. You can also

import items from a folder on your internal drive, a memory-card reader such as the SDXC card slot, an external USB drive, or even a Kodak PhotoCD (if you have an external DVD drive).



REMEMBER

If your photos are stored on your iPhone or iPad, you don't need a physical cable connection to import your images; after you enable the My Photo Stream or iCloud Photos features, those images are automatically available within Photos. I describe this shamelessly convenient method of importing at the end of this chapter.

Follow these steps to import images directly from your camera:

1. Connect your digital camera to your Mac.

Plug one end of a USB cable into your camera and the other end into your computer's USB port.

2. Prepare your camera to download files.

The procedure for downloading images and video varies by camera, but the process usually involves turning the camera on and choosing a Download or PC mode. Check your camera's user guide for more details.

3. Launch Photos.

Your Mac probably launches Photos automatically when it detects your camera, but you can always launch Photos manually by clicking the Photos icon on the Dock or within Launchpad.

4. Select the device in the Sidebar.

Photos displays all the images and video clips currently stored on your camera in the Viewer.

5. Click the Import To drop-down menu and choose a destination for the imported files.

You can choose an existing album, create a new album, or simply add the imported photos to your library.

6. Click the Import All New Items button to import all new files from the camera.



TIP

To select specific images to import, hold down the ⌘ key and click each desired photo; then click Import Selected instead of Import All New Photos.

The images and clips initially appear within the Last Import album in your Photos library, where you can organize them as you want.

Note that Photos automatically groups imported images and video by the year, month, and date when the files were created, if your camera stores this information with each file. If you want to see photos from your son's graduation, for example, those photos will appear in each view by that date. Think about that. It's

pretty tough to arrange old-fashioned film prints by the moments in time that they document, but Photos makes it easy for you to see which photos are part of the same group.



TIP

Don't be surprised if Photos automatically appears when you connect your iPhone or iPad to your iMac. This feature gives you a convenient opportunity to import photos with a single click. (In fact, if you've enabled the My Photo Stream feature as I demonstrate at the end of this chapter, you won't even have to physically connect your iOS device to your iMac at all to import those snapshots!)

IMPORTING IMAGES FROM YOUR INTERNAL DRIVE TO PHOTOS

Adding items stored on your internal drive, a CD, a DVD, an external drive, or a USB flash drive is easy. If the images and clips are in a folder, just drag that folder from a Finder window and drop it into the Viewer. You can even drag items directly to the Photos icon on the Dock. Photos automatically creates a new album with the folder name, and you can sit back while the images are imported into that new album.

If you have individual images, you can drag them as well. Select the images in a Finder window and drag them into the desired album in the Albums display. To add them to the album currently displayed in the Viewer, drag the selected photos and drop them in the Viewer instead.

If you'd rather import images by using a standard Mac Open dialog, choose File ⇨ Import. Simplicity strikes again!

You can also allow Photos to import images directly from your iOS devices by using My Photo Stream, which I cover later in this chapter.

Organize mode: Organizing and sorting your images

In the days of film prints, you could always stuff another shoebox with your latest photos or buy another sticky-backed album to expand your library. Your digital camera, though, stores images as files instead, and many folks don't print their digital photographs. Instead, you can keep your entire collection of digital photographs and scanned images well-ordered and easy to retrieve within Photos. Then you can display them in a slideshow, email them, print them, use them as Desktop backgrounds, or burn them to an archive disc.

A new kind of photo album

The most familiar method of organizing images in Photos is the *album*. Each album can represent any designation you like, be it your pets, a vacation, your daughter, or your daughter's ex-boyfriends. Follow these steps:

- 1. Create a new album.**
You can choose File ⇨ New Album or press ⌘+N. If you've selected any item thumbnails in the Viewer, they're added to the new album automatically.
- 2. Type the name of your new photo album in the Untitled Album text box in the Sidebar (see Figure 14-2).**
- 3. Press Return.**

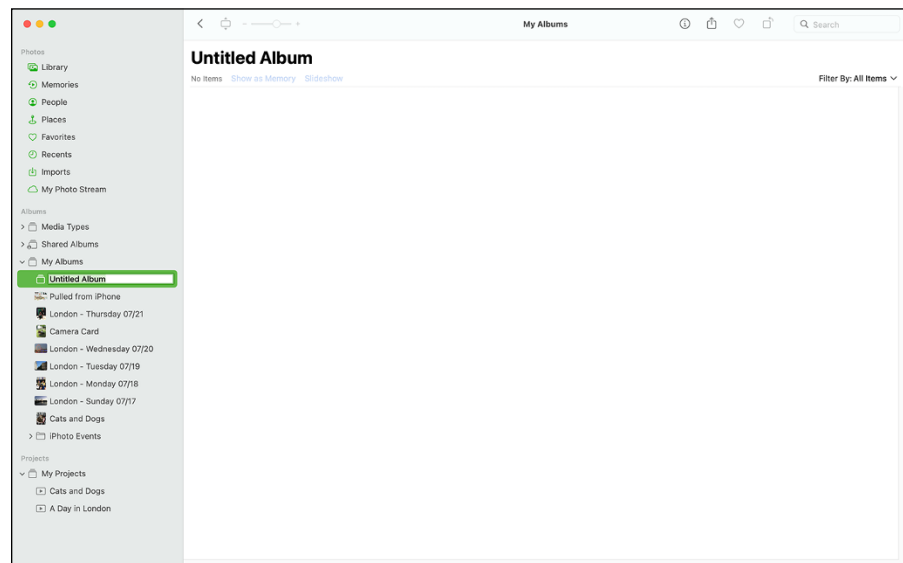


FIGURE 14-2:
Adding a new
album in Photos.

Photos also offers a special type of album called a *Smart Album*, which you can create from the File menu. (For even faster action, press ⌘+Option+N.) If you're familiar with the Smart Folders that you can use within the Finder and the Smart Playlists within Music (see Chapter 13), you've figured this one out already.

A *Smart Album* contains only photos that match certain criteria you choose, including the keywords you assign your images. Other criteria include text in the photo filenames, the dates when the images were added to Photos, a specific person you've identified, and any description you may have added (as well as camera-specific data, such as ISO and shutter speed).

Now here's the really nifty angle: Photos *automatically* builds and maintains Smart Albums for you. It adds new photos that match the criteria and deletes those you remove from your Photo Library. (It also removes the photos that no longer match the Smart Album's criteria.) Smart Album icons carry a gear symbol in the Photos Sidebar.



TIP

You can display (or edit) information about any photo or video clip by right-clicking the thumbnail and choosing Get Info from the shortcut menu. Click the Add a Title heading in the Info dialog to display a text box, where you type a new value. You can also type a short note or description in the Add a Caption box that appears in the dialog.

You can copy selected items from the Viewer into any album you choose. Right-click the desired items, hover your pointer over the Add To menu item, and choose the destination album. You can also copy selected items to an album by dragging them from the Viewer to the desired album entry in the Sidebar.

To remove a photo or video clip that has fallen out of favor, follow these steps:

1. **Click the desired album in the Sidebar.**
2. **In the Viewer, click the item you want to remove to select it.**
3. **Press Delete.**



REMEMBER

When you remove a photo or clip from an album, you don't remove the actual file from your collection (represented by Photos button on the toolbar or the Photos entry at the top of the Sidebar). An album is just a group of links to the images in your collection, just as a playlist in Music is a group of links to songs in your Music library. If you want to remove an offending photo from Photos, click the Photos button on the toolbar (or the Photos entry at the top of the Sidebar) to display your entire collection of photos and clips, and delete the item there. The item disappears from all albums with which it's associated.

To remove an entire album, right-click the offending album entry in the Sidebar and choose Delete Album from the shortcut menu.

To rename an album in the Sidebar, click the entry below the Albums heading in the list to select it, and click again to display a text box. Type the new album name, and press Return.



TIP

Change your mind? Photos comes with a handy-dandy Undo feature. Just press $\text{⌘}+\text{Z}$, and it's as though your last action never happened. (This trick is a great one for those moments when you realize that you just deleted your only image of your first car from your library.) For an extra level of backup protection for your

priceless images, you can invest in an external drive and use the awesome Monterey Time Machine backup feature. (Which you should be using anyway. Just saying.)

Working with People

Photos includes a powerful organizational tool called *People*, which appears as a separate item within the Sidebar.

People is a sophisticated recognition system that automatically recognizes human faces within the photos you add to your Photos library. (I don't know whether it works well with pets, but you can try.) Naturally, you have to identify — or *tag* — faces before Photos can recognize them.

To tag a face, follow these steps:

1. **In the Viewer, double-click the photo with a person you want to tag and click that person's face.**

Note that Photos indicates each person's face in the photo with a circle. If a face has already been tagged, the label (which appears when you hover your pointer over the icon) matches the person's face.



TIP

2. **To set Photos to always show labels in the Viewer — so that you don't have to click the Add Faces link — choose View ⇨ Show Face Names.**
3. **Click the *unnamed* label below the person's face to open a text box, as shown in Figure 14-3.**
4. **Type the person's name and press Return.**

If the name appears on a Contacts contact card — or is recognized as an existing People name or as one of your Facebook friends — you can click the matching entry that appears to confirm the identity. Wowzers!

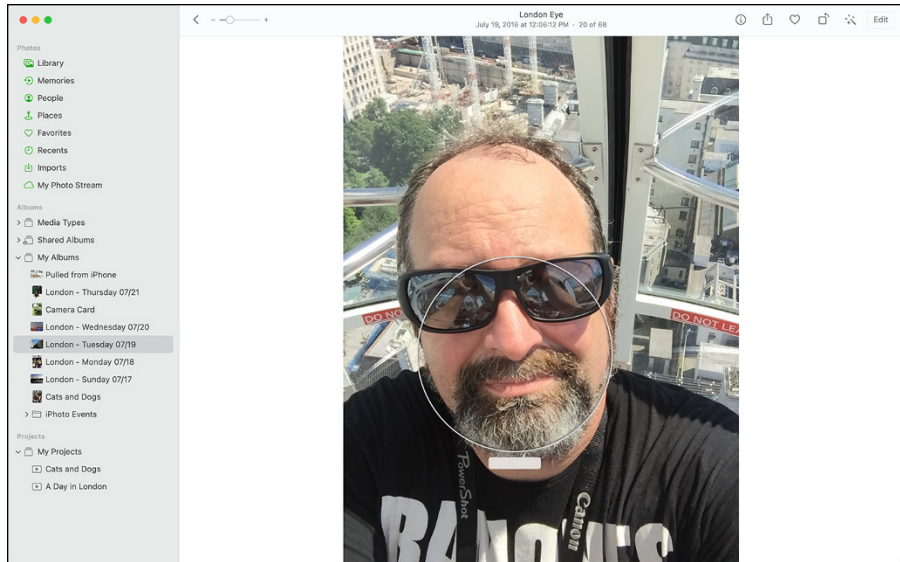
5. **To delete an incorrect face recognition, right-click inside the circle that appears around the face and choose *This Is Not (Name)* from the menu that appears.**



TIP

Photos might not recognize the face if the person is turned at an angle to the camera or is in a darker area of the photo. If so, display the Info dialog and click the Add Faces link to display a “floating” circular outline. Then click the outline and drag the circle over the person's face. If necessary, you can resize the box by dragging the handle on the right side of the circle. Finally, click the *Click to Name* label and type the person's name.

FIGURE 14-3:
Adding another
mug to my
collection of
Faces. (That
doesn't sound
right.)



After you tag an image, it appears in your People collection, which you can view by clicking the People entry in the Sidebar. You can double-click a portrait in your People collection to see all the images that contain that person.

Organizing with keywords

“Okay, Mark, albums and People are great ideas, but there has to be a way to search my library by category!” you say. Never fear, good Mac owner. You can also assign descriptive *keywords* to items to help organize your library and locate certain pictures and video clips fast. Photos comes with several standard keywords, and you can create your own as well.

To illustrate, suppose that you’d like to identify your images according to special events in your family. Birthday photos should have their own keyword, and anniversaries deserve another. By assigning keywords, you can search for Elsie’s birthdays or your silver wedding anniversary (no matter what collection or album they’re in), and all related photos with those keywords appear like magic!

Photos includes these keywords:

- » Favorite
- » Family
- » Kids

- » Vacation
- » Birthday
- » Flagged
- » Photo Stream
- » Check mark



TIP

What's the check mark about, you ask? It's a special case: The check-mark keyword comes in handy for temporarily identifying specific items, because you can search for only your check-marked photos and clips.

To assign keywords to images (or to remove keywords that have already been assigned), select one or more photos in the Viewer. Then choose Window ⇨ Keyword Manager or press ⌘+K to display the Keyword Manager window, shown in Figure 14-4.

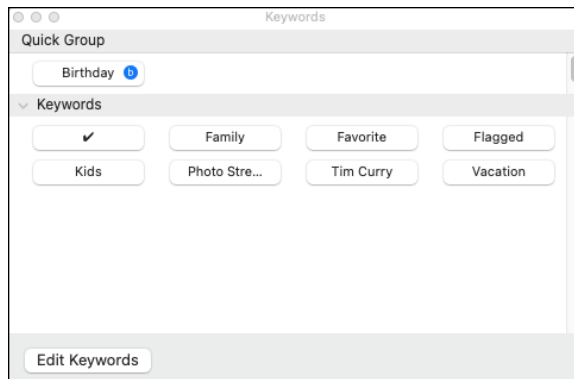


FIGURE 14-4:
Add keywords to
these selected
images.



TIP

Drag the keyword buttons that you use most to the Quick Group section of the Keyword Manager window, and Photos automatically creates a keyboard shortcut for each keyword in the Quick Group. Now you don't even need to display the Keywords window to get business done!

Click the buttons for the keywords you want to attach to the selected images to mark them, or click the highlighted buttons for the keywords you want to remove from the selected items.

YOU NEED YOUR OWN KEYWORDS

I bet that you take photos and video clips of things other than kids and vacations. That's why Photos allows you to create your own keywords. Display the Photos Keyword Manager window by pressing ⌘+K, clicking the Edit Keywords button, and then clicking Add (the button with the plus sign). Photos adds a new unnamed keyword to the list as an edit box, ready for you to type its name.

You can rename an existing keyword in this same window too. Click a keyword to select it and then click Rename. Remember, however, that renaming a keyword affects *all the images that were tagged with that keyword*. That may be confusing when, for example, photos originally tagged as Family suddenly appear with the keyword Foodstuffs. (I recommend applying a new keyword and deleting the old one if this problem crops up.)

To change the keyboard shortcut assigned to a keyword, click the Edit Keywords button on the Keyword Manager window, and then click the Shortcut button. While you're editing keywords, you can also remove an existing keyword from the list by clicking the keyword to select it and then click the Delete button (which bears a minus sign). When your keywords are picture-perfect (pun grudgingly intended), click OK to save them and return to the Keyword Manager window.

Digging through your library with keywords

Behold the power of keywords! To sift through your entire collection of images by using keywords, click the Search button on the toolbar in the top-right section of the Photos window and type one or more keywords. To see all the items you've flagged as Favorites that include kids, for example, type **Favorite Kids**.



REMEMBER

The images that remain in the Viewer after a search must have *all* the keywords you specified. If an image is identified by only three of four keywords you chose, for example, it isn't a match and doesn't appear in the Viewer. (You can create a Smart Album with specific keywords to get around this limitation.)



TIP

To search for a photo by words in its caption, just click the Search box and start typing. You can search your images by date and rating as well.

Searching by locations where photos were taken

Photos can also track the location where photos were taken automatically, but this feature requires a digital camera that includes GPS tracking information in the image metadata for Photos to do so without your help. (Older camera models are unlikely to support GPS tracking. Naturally, most iPhones and iPads support this feature.) You don't have to turn anything on to view photos by location.

When you're viewing photos by Moments and Collections, you'll notice that Photos includes the location name to identify where the photos were taken. To search for all images taken at a specific location, type the location name in the Search field.



TIP

If you right-click a specific photo (that includes location information) to select it and then choose Get Info from the shortcut menu, you see a close-up map of the location where the photo was taken.

Browsing your memories

If you're like me, you enjoy revisiting your memories of favorite events in pictures, and Photos presents them perfectly! Click the Memories entry in the Sidebar, and Photos displays a series of tiles that group the images from

- » A specific point in time (using the date added to each photo by your camera)
- » A group of people who appear often together in your photos (using the facial recognition feature that's built into Photos)
- » Portraits of people and pets taken from your Photos Library

Click a tile to expand it, and you can view the individual photos that make up the memory — or, if you prefer, click the Play button that appears in the animated title for an instant slideshow, complete with transitions and a music soundtrack. While the memory slideshow is playing, press the spacebar to pause and swipe up or down to fast forward or rewind.



TIP

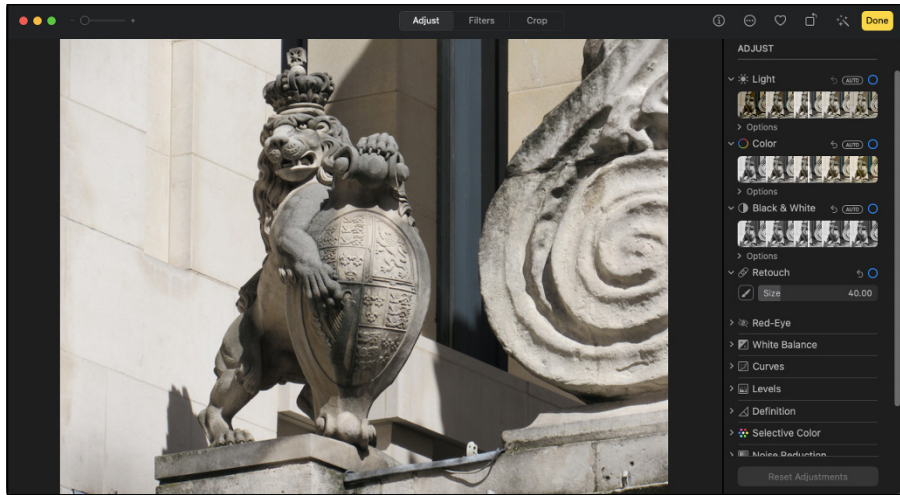
The contents of an album can be displayed as a memory as well. Click the album entry in the Sidebar to select it; then click the Show as Memory link at the top of the album.

Edit mode: Removing and fixing stuff the right way

Not every digital image is perfect; just look at my collection if you need proof. For shots that need a pixel massage, Photos includes editing tools that you can use to correct common problems.

The first step in any editing job is selecting the image you want to fix. (Double-click a thumbnail in the Viewer so that it fills the screen.) Then click the Edit button on the Photos toolbar (or simply press Return) to display the Edit-mode controls on the right side of the window, as shown in Figure 14-5. Now you're ready to fix problems by using the tools I discuss in the rest of this section.

FIGURE 14-5:
Photos is now in
edit mode. Watch
out, image
problems!



REMEMBER

If you display a video clip in the Viewer, you can play it by hovering your pointer over the clip and clicking the Play button that appears, and a subset of video-editing controls appear when you enter Edit mode. (Need more powerful editing for your videos? Use iMovie, which I cover like a blanket in Chapter 15.)

While you're editing, you can click the left- and right-arrow keys to move to the next item or back to the previous image. This trick works whether you're browsing the library or displaying the contents of an album. You can also display the Thumbnail pane in Edit mode.



TIP

If you prefer to edit images while using more of your screen real estate, click the Full Screen/Maximize button in the top-left corner of the Photos window. To switch back to the standard window arrangement, simply press the Esc key.

When you're finished with Edit mode, click the (wait for it) Done button again to return to the Viewer.

Rotating tipped-over shots

If an image is in the wrong orientation and needs to be turned to display correctly, click the Rotate button to turn it once counterclockwise. Hold down the Option key while you click the Rotate button to rotate clockwise.

Crop 'til you drop (and a whole lot more)

Does that photo or video have an intruder hovering around the edges of the subject? You can remove some of the border by *cropping* an item, just as folks once did with film prints and a pair of scissors. (We've come a long way.) With Photos,

you can remove unwanted portions from the edges of an image or video — a great way to get Uncle Milton’s stray head (complete with toupee) out of an otherwise-perfect holiday snapshot.

While you’re in Edit mode, follow these steps to crop, flip, and straighten an item:

1. **Click the Crop button at the top of the window.**
2. **Select the portion of the image that you want to keep.**

In the Viewer, click and drag the right-angle handles at the corners of the rectangle to outline the part of the image you want. Whatever is outside this rectangle disappears when the crop is complete.



TIP

When you drag a corner or edge of the outline, a semi-opaque grid (familiar to amateur and professional photographers as the nine rectangles from the Rule of Thirds) appears to help you visualize what you’re claiming. (Check it out in Figure 14-6.)

You can expand the outline to the image’s full dimensions at any time by clicking the Reset Adjustments button in the bottom-right corner.

See that attractive-looking Auto button that appears in the bottom-right corner of the Photos window when you’re in Crop mode? A single click of the Auto button and Photos takes its best shot at producing the ideal cropping and straightening job for you! If you don’t like the results, just use the Undo feature (⌘+Z) to return the photo to its previous appearance.

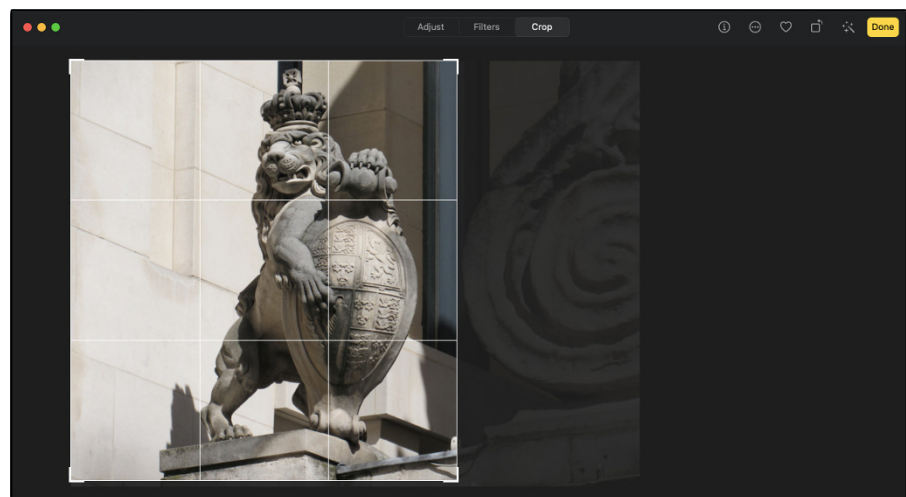


FIGURE 14-6:
Select the stuff
you want to keep
in your photo.



REMEMBER

Photos features multiple Undo levels, so you can press ⌘+Z several times to travel back through your past several changes. Alternatively, you can return the image to its original form (before you did any editing at all) by clicking the Reset Adjustments button.

3. (Optional) Choose a preset aspect ratio.

You might want to force your cropped selection to a specific aspect ratio, such as 4 x 3 or 16 x 9 for a widescreen desktop background or 4 x 6 or 5 x 7 to match the dimensions of photo paper. If so, click the Aspect item on the right side of the window (available only while cropping) and choose that ratio from the pop-up menu that appears. (Pick the Square selection for the perfect Facebook profile image or the Freeform selection to allow any aspect ratio when your cropping is done.)

4. (Optional) Flip your photo or video horizontally.

A click of the Flip item at the right side of the Crop window gives you the mirror image of your original photo.

5. (Optional) Straightening what's crooked.

Was your camera slightly tilted when you took the perfect shot? Never fear! Click the circular angle control on the right edge of the image and drag in the desired direction. (Besides straightening the subject, you can do some truly wild camera angles this way, just like in the '60s *Batman* TV series!)

6. Click the Done button.

Enhancing images to add pizzazz

If a photo looks washed out, click the Auto Enhance button to increase (or decrease) the color saturation and improve the contrast. (The toolbar button sports a very fitting magic-wand icon.) Auto Enhance is automatic, so you don't have to set anything — but be prepared to use Undo if you're dissatisfied with the changes.

Removing rampant red-eye

Unfortunately, today's digital cameras can still produce the same “zombies with red eyeballs” as traditional film cameras do. *Red-eye* is caused by a camera's flash reflecting off the eyes' interior surface, and it can occur with both humans and animals. (I'm told that pets get *green-eye* or *blue-eye*, but Photos can handle them, too!)

Photos can remove that red-eye and green-eye and turn frightening zombies back into your family and friends. In Edit mode, click the Adjust button at the top of the window; hover your pointer over the Red-Eye item on the right side of the screen; and click the Auto button that appears. Photos automatically attempts to remove

any red-eye effect that it detects in the photo, and a blue check mark appears next to the Red-Eye item to indicate that a change was made.

Retouching like the pros

The Photos Retouch feature is perfect for removing minor flecks or lines in an image (especially those you've scanned from prints), and Retouch has been improved in macOS Monterey. Click the disclosure triangle (which looks like a right arrow) by the Retouch item and click the Edit button that appears (which carries a paintbrush icon). Now hover your pointer over the photo to display the circular retouch tool. You can drag the Size slider to change the size of the retouch tool. Drag the pointer across the imperfection and click Done when you finish touching up. Don't forget to take a moment to marvel at your editing skill!

Using filters and adjustments to add a mood

Wonder whether a particular photo or video in your library would look better in black and white (*grayscale*)? Click the Filters button at the top of the window to display a list of effects that you can apply to the item, including black-and-white effects, enhanced color levels, and subtle shading. Click any thumbnail in the strip to apply the filter.

If you'd like more precise manual control of your image attributes — including sharpness, color levels, shadows, definition, and white balance — click the Adjust button at the top of the window and explore the lengthy array of options. Note that most of the adjustments offer an Auto button if you hover your pointer over the entry, and you can click the disclosure triangle to the left of each entry to display additional controls that create a different look.

I REALLY NEED A SLIDESHOW

You can use Photos to create slideshows by following these steps:

1. Right-click the desired album in the Sidebar and choose Create ➤ Slideshow ➤ Photos from the shortcut menu.

2. Type the name of the slideshow in the text box and press Return.

Photos adds a new entry below Projects in the Sidebar, and a scrolling thumbnail strip appears at the bottom of the Viewer, displaying the images in the album.

3. Click and drag the thumbnails to appear in the desired order.

(continued)

(continued)

After creating your slideshow, you can customize it with the controls on the right side of the Photos window:

- **Themes:** Click the Theme Picker button to choose the theme for your slideshow. The theme you choose controls the animation, transition type, and screen layout that Photos uses — everything from the classic Ken Burns “moving photo” animation to a nifty Sliding Panels layout.
- **Music:** Click the Music button to display Apple’s theme music as well as the tracks from your iTunes library. To choose a standard theme, open the Source pop-up menu and choose Theme Songs; then click that perfect song to select it. To choose songs from your iTunes library, open the Source pop-up menu and choose iTunes; then click the songs you want in the order in which you want them.
- **Duration:** Click the Duration Settings button and you can choose to fit the display of images to the length of the music you’ve chosen or set individual timings for the slide thumbnails you’ve selected. If you want your slideshow to loop when it finishes, click the Loop icon in the bottom-right corner of the Viewer to toggle it on. (When you do, the icon turns blue.)
- **Preview:** To display a preview of your slideshow without leaving the Photos window, click the Preview button in the bottom-left corner of the Viewer. This button is a handy way to determine whether the theme and music you’ve selected are really what you want. When you’re ready to play your slideshow, click the Play button that appears below the Viewer; Photos switches to full-screen mode. To create a movie file from your completed slideshow, click Export on the Photos toolbar.

Exploring iCloud Photos

Yes, Apple has decided that everything except the kitchen sink should be stored online in iCloud: first your Music media library; then your Pages, Numbers, and Keynote documents; and now your photographs and video clips! To turn the iCloud Photos feature on, choose Photos ⇨ Preferences, click the iCloud tab of the Preferences dialog, and click the iCloud Photos check box to enable it.

With iCloud Photos, your *entire* Photos library is stored online, and everything in your library is accessible from other Macs and iOS devices such as your iPad and iPhone. (Think “central storage house for everything visual that you can reach from anywhere with an Internet connection.”) If you take a photo with your iPhone, for example, it appears automatically within Photos. And if you recently cropped and edited a photo to perfection with Photos, you’ll be able to retrieve that edited photo on any of your iOS devices or another Mac.

On the same iCloud pane in the Preferences dialog, you can choose to

- » Download copies of the full-size images and full-resolution videos on your iMac's internal drive, which allows you to edit or view the originals even when you're not connected to the Internet.
- » Store smaller images and smaller-resolution videos on your iMac with the ability to retrieve the originals from the iCloud at any time when you're connected to the Internet.

Naturally, if you're a photographer who needs constant, instant access to your original images, the first option is preferable. Choose the Download Originals to this Mac option on the iCloud pane. If your iMac's drive is nearly full, however, and you'd like to conserve space, the second option is very attractive. Choose the Optimize Mac Storage option on the iCloud pane.

All this goodness is handled automatically, but there's a catch: Your *entire* Photos library needs to fit within your free 5GB of iCloud storage; otherwise, you'll have to pay a monthly subscription to get additional elbow room! (Storage subscriptions range from 99 cents a month for 50GB of space to \$9.99 a month for a whopping 2TB of space.) If you have only 3GB of photos, you may be able to use iCloud Photos without spending anything extra, but because my Photos Library is nearing 10GB, I'd probably need to subscribe to take full advantage of the feature. The choice is yours, dear reader: If you decide not to use iCloud Photos, rest assured that Photo Stream will still work as it did in iPhoto.

Putting My Photo Stream and iCloud Shared Albums to Work

Like iPhoto before it, Photos includes the *My Photo Stream* feature, which automatically shares the photos you take among your Macs, your PCs, and iOS devices. Unlike with the iCloud Photos feature, however, your images and videos are stored on your Mac's local hard drive, *not* in iCloud. (The images and videos are also always full-size and full-resolution.) Note that if you're using iCloud Photos, it really isn't necessary to enable My Photo Stream as well (and doing so might actually result in duplication of some images within Photos).

To turn on My Photo Stream, choose Photos ⇨ Preferences; click the iCloud toolbar button in the Preferences dialog; and then select the My Photo Stream check box. When the feature is turned on, Photos should automatically import My Photo Stream photos taken with iOS devices and other Macs to your Photos library.

When the My Photo Stream feature is turned on, it's a cinch to share images and videos across your Apple computers and devices; simply copy the items into the My Photo Stream location in the Sidebar. Photos automatically sends the selected images to all compatible devices over your Internet connection. (Note that all devices that use My Photo Stream must be configured with the same Apple ID.)

You can also choose to share specific photos by using iCloud Shared Albums, which can be turned on from the Photos Preferences dialog. (Yes, I agree that Apple *seriously* needs to work on choosing more-discrete names for these features.) Choose Photos ⇨ Preferences, click the iCloud tab on the toolbar of the Preferences dialog, and select the Shared Albums check box.

To subscribe to a shared-album invitation from another person, right-click the desired shared album in the Sidebar and choose Accept from the shortcut menu.

To create your own shared album, select the images you want to share, click the Share button on the toolbar, select the Shared Albums item, and click the New Shared Album button. Photos prompts you for the album name and the email addresses of the folks you want to invite to your shared album. After you enter each email address, click the Create button at the bottom of the sheet to start the ball rolling. You can also add or delete items from your shared album in the same way that you would with a regular Photos album. Apple, you absolutely *rock*!

- » Taking stock of the iMovie window
- » Understanding the moviemaking process
- » Importing and adding media content
- » Putting the pieces of a movie together
- » Creating a movie trailer
- » Sharing your movie with others

Chapter **15**

Making Film History with iMovie

Remember those home movies you used to make in high school? They were entertaining and fun to create, and your friends were impressed. In fact, some kids were so downright inspired that you're not surprised when you discover at your high school reunion that they turned out to be graphic artists or got involved in video or TV production.

iMovie, part of Apple's digital lifestyle suite, makes moviemaking as easy as those homemade movies. Apple simplifies all the technical stuff, such as importing video and adding audio, leaving you free to concentrate on your creative ideas. In fact, you won't find techy terms such as *codecs* and *keyframes* in this chapter. I guarantee you'll understand what's going on at all times. (How often do you get a promise like that with video-editing software?)

With iMovie, digital video from your smartphone or your camcorder, and the other applications that Apple provides, you can soon produce and share professional-looking movies, with some of the same creative transitions and titles used by Those Hollywood Types every single day — all on your iMac, all by yourself.

If you turn out to be a world-famous Hollywood-Type Director in a decade or so, don't forget the little people — like computer-book authors — along the way!

Shaking Hands with the iMovie Window

If you've ever tried using a professional-level video-editing application, you probably felt as though you were suddenly dropped into the cockpit of a jumbo jet. In iMovie, though, all the controls you need are easy to use and logically placed.

To launch iMovie, click the iMovie icon within Launchpad. (It looks like a star on the Hollywood Walk of Fame.) You can also click the Applications folder in any Finder window Sidebar and then double-click the iMovie icon.

To follow the examples I show you here, take these strenuous steps to create a new movie project:

1. Choose File ⇨ New Movie (or press ⌘+N).

Alternatively, you can click the Create New thumbnail and choose the Movie entry from the pop-up menu.



TIP

You can also create movie *trailers* (short previews or teasers) within iMovie, as I demonstrate later in this chapter. Generally, however, you should create your trailer project *after* your movie is completed (unless, of course, you're specifically creating just a trailer). Why? For the same reason that studios create trailers after the filming is finished: After you complete your movie, all the clips will be imported already, and you'll have a better idea of what you want to include while “teasing” your audience!

2. Press ⌘+6 to display the Theme Chooser, shown in Figure 15-1.

3. Click a theme thumbnail to select a theme to apply to your finished movie.



TIP

To preview the appearance of a theme, hover your cursor over the thumbnail and click the Play button that appears.

iMovie automatically adds the transitions and titles that correspond to that theme.

Normally, Step 3 is what you want to do, but you can add transitions and titles manually, as I show you later in this chapter. So if you decide not to use a theme out of the gate, you don't have to open the Theme Chooser at all.

4. Click the Change button.

iMovie adds the new project to the list in the Sidebar, and you're on your way! Check out Figure 15-2: the whole enchilada in one window.

FIGURE 15-1:
Applying a theme to your movie.

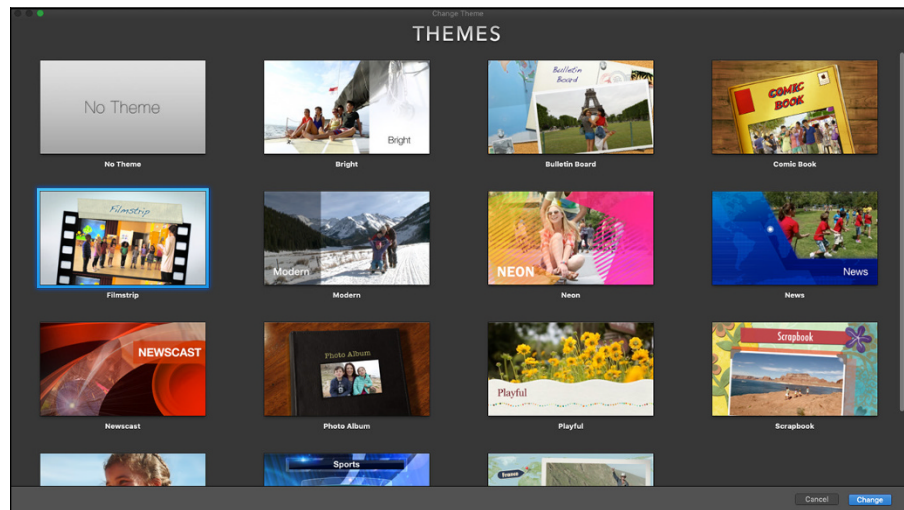
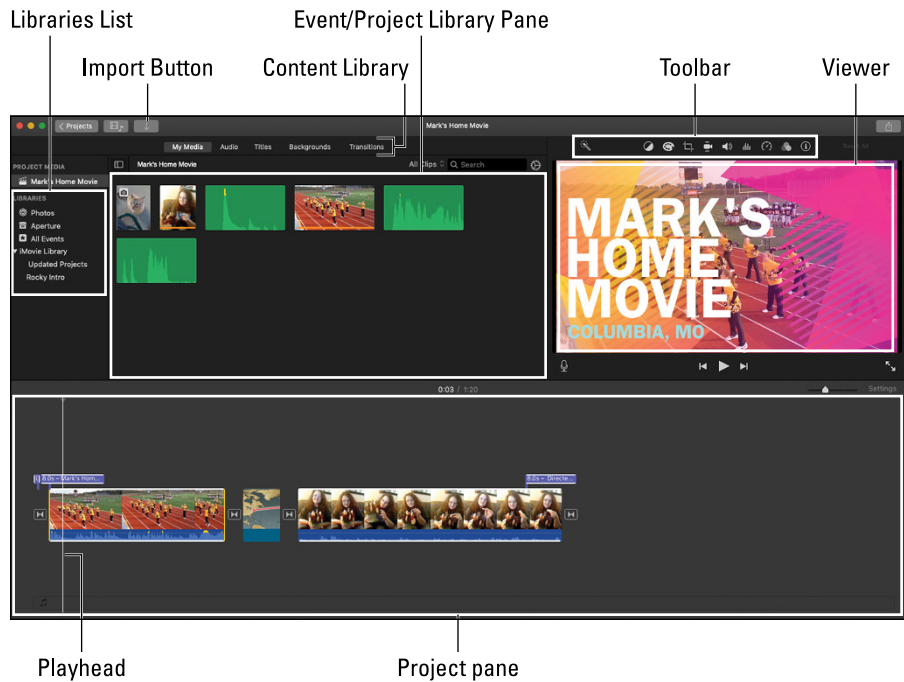


FIGURE 15-2:
iMovie is a lean, mean, video-producing machine.



You'll use these controls and displays most often:

- » **Viewer:** Think of this as being just like your TV or computer monitor. Your video clips, still images, and finished movie play here. You also crop and rotate your video within the Viewer.
- » **Import button:** Click this button to import video clips from your digital camcorder, iPhone, iPad — even your iMac's built-in FaceTime HD camera! I go over this process in detail in the section "Importing the Building Blocks," later in this chapter.
- » **Content library:** This row of buttons allows you to add photos, video clips, audio and effects such as transitions, titles, music, and sounds.
- » **Libraries list:** This Sidebar list allows you to display your photos and video clips from your Photos library. (You can also display images from your Aperture library, if you used this legacy application.) Additionally, the Libraries list displays all the video clips you can add to your project from events you've imported. The items in the list change depending on the type of content you've chosen in the content library. You can also select an existing iMovie project from the iMovie library. To hide the Libraries list and make more room for the media pane, click the Hide button that appears in the top-right corner of the list. (To display the Libraries list again, click the same button, which now reads Show.)



TIP

You can hide and show both the content library and the Libraries list with one click of the Show or Hide the Media Library button, which appears in the top-left corner of the iMovie window; it bears a tiny musical note-and-filmstrip icon. By hiding both, you maximize the space available for your Viewer.

- » **Event/Project Library pane:** If you select an event in the All Events entry in the Libraries list, iMovie displays a thumbnail of that event's content in the Event pane. (Move your cursor over the Event thumbnail to see previews of the clips.) If you decide that you want to include a clip, double-click the event to display the clips and add the desired clip to your project. This pane also serves as the Project Library pane, where you can display your existing iMovie projects; click the Projects entry in the Libraries list to display your projects as thumbnails. To load a project, just double-click the thumbnail, and the project appears in the Project Library pane.



REMEMBER

The Event/Project Library pane displays different content depending on the entry you select in the Libraries list.

- » **Project pane:** This pane is where most of your work gets done within iMovie, displaying the elements you've added to that specific project (such as video clips, still photos, and audio clips). Your movie appears as a linear strip of thumbnails, making it easy to select, insert, and delete elements.

- » **Playhead:** The white vertical line you see in the Project pane (or the red vertical line you see in the Event/Project Library pane) is the *playhead*, which indicates the current editing point while you're browsing your clips or creating your movie. When you're playing your movie, the playhead moves to follow your progress through the movie.
- » **Toolbar:** This strip of buttons allows you to enhance and adjust photos and video clips.

Those are the major highlights of the iMovie window. A director's chair and megaphone are optional, of course, but they do add to the mood.

A Bird's-Eye View of Moviemaking

I don't want to box in your creative skills. After all, you can attack the moviemaking process from several angles (pun unfortunately intended). But I've found that my movies turn out best when I follow a linear process. So before I dive into specifics, allow me to give you an overview of moviemaking with iMovie.

Here's my take on the process, reduced to seven basic steps:

1. Import your video clips from your camcorder, your iMac's FaceTime HD camera, your Photos Library, or a folder on your internal drive.
2. Drag your new selection of clips from the Event pane to the Project pane and arrange them in the desired order.
3. Import or record audio clips (from Music, GarageBand, or external sources, such as audio CDs or audio files you've recorded yourself) and add them to your movie.
4. Import your photos (directly from Photos or your internal drive) and place them where needed in your movie.
5. Add professional niceties such as voice-overs, transitions, effects, and text to the project.
6. Preview your film and edit it further if necessary.
7. Share your finished film through the web, email, your Apple TV, or an iOS device (an iPhone, iPad, or iPod touch).



TIP

Wondering how you save your project in iMovie — especially when the File menu has no Save item? iMovie automatically saves your project as you work, leaving you free to concentrate on your moviemaking art.

Importing the Building Blocks

Sure, you need video clips to create a movie of your own, but don't panic if you have a small supply. You can certainly turn to Apple's other digital media applications for additional raw material. (See, I told you that whole "digital suite" thing would come in handy.)

Along with video clips you import from your DV camcorder, your iMac's trusty built-in FaceTime HD camera (or an external webcam), and your internal drive, you can call on Photos for the still images you'll need for your credits. On the audio side, you can call on Music and GarageBand for background audio and effects. In this section, I show you how.

Pulling in video clips

Your iMac comes equipped with the right hardware for video editing: a superb high-resolution display, a large internal drive and ports to connect stuff. Depending on the iMac model you're using and your external devices, you may use a USB or Thunderbolt connection. I cover both older, tape-based camcorders and USB/Thunderbolt mass-storage devices in this section.



TIP

Are you using your iPhone or iPad camera to film your next blockbuster? If so, you can import those video clips into the Photos application using a cable connection or a wireless sync. (Alternatively, the iCloud Photos/My Photo Stream features that are built into Photos can import the clips automatically.) After the clips appear in Photos, you can add them easily by selecting the Photos entry in the Libraries list to display the contents of your Photos library.

Oh, and don't forget that your iMac has a FaceTime HD camera on board, ready to record clips. Heck, you're a self-contained movie studio!

Here's the drill if your clips are on your camcorder or mass-storage USB/Thunderbolt video device:

- 1. Plug the proper cable into your iMac.**
- 2. Set the camcorder to VTR (or VCR) mode.**
Some video devices call this mode *Play*.
- 3. Click the Import button in the top-left corner of the iMovie window (refer to Figure 15-2).**



TIP

iMovie opens the Import window.

4. Open the Import To pop-up menu at the top of the Import window and choose the destination for your new video clips.

To create a new event for the imported clips, choose New Event. Alternatively, you can import into an existing Event or iMovie project. If your family reunion spanned more than one day, you can create a new event for each day. (How does Apple think up these things?)

5. Click the desired video source in the Source Sidebar on the left side of the Import window.

If you're using a tape-based camcorder, playback controls appear under the Camera Import window, mirroring the controls on your camcorder. These controls allow you to control the unit from iMovie. *Keen!* If you're using a mass-storage camcorder connected by USB, you instead get an Import All button underneath the thumbnails of available clips. (Note that this button changes to Import Selected if you select one or more of the clips.)

If you choose your FaceTime HD camera from the list, you see a real-time preview and a big red Record button. Click the Record button to start and stop recording. (You can skip the rest of the steps in this section, which deal only with external camcorders.)

6. To import selected clips from your DV camcorder, advance the video to a couple of seconds before the point where you want to start your capture; then click Import.

7. Click OK and admire your handiwork.

iMovie begins transferring the footage to your drive and automatically adds the imported clips to the specified destination.



TIP

If your clips are already on your drive, rest assured that iMovie can import them, including those in high-definition video (HDV) format. iMovie also recognizes other video formats, as shown in Table 15-1.

To import a movie file, follow this bouncing ball:

- 1. Click the Import button on the toolbar.**
- 2. Click the drive that stores your clips in the window's Sidebar and navigate to their location.**
- 3. Select the desired clips in the list.**
- 4. From the Import To pop-up menu at the top of the Import window, choose the destination within iMovie.**
- 5. Click Import.**

TABLE 15-1**Video Formats Supported by iMovie**

File Type	Description
DV	Standard 4:3 digital video
DV widescreen	Widescreen 16:9 digital video
MOV	QuickTime movies
HDV and AVCHD	High-definition (popularly called widescreen) digital video, in 720p and 1080i
MPEG-2	Digital video format used for DVD movies
MPEG-4	A popular format for streaming Internet and wireless digital video, as well as handheld iOS devices such as the iPad, iPhone, and iPod touch

Alternatively, you can also drag a video clip from a Finder window and drop it in the Project pane.

Making use of still images

Still images come in handy as impressive-looking titles or as end credits to your movie. (To be truly professional, make sure that you list a *gaffer* and a *best boy*. I have no idea what they do, but they're always listed.) You also can use still images to introduce scenes, close scenes, and separate clips. I use stills when delineating the days of a vacation within a movie or different Christmas celebrations over time, for example.

Here are two methods of adding stills to your movie:

- » **Adding images and video clips from Photos:** Click the Photos entry in the Libraries list to access your images right from iMovie (as shown in Figure 15-3). When you find the image you want to add, just drag it to the right spot in the Project pane.
- » **Importing images from your internal drive:** If you're a member of the International Drag-and-Drop Society, you can drag TIFF, JPEG, GIF, PICT, PNG, and PSD images directly from a Finder window and drop them into the Project pane.

Importing and adding audio from all sorts of places

You can pull in everything from Wagner to Weezer as both background music and sound effects for your movie. In this section, I focus on how to get those notes into

iMovie and then how to add them to your movie by dragging them to the Project pane.



FIGURE 15-3:
Pulling still
images from
Photos is child's
play.

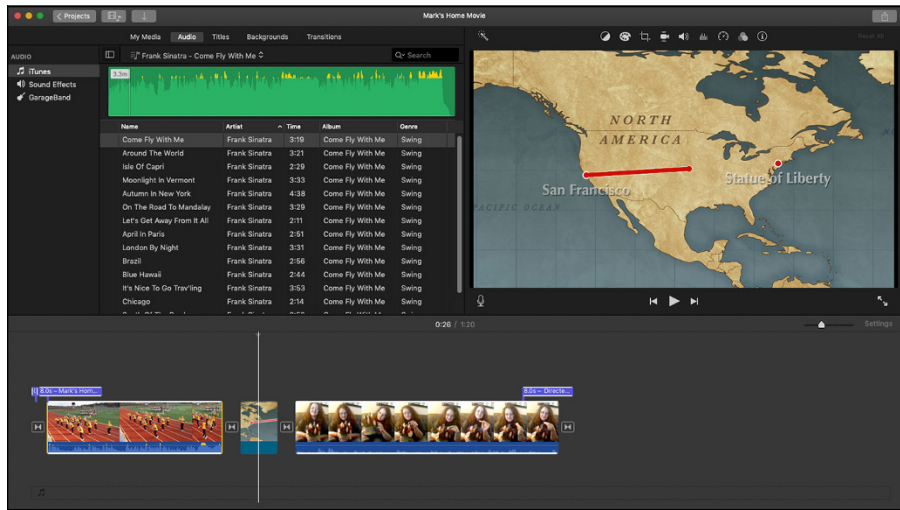
You can add audio from several sources:

» **Adding songs from Music and GarageBand:** Click the Audio button in the Content library and select the Music entry in the Sidebar to display the contents of your Music library. Then select the desired song in the scrolling list (which displays all your music). To display a playlist or Smart Playlist, click the Music drop-down list above the waveform display. Figure 15-4 illustrates a playlist of Frank Sinatra that I selected for this project. You can add a track to your movie by dragging any song entry from the list to the desired spot in the Project pane.

You're not limited to Music for ear candy, however. If you exported any music that you composed in GarageBand to your Music library, you can use those songs in your movie. Click the GarageBand button in the Sidebar to view your GarageBand music and then drag and drop to your heart's content.

» **Adding sound effects:** If you need the sound of a horse galloping for your Rocky Mountain vacation clips, click the Audio button in the Content library; then click Sound Effects in the Sidebar. iMovie includes top-shelf audio effects that you can use in the sound-effects audio track in the Project pane. This way, you can add sound effects even when you've already added a background song. Again, to add a sound effect, drag it to the perfect spot in the Project pane.

FIGURE 15-4:
Calling on my
Music library to
add Ol' Blue Eyes
to my iMovie.



TIP

If you have several gigabytes in your Music library, it may be more of a challenge to locate Janis Joplin's rendition of "Me and Bobby McGee," especially if it's included in a compilation. Let your supercomputer do the digging for you! Click the Search box above the waveform (which carries the familiar magnifying-glass icon), and begin typing a song name. iMovie narrows down the song titles displayed to those that match the characters you type. To reset the Search box and display all your songs in the library or selected playlist, click the X icon that appears to the right of the Search box. (If you're preparing a video for posting on services like YouTube or Facebook, remember that incorporating copyrighted music into your video may violate their policies.)

» **Recording directly from a microphone:** Yep, if you're thinking voice-over narration, you've hit the nail on the head. Check out the nearby "Narration the easy way" sidebar for the scoop.

NARRATION THE EASY WAY

Ready to create that award-winning nature documentary? You can add voice-over narration to your iMovie project that would make Jacques Cousteau proud. In fact, you can record your voice while you watch your movie playing, allowing perfect synchronization with the action! To add narration, follow these steps:

1. Press **V** to display the Voiceover controls under the Viewer.
2. Click the Voiceover Options button and select the input device from the pop-up menu.

Today's iMac models sport *three* excellent internal microphones, but you can always add a USB microphone to your system.

3. **Drag the input volume slider to a comfortable level.**
4. **To mute the audio of your movie (which may make it easier to concentrate on your narration), select the Mute Project check box.**
5. **Click the spot within your movie in the Project pane where the narration should begin.**
6. **Click the Start Recording button.**

iMovie prompts you with three tones before the playhead reaches the selected spot in your movie, so make sure that you begin speaking after the third tone.

7. **Watch the video while you narrate so that you can coordinate your narration track with the action.**
8. **Click the red Stop Recording button to stop recording.**

iMovie adds an icon to the Project pane below the video with the voice-over.

9. **Click the Close button in the Voiceover controls.**

Building the Cinematic Basics

It's time to dive in and add the building blocks of your movie. Along with the video clips, audio tracks, and still images you've imported, you can add Hollywood-quality transitions, optical effects, and animated text titles. In this section, I demonstrate how to elevate your collection of video clips to a real, live, honest-to-goodness movie.

Adding clips to your movie

You can add clips to your movie via the Project pane and Event/Project Library pane (refer to Figure 15-2). The Dynamic Duo works like this:

- » **Project pane:** This pane displays the media you've added to your project so far, allowing you to rearrange the clips, titles, transitions, and still images in your movie.
- » **Event/Project Library pane:** This pane serves as the source repository for all your clips, displaying them arranged by event (the date when they were shot or imported) or by project (media you've added to existing iMovie projects).

Typically, you add a clip to your movie from an event. Follow these steps:

1. **Click the My Media button in the Content library.**
2. **Click the All Events entry in the Libraries list.**
3. **Move the cursor across clips in the Event pane to watch a preview of the video.**
4. **When you've decided what to add to your project, add the entire clip or a selection:**
 - **To select an entire clip:** Right-click the clip's thumbnail, and choose Select Entire Clip from the shortcut menu that appears.
 - **To select a portion of a clip:** Click and hold, and then drag the cursor across the thumbnail. A yellow frame appears around your selection. To change the length of the selected video, hover the cursor over either end of the clip and drag the handle that appears on either side. If you make a mistake while selecting video, just click any empty space within the Event pane to remove the selection frame and try again.
5. **Drag the selection from the Event pane to the spot where it belongs in the Project pane.**

Alternatively, you can press the E key.



Preview your work — often.

iMovie includes a Play Full Screen button, which appears in the bottom-right corner of the Viewer. (Alternatively, press ⌘+Shift+F or choose View ⇄ Play Full Screen to watch the selection.) Press the spacebar to pause, and press Esc to return to iMovie. You can also move the cursor across the filmstrip in the Project pane to browse your project quickly.

To play a selection from the beginning, press \ (backslash). If you've ever watched a director at work on a movie set, you may have noticed that they constantly watch a monitor to see what things will look like for the audience. You have the same option in iMovie!

Marking clips

While you're watching video in the Event/Project Library pane, you may decide that a certain clip has a favorite scene or that another clip has material you don't want, such as Uncle Ed's shadow puppets. (Shudder.) iMovie features Favorite and Rejected frames, which allow you to view and use your best camera work (and ignore the worst stuff).

To mark a great video clip as a Favorite, select and right-click a range of frames or the entire clip in the Event/Project Library pane and then choose Favorite from the shortcut menu item (or press F). To mark clips that are subpar, select the offending clip in the Event/Project Library pane and press Delete (or right-click and choose Reject). Clips marked as Favorites have a green line on top of the clip, and clips marked as Rejected have a red line.



TIP

When viewing your iMovie Library, you can use the Search Filter option to specify which types of marked clips are shown: Click the pop-up menu next to the Search field at the top of the Event/Project Library pane. Your options include displaying all clips, displaying just Favorite clips, hiding Rejected clips, or displaying just Rejected clips.

If you decide that a Rejected clip isn't so bad after all or that a Favorite really isn't your best work, no problem. Unmark any selected Favorite or Rejected scene in the Event/Project Library pane by choosing Mark ⇄ Unrate (or just press U).

Removing clips from your movie

Don't like a clip? Bah. To banish a clip from your movie, follow these steps:

1. Click the offending clip in the Project pane to select it.

Alternatively, you can select a portion of a clip by holding down the mouse button (or maintaining pressure on the trackpad) and dragging the selection box that appears.

2. Press Delete.



TIP

This step deletes the clip from the Project pane, but the clip is still available if you select All Events or the iMovie Library in the Libraries list.

If you remove the wrong clip, don't panic. Instead, use iMovie's Undo feature (press ⌘+Z) to restore it.

Reordering clips in your movie

If Day One of your vacation appears after Day Two, you can easily reorder your clips and stills by dragging them to the proper spaces in the Project pane. When you take your finger off the mouse (or trackpad), iMovie automatically moves aside the rest of your movie with a minimum of fuss and bother.

Editing clips in iMovie

If a clip has extra seconds of footage at the beginning or end (as it should, to ensure that you get all the action), you don't want that superfluous stuff in your masterpiece. Our favorite video editor gives you the following basic functions:

- » **Crop:** Removes unwanted material from a video clip or still image
- » **Rotate:** Rotates a clip or image on its center axis
- » **Trim:** Trims frames from a video clip

Before you can edit, however, you have to select a section of a clip:

1. **Click a clip or image in either the Project pane (where changes you make are specific to this project) or the Event pane (where edits you make are reflected in any project that uses that footage).**

iMovie displays the clip or image on the monitor.

2. **To select the entire clip or image, simply click it.**
3. **Drag the cursor across the thumbnail to select the section of the media you want to edit.**

Some editing functions, such as Crop and Rotate, automatically apply to the entire clip.

The selected region is surrounded by a yellow frame. You're ready to edit that selected part of the clip.

When you move the cursor to the beginning or end of the selection, selection handles appear.



TIP

4. **You can make fine changes in the selected section by dragging the selection handles.**
 - **To crop:** Click the Crop button on the toolbar at the top of the Viewer (which bears an icon of two right angles forming a square). Drag the edges of the frame, using the handles, to select the section you want to keep. To preview your selection, click the Play button that appears when you move the cursor into the Viewer pane. When you're ready, click the Done button (which bears a check mark), and everything but the selected region is removed.
 - **To rotate:** Click the Crop button. Now you can click one of the two rotation buttons that appear on the right side of the Viewer (both of which carry a box and curved-arrow icon). Each click rotates the media 90 degrees in the indicated direction. Click the Done button (with the check mark) when the clip or image is properly oriented.

- **To trim:** Right-click the selection and choose Trim to Playhead from the shortcut menu. iMovie removes the frames from the selected video up to the playhead position.

Transitions for the masses

Many iMovie owners approach transitions as *visual bookends*: They merely act as placeholders that appear between video clips. Nothing could be further from the truth, though, because judicious use of transitions can make or break a scene. Which would you prefer after a wedding ceremony: an abrupt, jarring cut to the reception or a gradual fade-out to the reception?



REMEMBER

Because today's audiences are sensitive to transitions between scenes, you should try not to overuse the same transition. Pick two or three that match the mood of your film and the scenes between which you're transitioning. Also carefully weigh the visual impact of a transition. You might even decide that having no transition is most effective. (Directors call the deliberate lack of a transition a *jump cut*.)

iMovie includes a surprising array of transitions, including old favorites (such as Fade to Black and Cross Dissolve) and some nifty stuff that you may not be familiar with (such as Cube and Page Curl). To display your transitions collection (see Figure 15-5), click the Transitions entry in the Content library.

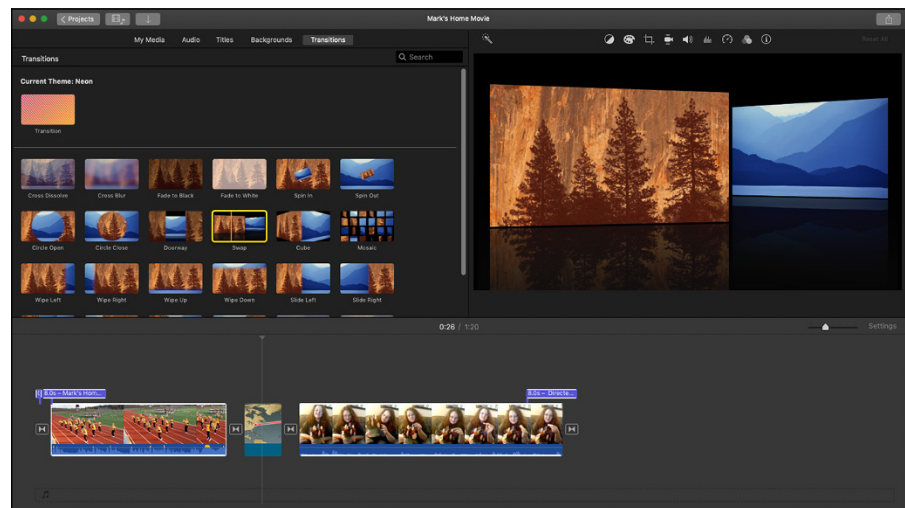


FIGURE 15-5:
Add transitions
for flow between
clips in iMovie.

To see what a particular transition looks like, click the thumbnail to select it and then move the cursor over the thumbnail to display the transition in the Viewer.

Adding a transition couldn't be easier: Drag the transition from the thumbnail list and drop it between clips or between a clip and a still image in the Project pane. In iMovie, transitions are applied in real time.

Even *Gone with the Wind* had titles

The next stop on the iMovie Hollywood Features Tour is the Titles list, shown in Figure 15-6. You find it by clicking the Titles entry in the Content library. You can add a title with a still image, but iMovie also includes everything you need to add basic animated text to your movie.

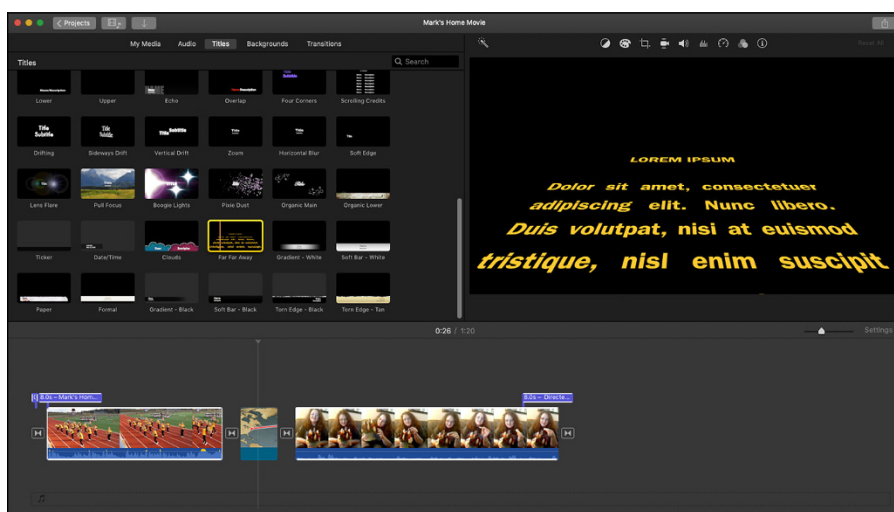


FIGURE 15-6:
Add titles for your
next silent film.

Most of the controls you can adjust are the same for each animation style. You can change the font, the size of the text, and the color of the text. To add a title manually, follow these steps:

1. **Select a Title animation thumbnail in the Titles list and drag it to the desired spot in the Project pane.**
Note that the title is previewed in the Viewer as well as in the Project pane.
2. **Click the title strip in the Project pane to select it.**
3. **Click the Title Settings button (which bears a T symbol) on the toolbar to make any changes you want in the fonts or text attributes.**
4. **Click the text box within the Viewer to delete the default text and type your own titles.**

5. Click the **Done** (check mark) button to save your changes.
6. Click the **Play** button in the Viewer to preview your title.

iMovie displays a preview of the effect in the Viewer with the settings you chose.



TIP

If the Automatic Titles and Transitions option is turned on, dragging a transition or title to your Project pane will result in a somewhat brusque reminder from iMovie. However, you can elect to turn off this option from the dialog, which will allow you to manually add the perfect title or transition to your masterwork.

Adding maps and backgrounds

iMovie includes easy-to-use animated maps — think Indiana Jones traveling by airplane from place to place — and static backgrounds that can be used with your titles. To display them, click the Backgrounds entry in the Content library.

To use an animated map, follow these steps:

1. Drag one of the globe or map thumbnails to the Project pane.
2. When the globe or map is created, click it in the Project pane to select it.
3. Click the **Map Settings** button above the Viewer (which bears a globe icon) and then click the **Start Location** button (and, optionally, the **End Location** button) to enter the start and stop points for the animation.

Type a city or place name to see your choices. (Heck, you can even type an airport code or decimal coordinates to specify the spot.)

4. Click **Done**.

Watch as iMovie animates your location (or your trip) in seconds!

To add a static background from the browser, drag it to the desired spot within the Project pane.

Creating an Honest-to-Goodness Movie Trailer

Yes, friends, you read that correctly: iMovie includes a Trailer feature that can turn your film clips into a Hollywood-class preview, complete with genre transitions and background music. This is *off-the-scale* cool!

To create a trailer project, follow these steps:

1. **Choose File ⇨ New Trailer.**
2. **Click a Movie Trailer thumbnail to select it.**

If you hover the cursor over the thumbnail and click the Play icon that appears, iMovie displays a nifty preview of the trailer style you selected. You can click different thumbnails to preview them before you decide. Naturally, you want to choose a trailer style that most closely matches the mood you want to project in your movie.

Note that each trailer has a suggested number of cast members. This number reflects the number of people who will appear in the clip placeholders during the editing process. (More on this in a moment.)

3. **Click Create.**

iMovie replaces the Project pane with the Trailer pane, as shown in Figure 15-7.

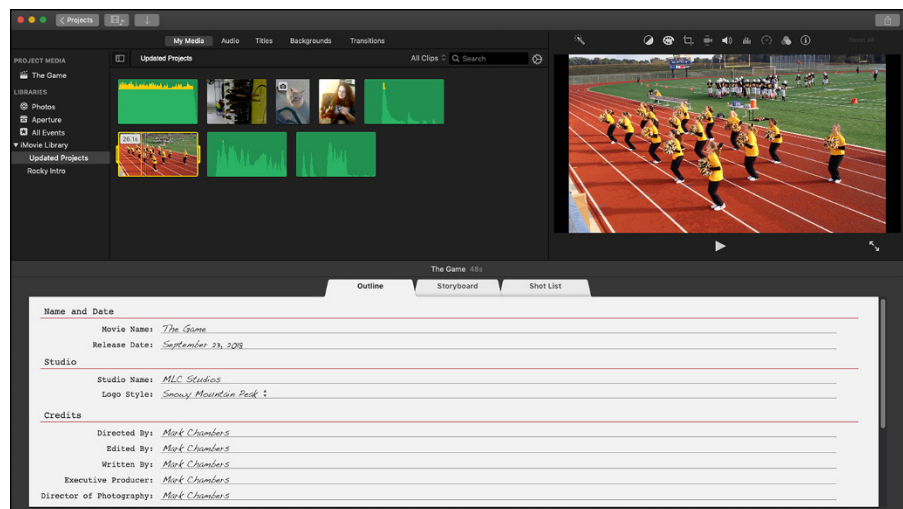


FIGURE 15-7:
Build your movie
trailer from the
Trailer pane.

You can fine-tune your trailer with the Outline, Storyboard, and Shot List tabs:

- **Outline:** On the Outline tab, you can edit the titles used in the trailer, as well as pop-up lists of information, such as the names of the star(s) and the logo style you want for your “studio” at the beginning of the trailer. To change a text field, click it and type the new text. The changes you make in the Trailer display appear in the Viewer in real time.

- **Storyboard:** When you complete your edits to the titles, click the Storyboard tab. Now you can edit the text for each transition: Simply click the text to display the edit box, and type. You can also drag clips from the Event pane (or from a Finder window) to fill the storyboard's placeholders for video clips. To delete a clip from the storyboard, click it to select it and press Delete.



TIP



TIP

To preserve the look and feel of the trailer storyboard, try to match your clips with the description and suggested activity indicated by the placeholder. (In other words, don't stick a wide-angle video clip of the family dog cavorting in the yard in a placeholder marked Closeup. You get the idea.)

The Storyboard tab may not look like an editing timeline, but you can move the cursor anywhere within the storyboard to preview your trailer. The playhead indicator appears wherever the cursor appears, allowing you to watch the clip or transition it's resting on. You'll soon be sweeping the cursor to the left or right to move through the sections of your trailer.

Shot List: For a list of each clip required for the full trailer, click the Shot List tab. On this tab, clips are organized by type. All the action clips appear in one section, for example, and all the landscape and close-up clips are grouped as well. If necessary, you can add, delete, or swap video clips in the Shot List.

To preview your trailer in its entirety, click the Play button at the bottom of the Viewer (or the Play Full Screen button in the bottom-right corner of the Viewer controls). Naturally, any storyboard placeholder you haven't filled with a clip displays just the placeholder.

Note that iMovie displays your trailer when you click the Updated Projects entry in the Libraries list, and it appears in the Event/Project Library pane.

I bet that all those hard-working Hollywood video editors are fuming about how easy it is to create a trailer in iMovie!

Browsing Your Video Library

Sometimes you may lose track of which project contains what content. Even superstar directors are only human, especially those with a number of movies in production! iMovie allows you to browse through all your existing projects by clicking the Projects button at the top of the window. When you move your cursor over a specific project thumbnail, a circle icon with three dots appears, and you can click that icon to play the project (without loading it), rename it, duplicate it, or delete it from iMovie.

Sharing Your Finished Classic

Your movie is complete, and iMovie has saved it to your drive automatically. Now you're wondering where to go from here. Select your movie in the Event/Project Library pane and then click Share in the top-right corner of the window. iMovie can unleash your movie on your unsuspecting family and friends (and even the entire world) in several ways:

- » **YouTube/Facebook/Vimeo:** Why, certainly you can send your iMovie directly to any of these websites! Can it get any more convenient than that? (I think not.)
- » **File:** Create a copy of your movie on your hard drive in one of four resolutions (from Standard Definition to High Definition), or send your movie to the Home Videos section of your Apple TV library.
- » **Email:** Send your movie as an email attachment.

When you choose a sharing option, iMovie displays the video quality for the option and makes automatic changes in the movie attributes. (Choosing Email, for example, reduces the file size of the finished movie as much as possible.)

If you're worried about permanently reducing the quality of your project by sharing it in a smaller size, fear not! When you choose a sharing option to export your movie, your original project remains on your drive unchanged, so you can share a better-quality version at any time in the future.



REMEMBER

- » Navigating the GarageBand window
- » Composing a song
- » Building arrangements
- » Adding effects to instruments
- » Exporting your work across the globe

Chapter **16**

Recording Your Hits with GarageBand

Do you dream of making music? I've always wanted to join a band, but I never devoted the time it takes to learn the guitar. You know the drill: Rock stars struggle for years to master an instrument, practice for untold hours, and memorize chords. Wait a second, I almost forgot. You don't need to do any of that now!

Apple's GarageBand lets a musical wannabe (like yours truly) make music on your desktop with an iMac — complete with a driving bass line, funky horns, and perfect drums that never miss a beat. In fact, the thousands of prerecorded loops on tap in this awesome application allow you to design your music to match that melody running through your head, from techno to jazz to alternative rock.

This chapter explains everything you need to know to create your first song. I also show you how to import your hit recording into Music so that you can listen to it on your iPhone with a big silly grin on your face (as I do) or add it to your next iMovie project or Photos slideshow.

Don't be too smug when you think of all that practicing and hard work you missed out on. What a shame!

Shaking Hands with Your Band

As you can see in Figure 16-1, the GarageBand window isn't complex, and that's good design. In this section, I list the most important controls so that you know your Play button from your Loop Browser button.

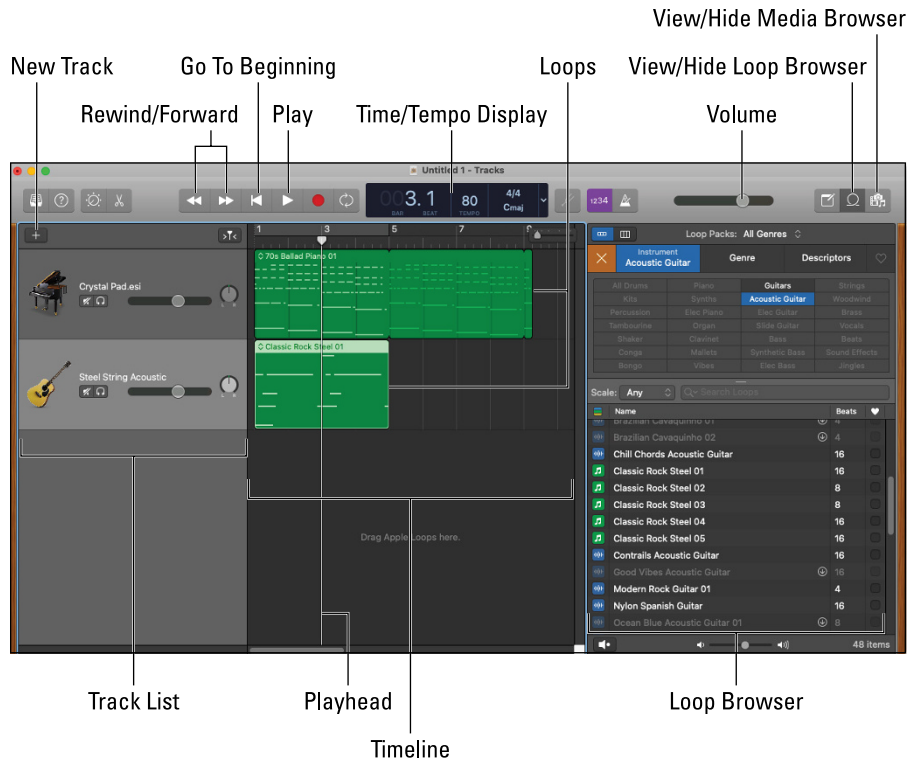


FIGURE 16-1:
The GarageBand
window.

Your music-making machine includes

- » **Track list:** In GarageBand, a *track* is a discrete instrument you set up to play one part of your song. A classical piece for string quartet, for example, would have four tracks, one each for violin, viola, cello, and bass. The Track list contains all the tracks in your song, arranged like the rows in a spreadsheet so you can easily see and modify them. A track begins in the list and stretches out to the right all the way to the end of the song. In the Track list shown in Figure 16-1, I already have one track defined: a Classic Electric Piano.

- » **Timeline:** This scrolling area holds the loops (see the next bullet) you add, compose, or record, allowing you to move and edit them easily. When a song plays, the Timeline scrolls to give you a look at your music. (Bear with me; you'll understand that cryptic statement in a page or two.)
- » **Loop:** *Loops* — prerecorded clips of an instrument being played in a specific style and tempo — are the building blocks of your song. Most are 5 seconds in length, and others are even shorter. You can drag loops from the Loop Browser to a track and build a bass line or guitar solo. Loops can also be repeated within a track, which I discuss further in a page or two. (Note that loops have not been added in Figure 16-1; you'll see them later.)
- » **Playhead:** This vertical line is a moving indicator that shows you the current position in your song while it scrolls by in the Timeline. You can drag the playhead to a new location at any time. The playhead also acts like the insertion cursor in a word processing application: If you insert a section of a song or a loop from the Clipboard, it appears at the playhead's current location. (More on copying and inserting loops later, so don't panic.)
- » **New Track button:** Click this button to add a new track to your song.
- » **View/Hide Loop Browser button:** Click the button with the loop icon to display the Loop Browser on the right side of the window (shown in Figure 16-1); click it again to close it. You can see more of your tracks' contents at one time without scrolling by closing the Loop Browser.
- » **View/Hide Media Browser button:** Click this button (which bears icons of a filmstrip, camera, and musical note) to display the Media Browser on the right side of the window; click it again to close it (and see more of your tracks). Use the Media Browser to add media (in this case, digital song files or movies) to your GarageBand project for use as ringtones.
- » **Go to Beginning button:** Clicking this button returns the playhead to the beginning of the Timeline. (Note that this button appears only when the playhead isn't already at the beginning of the Timeline — hence, it doesn't appear in Figure 16-1.)
- » **Rewind/Forward One Measure buttons:** To move quickly through your song by jumping to the previous or next measure, click the corresponding button.
- » **Play button:** Hey, old friend! At last, here's a control you've probably used countless times before, and it works just like the same control within Music or on your audio CD player. Click Play, and GarageBand begins playing your entire song. Notice that the Play button turns green. To pause the music, click Play again; the button loses that sexy green sheen and the playhead stops.
- » **Time/Tempo display:** This cool-looking LCD display shows you the current playhead position in seconds.



TIP

You can click the drop-down menu on the right side of the display to switch between a beats and time display.

» **Volume slider:** Here's another familiar face. Just drag the slider to raise or lower the volume.

More controls are scattered around the GarageBand window, of course, but these are the main controls used to compose a song — which is the next stop!



TIP

Did I mention that you can work on your GarageBand music wherever the inspiration hits you? If you share a song in progress using the GarageBand application on your iPhone or iPad, you can resume that project on your iMac — or vice versa. To share the project on your iMac for use on an iOS device, click Share in the GarageBand menu and choose Project to GarageBand for iOS.

Composing Made Easy

In this section, I cover the basics of composition in GarageBand, working from the beginning. Follow along with this running example:

1. **Click the GarageBand icon on the Dock.**
It looks like an electric guitar and an amplifier.
2. **If GarageBand opens a window for a previous project, close it by clicking the Close button in each window.**
GarageBand displays the top-level New Project window, as shown in Figure 16-2.
3. **Click New Project in the list on the left side.**
4. **Click the Empty Project icon and then click the Choose button.**
GarageBand displays the Track Type dialog (not shown).
5. **Click the Software Instrument icon.**
In this chapter, I focus on using software instrument tracks, which are the easiest for a nonmusician to use (and don't require you to actually play any notes on an instrument).
6. **Click the Create button.**
You see the full GarageBand window shown in Figure 16-1. Now you're ready to add tracks and continue with the tutorial.

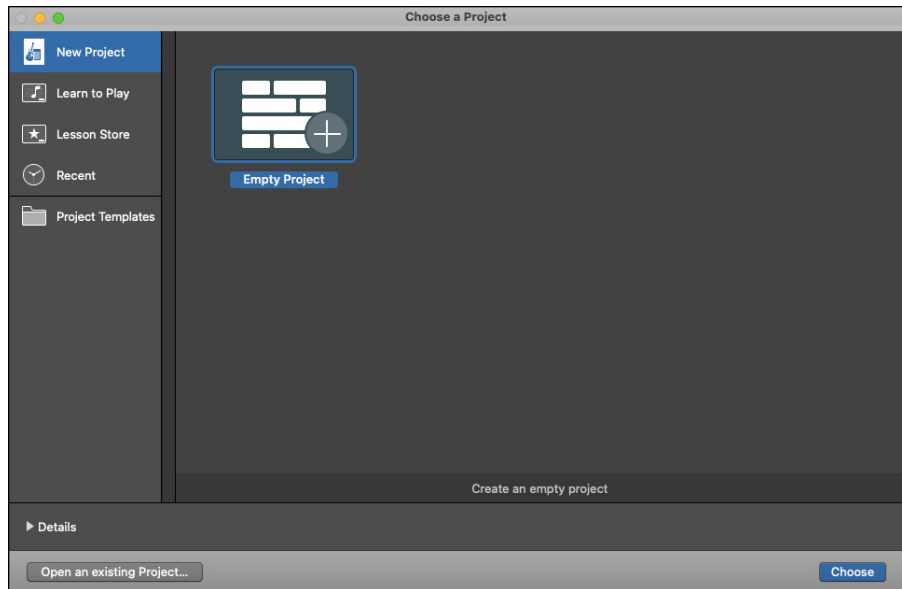


FIGURE 16-2:
Start creating
your new song
here.

Adding tracks

Although I'm not a musician, I am a music lover. I know that many classical composers approached a new work the same way that you approach a new song in GarageBand: by envisioning the instruments they wanted to hear. (I imagine that Mozart and Beethoven would've been thrilled to use GarageBand, but I think they did a decent job with pen and paper.)

If you've followed along to this point, you've noticed these things:

- » **A Musical Typing keyboard in your GarageBand window:** You can record the contents of a software instrument track by playing the Musical Typing keyboard layout. (As you might imagine, this solution isn't the best one.) If you're a musician, the best method of recording your own notes is with a MIDI instrument, which I discuss later in the chapter. You can display the Musical Typing keyboard window at any time by pressing $\text{⌘}+\text{K}$. If the keyboard window is onscreen and you don't need it, banish it by pressing $\text{⌘}+\text{K}$ or by clicking the Close button in the keyboard window.
- » **The example song with only one empty track:** If you want to write the next classical masterpiece for Classic Electric Piano, that's fine. (I'm a big fan of this instrument, so I use this track later in the example.) Note that you can always delete a track, however. Click the offending track to select it and then choose Track $\rightarrow$ Delete Track.

You can use five kinds of tracks in GarageBand:

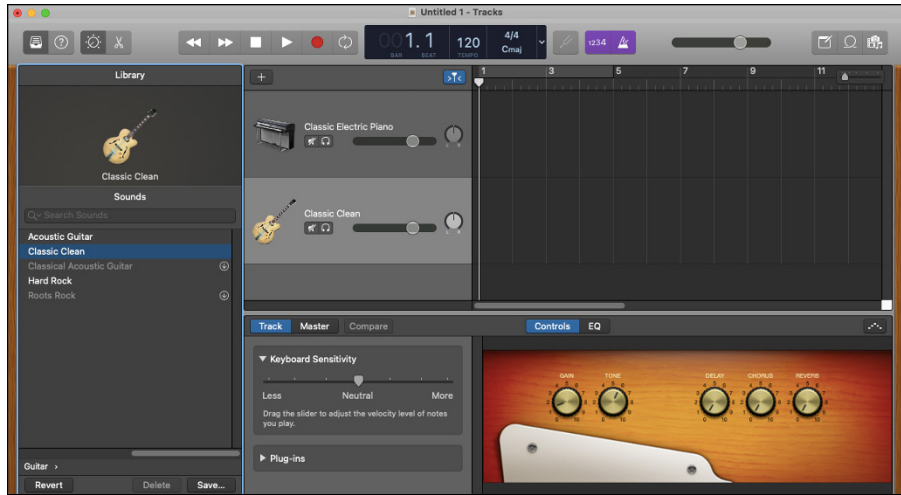
- » **Software instrument tracks:** These tracks aren't audio recordings. Rather, they're mathematically precise algorithms that your iMac *renders* (builds) to fit your needs. If you have a MIDI instrument connected to your iMac, you can create your own software instrument tracks. (More on MIDI instruments later in this chapter.)
- » **Real instrument tracks:** These tracks are actual audio recordings, such as your voice or a physical instrument without a MIDI connection. (Think microphone.)
- » **Electric Guitar and Bass tracks:** GarageBand includes a real instrument track especially made for either an electric guitar or bass. This track allows you to access different amplifiers and *stompboxes* (those effect pedals that electric guitarists are always poking with their feet to change the sound of their instruments).
- » **Drummer track:** I call this feature "Ringo in a Box" — a drum track that's automatic, yet *very* configurable and easy to customize. You have presets galore, so you can quickly jump into different drum sets and playing styles.
- » **Movie tracks:** The video soundtrack appears if you're *scoring* (adding music to) an iMovie movie. You also get a cool companion video track that shows the clips in your movie. (More on this in the "Look, I'm John Williams!" sidebar, later in this chapter.)

It's time to add a software instrument track of your very own:

1. **Press ⌘+Option+N (or click the New Track button).**
GarageBand displays the New Track sheet.
2. **Click the Software Instrument icon and then click Create.**
3. **Click the new track (the second in the list) to select it.**
4. **In the Library pane, choose the general instrument category you want by clicking the category name at the bottom of the pane.**
I chose Guitar, which prompts a second list of choices, still in the Library pane.
5. **In the second list, select your specific style of weapon, such as Classic Clean for a simple playing style.**

Figure 16-3 shows the new track that ends up in your list when you follow these steps. Now you're ready to rock with both the original electric piano and an electric guitar! If you like, you can hide the Library pane by clicking the Show/Hide Library button in the top-left corner of the window.

FIGURE 16-3:
The new track
appears, ready
to rock.



TIP

GarageBand includes a Songwriter project (also available in the top-level New Project window). When you choose a Songwriter project, GarageBand presents a full set of instrument tracks, plus a real instrument track for your voice. You're ready to start adding loops and recording your own voice!

Choosing loops

When you have a new, empty track, you can add loops to build your song from the Loop Browser. Apple gives you thousands of loops to choose among, in a mind-boggling variety. Click the Loop Browser button (which bears a loop symbol, somewhat like a roller coaster; refer to Figure 16-1) to display your collection, as shown in Figure 16-4.

Looking for just the right loop

The running project already includes two tracks but no loops yet. (Refer to Figure 16-3.) Just for grins, add a Classic Electric Piano loop. Follow these steps to search the loop library for just the right rhythm:

- 1. In the Loop Browser, click the Instrument tab and then click the button that corresponds to the instrument you're using.**

I chose the Elec Piano button (refer to Figure 16-4).

A list of different beats appears in the pane at the bottom of the Loop Browser window.

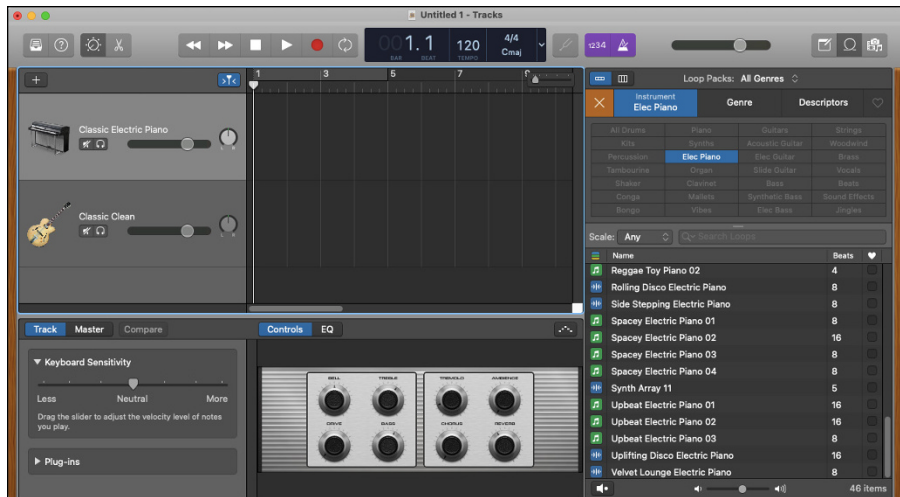


FIGURE 16-4:
The Loop
Browser is a great
hangout for any
musician.

2. Click one of the loops that has a green musical-note icon.

Go ahead; this is where things get fun! GarageBand begins playing the loop nonstop, allowing you to get a feel for how that particular loop sounds.



REMEMBER

The examples I chose for this chapter are software instruments, which are identified by a green musical-note icon. (If you have a MIDI instrument that you play, have at it with real instrument loops.)

3. Click another entry in the list.

The application switches to that loop.

Now you're beginning to understand why GarageBand is so cool for both musicians and the note-impaired. It's like having your own band with members who never get tired, never miss a beat, and play whatever you want while you're composing. (Mozart would've *loved* this feature.)



TIP

If you want to search for a particular instrument, click the Search box near the top of the Loop Browser and type the text you want to match. GarageBand returns the search results in a list.

4. Scroll down the search-results list and continue to sample loops until you find one that fits like a glove.

For this reporter, it's Upbeat Electric Piano 01 (refer to Figure 16-4).

5. Drag the entry to your Classic Electric Piano track and drop it at the beginning of the Timeline (as indicated by the playhead).

Your window looks like Figure 16-5.

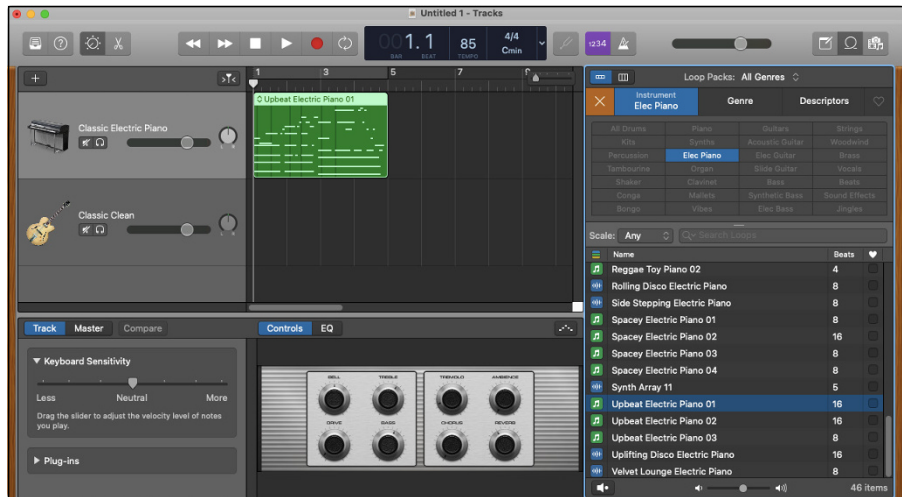


FIGURE 16-5:
A track with a
loop added.

Now, click the Loop Browser button at the right side of the toolbar to close the Loop Browser, which gives your Timeline additional elbow room. (You'll need that space for repeating and resizing loops in the next section.)



TIP

If you want that same beat throughout the song, you don't need to add any more loops to that track. (More on extending that beat in the next section.) If you want the piano's beat to change later in the song, however, you add a second loop after the first one in the *same* track. For now, leave this track as is.



REMEMBER

Whoops! Did you do something you regret? Don't forget that you can undo most actions in GarageBand by pressing the old standby $\text{⌘}+\text{Z}$ immediately afterward.

Second verse, same as the first

When you compose, you can add tracks for each instrument you want in your song:

- » Each track can have more than one loop.
- » Loops *don't* have to start at the beginning; you can drop a loop anywhere in the Timeline.

You may prefer to start a song with just your drum kit, for example, with your bass line beginning sometime later for a funkier opening.



TECHNICAL
STUFF

You put loops on separate tracks so that they can play different instruments simultaneously. If all your loops in a song are added to the same track, you hear only one loop at a time, and all the loops use the same software instrument. By creating multiple tracks, you give yourself the elbow room to bring in the entire band at the same time. It's über-convenient to compose your song when you can see each instrument's loops and where they fall in the song.



TIP

Click the Reset button in the Loop Browser (which carries an X icon) to choose another instrument or genre category.

LOOK, I'M JOHN WILLIAMS!

You, too, can be a famous composer of soundtracks . . . well, perhaps not quite as famous as Mr. Williams, but even he had to start somewhere. To add a GarageBand score to an iMovie project, choose Track ⇨ Show Movie Track in the GarageBand menu bar to display the Movie track. Now choose File ⇨ Movie ⇨ Open Movie, select the movie, and click Open.

At this point, you add and modify instrument tracks and loops just as you would in any other GarageBand project. GarageBand displays a video preview in the Movie track. When you click the Play button, the video is shown as well so that you can check your work and tweak settings (as described later in the chapter).

When you finish composing, choose File ⇨ Movie ⇨ Export Audio to Movie. You can specify the name, location, and quality of the new movie file. Note that you can't edit your finished movie file in iMovie again, so scoring should always be the last step in your filmmaking process.

Resizing, repeating, and moving loops

If you haven't already tried listening to your entire song, try it now. You can click Play at any time without wreaking havoc on your carefully created tracks. Sounds pretty good, doesn't it?

But wait: I bet the song stopped after about 5 seconds, right? (You can watch the passing seconds in either the Time/Tempo display or the second rule that appears at the top of the Timeline.) I'm sure that you want your song to last more than 5 seconds! When the playhead moves past the end of the last loop, your song is over. Click Play again to pause the playback; then click the Go to Beginning button (shown in Figure 16-1) to move the playhead back to the beginning of the song.

The music stops so soon because your loops are only so long. As mentioned earlier, most loops are 5 seconds long, and others are even shorter. To keep the groove going, you must do one of three things:

- » **Resize the loop.** Hover the cursor over the left or right edge of most loops, and an interesting thing happens: The cursor changes to an icon representing the left or right edge of the loop, with arrows pointing both ways. That's your cue to click and drag. As you drag, some loops expand to fill the space you're making, repeating the beats in perfect time. By resizing a loop, you can drag the loop's edge as far as you like.
- » **Repeat the loop.** Depending on which loop you chose, you might find that resizing it doesn't repeat the measure. Instead, the new part of the loop is simply dead air. In fact, the length of many loops is limited to anywhere from 1 to 5 seconds. But if you move the cursor over the top-right corner of a loop you want to extend, it turns into a vertical line with a circular arrow, which tells you that you can click and repeat the loop. GarageBand adds multiple copies of the same loop automatically for as far as you drag the loop. In Figure 16-6, you see that I repeated the Upbeat Electric Piano 01 loop.
- » **Add a new loop.** You can switch to a different loop to change the music's flow. Naturally, the instrument stays the same, but there's no reason that you can't use a horn-riff loop in your violin track (as long as it sounds good played by a violin)! To GarageBand, a software instrument track is compatible with *any* software instrument loop you add from the Loop Browser, as long as that loop is marked with your old friend the green musical note.



FIGURE 16-6:
By repeating a
loop, you can
keep the notes
flowing.



TIP

You can also use the familiar Cut (⌘+X), Copy (⌘+C), and Paste (⌘+V) keyboard shortcuts to cut, copy, and paste loops both on the Timeline and from track to track. And you can click a loop and drag it anywhere.



REMEMBER

A track doesn't have to be filled for every second with one loop or another. Most of my songs have repeating loops with empty space between them as different instruments perform solo.

Each track can be adjusted so that you can listen to the interplay between two or more tracks or hear how your song sounds without a specific track:

- » **Mute a track.** Click the tiny speaker button below the track name in the list, and the button turns blue to indicate that the track is muted. To unmute, click the speaker icon again.
- » **Change the volume or balance of a track.** Use the volume slider and balance knob that appear next to the track name. These controls come in handy if you want an instrument to sound louder or to confine that instrument to the left or right speaker.

Using the Arrangement track

GarageBand includes another method you can use to monkey with your music: Use the Arrangement track to define (or mark) specific sections of a song, which allows you to reorganize things by selecting, moving, and copying entire sections. You're probably familiar with a song's chorus (or refrain), for example, and how often it appears during the tune. With the Arrangement track, you can reposition the entire chorus, carrying all the loops and settings within the chorus along with it. If you need another chorus, just copy that arrangement.

To use the Arrangement track, display it by choosing Track ⇨ Show Arrangement Track. The Arrangement track appears as a thin strip at the top of the Track list. Click the Add Marker button (the circular button bearing a plus sign) at the right end of the Arrangement track, and you see a new marker, as shown in Figure 16-7. (It appears in the Arrangement track row, looking rather like a rectangular tab in Safari, bearing a name — in this case, *Intro*.) You can drag the right side of the Arrangement marker to the left or right to resize it or drag it to move it anywhere in the song.



TIP

To rename an Arrangement marker, click the current name (in Figure 16-7, you would click the word *Intro*) to display the menu of existing marker names. Click Rename, type a new name for the marker in the text box, and press Return. (You can also choose one of the existing names from the menu.)

FIGURE 16-7:
I just added a
new marker in
my song's
Arrangement
track.



Now, here's where Arrangement markers get *cool*:

- » **To move an entire Arrangement marker:** Click anywhere on the marker's title bar (except the title itself) and drag it anywhere you like in the song. (You can hold down Shift while clicking multiple contiguous markers to select more than one.)
- » **To copy an Arrangement marker:** Hold down the Option key and drag the desired marker's title to the spot where you want the copy to appear.
- » **To empty the regions in an Arrangement marker:** Select it and press Delete. To delete the marker, press Delete a second time.

Tweaking the settings for a track

You don't think that Rush and U2 just play and walk away, do you? No. They spend hours after their recording sessions are over, tweaking their music in the studio and on the mixing board until every note sounds just as it should. You can adjust the settings for a track, too. The tweaks you can perform include adding effects (pull a Hendrix by adding echo and reverb to your electric guitar track) and kicking in an equalizer (for fine-tuning the sound of your background horns).

To make adjustments in a track, follow these steps:

1. Click the desired track in the Track list to select it.

2. Click the **Smart Controls** button in the top-left corner of the GarageBand window (refer to Figure 16-1).

You can also press B to hide or display the Smart Controls pane.

3. Click the **Controls** tab to show the settings shown in Figure 16-8.

Note that the settings you see will vary according to the type of instrument track you've selected.

4. Click the **knob control or slider for a specific effect to change the sound.**



TIP

GarageBand offers a Visual Equalizer window that you can use to create a custom equalizer setting for each track. In the Smart Controls pane, click the EQ tab. To change the Bass, Low Mid, High Mid, or Treble setting for a track, click and drag the equalizer waveform in the desired direction. And yep, you can do this while your song is playing, so you can use both your eyes *and* ears to define the perfect settings!

5. Click the **Smart Controls** button (or press B) to return to GarageBand.



FIGURE 16-8:
Finesse your tune
by tweaking the
sound of a
specific track.

Time for a Mark's Maxim:



MARK'S
MAXIM

Save your work often in GarageBand. One power blackout and you'll never forgive yourself. When you're pleased with the progress you've made in your project, press ⌘+S and enjoy the peace of mind. (Use Time Machine with an external backup drive for good measure.)

JOIN IN AND JAM . . . OR SING!

GarageBand is even more fun if you happen to play an instrument! And yes, I'm envious, no matter how much I enjoy the techno and jazz music I create. After all, take away my Mac and I'm back to playing the kazoo — at least until I absorb all the Learn to Play lessons for the guitar. (More on Learn to Play in the next sidebar.)

Most musicians use MIDI instruments called *controllers* to play music on the computer. That pleasant-sounding acronym stands for *Musical Instrument Digital Interface*. A wide variety of MIDI controllers is available these days, from traditional MIDI keyboards to more exotic fun, such as MIDI saxophones. Apple sells a 37-key MIDI keyboard from iRig for around \$150, for example. Alternatively, the highly recommended Casio CTX-3200 offers 61 keys, and it's available online for about \$130. (Both keyboards connect to your trusty iMac via a USB cable.)

If you have an older instrument with traditional round MIDI ports — you'll never confuse them with USB connectors — you need a USB-to-MIDI converter. You can find this type of converter for around \$50 on websites that cater to musicians.

You can also connect microphones or traditional electric instruments to your iMac for use with GarageBand. You'll need an audio interface, which feeds the signal from these traditional sources into your iMac through the USB port.

When your instrument is connected, you can record tracks with any software instrument. Create a new software instrument track as I demonstrate in this chapter, select it, and play a few notes. Suddenly, you're playing the instrument you chose! If nothing happens, check the MIDI status light in the Time display to see whether it blinks with each note you play. If not, check the installation of your MIDI connection and make sure that you've loaded any required drivers, as well as your MIDI settings within QuickTime and the input settings in the System Preferences Sound pane.

Drag the playhead to a beat or two before the spot in the Timeline where you want your recording to start. This step gives you time to match the beat. Then click the big red Record button and start jamming! When you're finished, click the Play button to stop recording.

Sharing Your Songs

When you finish your song, you can play it whenever you like through GarageBand. But then again, that isn't really what you want, is it? You want to share your music with others on an audio CD or download it to your iPhone or iPad so that you can enjoy it yourself while walking through the mall.

Music to the rescue! As with the other digital lifestyle applications I cover in this book, GarageBand can share the music you make through the digital hub that is your iMac. (You can find out how to become a Music power user in Chapter 13.)

Creating song files in Music

You can create an AAC song file (or even a ringtone) from any project in just a few simple steps:

1. **Open the project you want to share.**
2. **Choose Share ⇨ Song to Music.**

HEY, GARAGEBAND, TEACH ME HOW TO PLAY!

In the early days of GarageBand, you were limited to creating music. And if you were a nonmusician like yours truly, GarageBand had no practical use as a tool for teaching yourself how to *play* an instrument.

Ah, but Apple's addition of Learn to Play actually turns GarageBand into your private video tutor for basic piano and guitar! In the New Project window (refer to Figure 16-2), click the Learn to Play entry in the list on the left side to display your guitar and piano lessons. Right out of the box, you have a solid introduction to both instruments. You can also download more lessons — which cover more advanced topics such as fingering and chords — for each instrument from the Lesson Store (available from the New Project window). Your onscreen instructor can even record what you play.

In fact, GarageBand includes the How Did I Play feature, which can pinpoint the portions of a lesson you played correctly and which spots in the song you need to work on. (I'm told that musicians call such trouble spots *flubs*. Having no musical talent whatsoever, anything that I attempted to play would be one giant flub.) To try How Did I Play, open your favorite lesson, click the Record button (with the red dot in the center) and begin playing. To stop recording, click the Play button. Now you can see the portions of the song you played correctly (where the notation area is green) and spots where you, um, flubbed (where the notation area turns red). Oh, and make sure that your instrument is in tune, because even correct notes played on an instrument that's out of tune produce errors for How Did I Play!

If you find the free Learn to Play lessons valuable, you can move up to the Artist lessons, which are taught by famous musicians (including favorites of mine such as America; Squeeze; and Alex Lifeson of Rush, who actually teaches you how to play "Tom Sawyer")!



3. **In each of the text boxes, type the title, artist name, composer name, album name, and Music playlist for the tracks you create.**

You can leave the defaults as they are if you prefer. Each track you export is named after the song's name in GarageBand.

4. **From the Quality pop-up menu, choose the proper audio quality for the finished file.**

The higher the quality, the larger the file.

5. **Click the Share button.**

After a second or two of hard work, your iMac opens the Music window and highlights the new (or existing) playlist that contains your new audio.

Exporting a project

Sometimes, you'd like to create an audio file from a GarageBand project, but you'd rather not add that song or ringtone to your Music library automatically. (Perhaps you now have audio proof that a family member **does** indeed snore.) In that case, you can always export a song straight to your iMac's internal drive as a stand-alone audio track by following these steps:

1. **Open the project you want to export.**
2. **Choose Share ➞ Export Song to Disk.**
3. **Type a name for the audio file.**

Click the button next to the Save As text box to select a specific location where the file should be created, or choose a preset from the Where pop-up menu.

4. **From the Quality pop-up menu, choose the desired audio quality.**

As with sharing a song to Music, the higher the quality, the larger the file.

5. **Click Export.**

Burning an audio CD

Ready to create a demo CD with your latest GarageBand creation? If your iMac has an external optical drive, follow these steps to burn an audio disc from within GarageBand:

1. **Open the song you want to record to disc.**

2. Load a blank disc into your optical drive.

If you see a dialog requesting that you choose an action, click the Ignore button.

3. Choose Share ➞ Burn Song to CD.

Note that the CD you create has only one track. To include more tracks on the CD, share the song to your Music library (as described earlier), create a playlist containing the desired songs and burn that playlist within the Music application.

5 Getting Productive with Your iMac

IN THIS PART . . .

Create and format documents with Pages.

Build spreadsheets with Numbers.

Showcase your ideas with Keynote.

- » Creating, opening, and saving a Pages document
- » Entering, editing, and formatting text
- » Inserting text, shapes, and graphics
- » Cutting, copying, and pasting
- » Setting document defaults
- » Printing and sharing your work

Chapter 17

Desktop Publishing with Pages

What's the difference between word processing and desktop publishing? In a nutshell, it's in how you design your document. Most folks use a word processor like an old-fashioned typewriter, much like I'm using Microsoft Word right now. (Yawn.)

A *desktop publishing application* allows far more creativity in choosing where to place text, how to align graphics, and how to edit formats. I think desktop publishing is more visual and intuitive, allowing your imagination a free hand in creating a document.

In this chapter, I show you how to set your inner designer free from the tedious constraints of word processing. Whether you need a simple letter, a stunning brochure, or a multipage newsletter, Pages can handle the job with ease, and you'll be surprised by how simple it is to use. Plus, Pages is a *free* download for any iMac (and free Apple software is always A Good Thing).

Creating a New Pages Document

To create a new Pages document, follow these steps:

1. Click the Pages icon on the Dock.

If the Pages icon doesn't appear on your Dock, click the Launchpad icon and then click the Pages icon (which looks like a document and pen). If you haven't yet installed the three Apple productivity applications — Pages, Numbers, and Keynote — click the App Store icon on your Dock and download them for free!

2. Click the New Document button in the bottom-left corner of the Open dialog.

Pages displays the Choose a Template window, shown in Figure 17-1.

You can also create a new Pages document at any time. Just choose File ⇨ New to display the Choose a Template window.



TIP

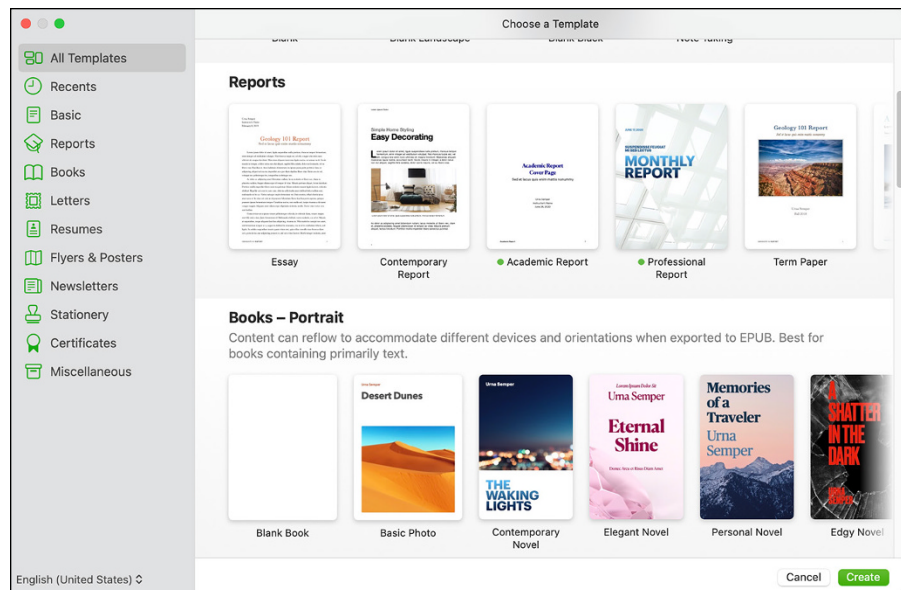


FIGURE 17-1: Select a template from the Choose a Template window.

3. In the list on the left, click the type of document you want to create.

The thumbnails on the right are updated with templates that match your choice.

4. **Click the template that most closely matches your needs.**

To start with a blank page, choose the Blank template.

5. **Click the Choose button to open a new document that uses the template you selected.**

Opening an Existing Pages Document

You can always open a Pages document from a Finder window, of course. Just double-click the document icon. You can also open a Pages document from within the program. Follow these steps:

1. **Launch Pages as described in the preceding section.**
2. **Press ⌘+O to display the Open dialog.**

The Open dialog operates much the same as a Finder window in Icon, List, or Column view mode. To open a document you've already saved in your iCloud Drive, click the Pages item below the iCloud heading in the Sidebar on the left side of the dialog and double-click the desired document thumbnail in the thumbnail display on the right side of the dialog. To open a document on your internal drive or network, click the desired location in the Open dialog Sidebar. (If you're into convenience, as I am, click one of the locations below the Favorites heading to jump to common folders such as Downloads or Documents!)

3. **Click the desired drive in the Devices list on the left side of the dialog and then click folders and subfolders until you locate the Pages document.**

You can also click the Search box in the top-right corner of the Open dialog and type a portion of the document's name or its contents.



TIP

If you're displaying the Preview column in Column view, you can hover the cursor over a document thumbnail and quickly flip through the pages by clicking the left and right arrows that appear. This "find" feature can help you identify a particular Pages document without even opening it.

4. **Double-click the thumbnail (or filename) to load it.**

If you want to open a Pages document you've edited in the recent past, things get even easier. Just choose File ⇨ Open Recent and you can open the document with a single click on the submenu that appears.



Pages can open, edit, and save documents created in the Mac version of Microsoft Word. However, documents created using some of the advanced features and formatting capabilities of Word (like Word macros) may not import properly into Pages. If this occurs, Pages will display a message alerting you that some content has changed.

Saving Your Work

Pages fully supports Monterey's Auto-Save feature, but you may feel the need to save your work manually after you finish a significant edit (or if you need to take a break while designing). If you're editing a document that's already been saved at least once, press $\text{⌘}+\text{S}$. A new version of the document is saved in its current location and you can continue with your work.

If you're working on a new document that hasn't been saved, follow these steps to save it:

- 1. With the Pages document open, press $\text{⌘}+\text{S}$.**
- 2. Type a filename for your new document.**
- 3. Open the Where pop-up menu and choose a location in which to save the document.**

Note that Pages defaults to your iCloud Drive as the target location. This way, you can open and edit your Pages document on any Mac or iOS device that uses the same Apple ID. Alternatively, click the button sporting the down arrow to expand the Save As sheet. This sheet allows you to navigate to a different location on your hard drive or network or to create a new folder in which to store this Pages project.

- 4. Click Save.**



You can create a version of a Pages document by choosing File ⇨ Save. To revert the current document to an older version, choose File ⇨ Revert To. Pages gives you the option of reverting to the last saved version, or you can click Browse All Versions to choose among multiple versions of the document.

Touring the Pages Window

Before you dive into any real work, let me show you around the Pages window. You'll find the following major components and controls, as shown in Figure 17-2:

- » **Pages list:** This thumbnail list displays all the pages you've created within your document. (For a single-page document, of course, the Page list contains a single thumbnail.) You can switch instantly among different pages in your document by clicking the desired thumbnail in the list. If the list isn't visible, click the View button at the left end of the Pages toolbar and then click Page Thumbnails.
- » **Layout pane:** This section takes up most of the Pages window. It's where you design and edit each page in your document.
- » **Toolbar:** Yep, Pages has its own toolbar. It keeps all the most common application controls within easy, one-click reach.
- » **Inspector:** This window extension allows you to quickly switch the appearance of selected paragraphs, characters, and lists (in Format mode) or to specify settings that affect the entire document (in Document mode). You can hide and display the Inspector from the View menu or the Format or Document buttons on the toolbar.

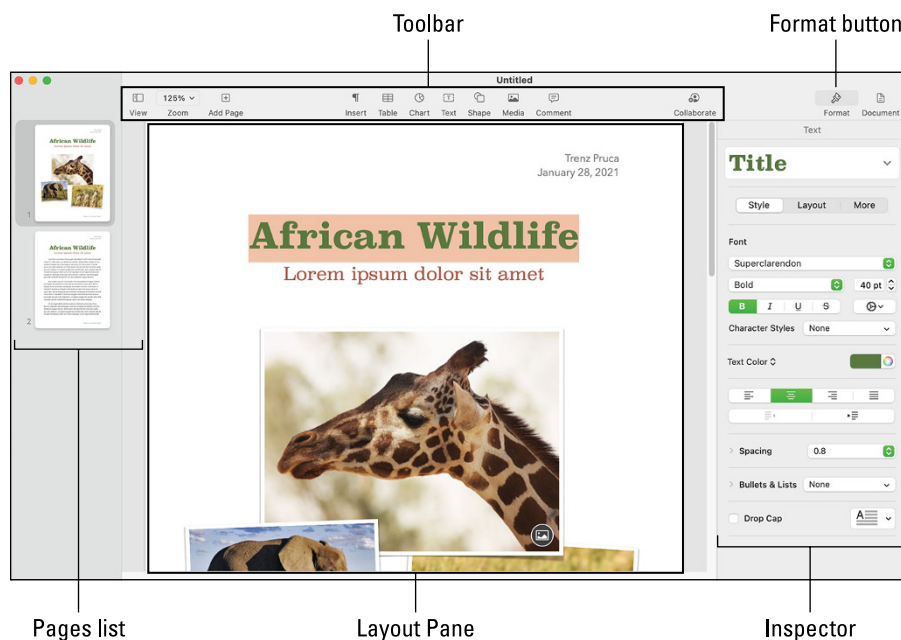


FIGURE 17-2:
The major points
of interest in the
Pages window.

Entering and Editing Text

If you've used a modern word processing program, you'll feel right at home typing within Pages. The bar-shaped text cursor, which looks like a capital letter *I*, indicates where the text you enter will appear in a Pages document. To enter text, simply begin typing. To edit existing text in your Pages document, select and highlight the text. As you type, Pages replaces the existing text. You can delete text by clicking and dragging across the characters to highlight them and then pressing Delete.



TIP

Need to track the number of words in your Pages document? (Say, for a class assignment?) Click View ⇨ Show Word Count. You can even display the actual character count!

Using Text, Shapes, and Graphics Boxes

Within Pages, you'll quickly learn that text, shapes, and graphics appear in *boxes*, which you can resize by clicking and dragging one of the handles that appear around the edges of the box. (Click the box to select it and then hover the cursor over one of the square handles. The handle changes to a double-headed arrow, indicating that Pages is ready to resize the box.)

You can also move a box, including all the stuff it contains, to another location within the Layout pane. Click in the center of the box and then drag the box to the desired spot. Note that Pages displays yellow alignment lines to help you align the box with other elements around it (or with regular divisions of the page, such as the vertical center of a poster or flyer).



REMEMBER

To select text or graphics within a box, you must first click the box to select it and then double-click the line of text or the graphic you want to change.

The Three Amigos: Cut, Copy, and Paste

“Hang on, Mark. You’ve covered moving stuff, but what if you want to *copy* a block of text or a photo to a second location? Or how about cutting something from a document that’s open in another application?” Good questions. That’s when you can call on the power of the cut, copy, and paste features within Pages. The next few sections explain these actions.

Cutting stuff

Cutting selected text, shapes, or graphics removes them from your Pages document and places that material on your Clipboard. (Think of the *Clipboard* as a holding area for sections of existing text and graphics you want to manipulate.) To cut, select some material and then choose Edit ⇨ Cut or press ⌘+X.

Copying text and images

When you copy text, shapes, or graphics, the original selection remains untouched and a copy of the selection is placed on the Clipboard. Select some material and choose Edit ⇨ Copy or press ⌘+C. To copy selected items by dragging, hold down the Option key while you drag the items to their destination.



REMEMBER

If you cut or copy a new selection to the Clipboard, it erases what was there. In other words, the Clipboard holds only the latest material you cut or copied.

Pasting from the Clipboard

Wondering what you can do with the stuff that's stored on the Clipboard? Pasting the contents of the Clipboard places the material at the current location of the insertion cursor.



WARNING

You must paste the contents before you cut or copy again to avoid losing what's on the Clipboard.

To paste the Clipboard contents, click the insertion cursor at the location you want and choose Edit ⇨ Paste or press ⌘+V.

Formatting Text the Easy Way

If you feel that some (or all) of the text in your Pages document needs a face-lift, you can format that text any way you like. Formatting lets you change the color, font family, character size, and attributes as necessary.

After the text is selected, you can apply basic formatting in two ways:

- » **Use the Inspector.** The Inspector appears on the right side of the Pages window (refer to Figure 17-2). The controls it displays vary according to the selection you've made. (Click the Format button on the right end of the

toolbar, which looks like a tiny paintbrush, to display and hide the Inspector.) Click to select a font control to display a pop-up menu and then click your choice. Select a portion of text and open the Font Family pop-up menu to change the font family from vanilla Arial to something more daring, for example. You can also select characteristics, such as the text's paragraph style, or choose italic or bold. In addition, the Inspector provides buttons for vertical and horizontal text alignment.

- » **Use the Format menu.** Most controls displayed within the Format section of the Inspector are also available from the Format menu. Click Format and hover the cursor over the Font menu item, and you can apply boldface, italics, and underlining to the selected text. You can also make the text bigger or smaller. To change the alignment from the Format menu, click Format and hover the mouse cursor over the Text menu item.

Adding a Spiffy Table

In the world of word processing, a *table* is a grid that holds text, shapes, and graphics for easy comparison. You can create a custom table layout within Pages with a few simple clicks.

Follow these steps:

1. **Click the insertion cursor at the location where you want the table to appear.**
2. **Click the Table button on the Pages toolbar.**

Pages displays thumbnail images of table styles. You have a selection of colors, and some tables even include highlighted rows and columns. Click the left and right icons to display different styles of thumbnails until you find the one that's closest to the table you need.

Don't worry if the style isn't exactly right. You can always change the layout by selecting the table and displaying the Format Inspector, where you can fine-tune all sorts of font, color, grid, and border options.

3. **Click the style thumbnail to insert the table.**

If you need to change the number of rows or columns in your table, Pages makes it easy. To add or delete rows or columns directly from the table, select it and then click the row and column buttons that appear. (Each button bears two horizontal or vertical lines, as shown in Figure 17-3.)

4. Click within a cell in the table to enter text.

The table cell automatically resizes and wraps the text you enter to fit.

You can paste material from the Clipboard into a table. See the earlier section “Pasting from the Clipboard” for details.



REMEMBER

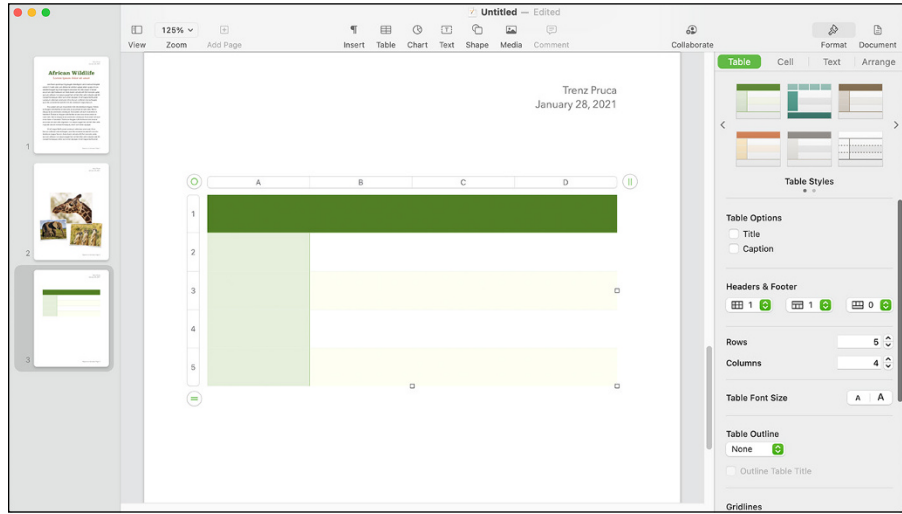


FIGURE 17-3:
Use Table
controls to tweak
your table.

Here are a few pointers on dressing up your table and making its data more attractive and readable:

- » **Change the borders on a selected cell.** Click the Format icon on the toolbar to open the Format Inspector, click the Cell tab, and then click the desired button in the Border section.



TIP

Select a range of cells in a table by holding down Shift as you click. Hold down ⌘ and click to select multiple cells that aren't contiguous.

- » **Add a background color to selected cells, or fill them with an image for a background.** Click the Cell tab, click the Fill section in the Inspector, and choose a type of background.

Adding Alluring Photos

You can choose one of two methods of adding a picture within your Pages document:



TIP

» **As a floating object:** You place the image in a particular spot, and it doesn't move even if you make changes to the text. To add a floating object, drag an image file from a Finder window and place it at the spot you want within your document. Alternatively, you can click the Media button on the toolbar, click Photos, navigate to the location where the file is saved, and click the image thumbnail. Figure 17-4 shows the Media Browser in action.

Click the magnifying-glass icon to search for a specific item by using keywords.

Note that a floating object (such as a shape or image) can be sent to the background, where text doesn't wrap around it. To bring back a background object as a regular floating object, click the object to select it and then choose Arrange ⇨ Bring to Front. (More about background shapes in the next section.)

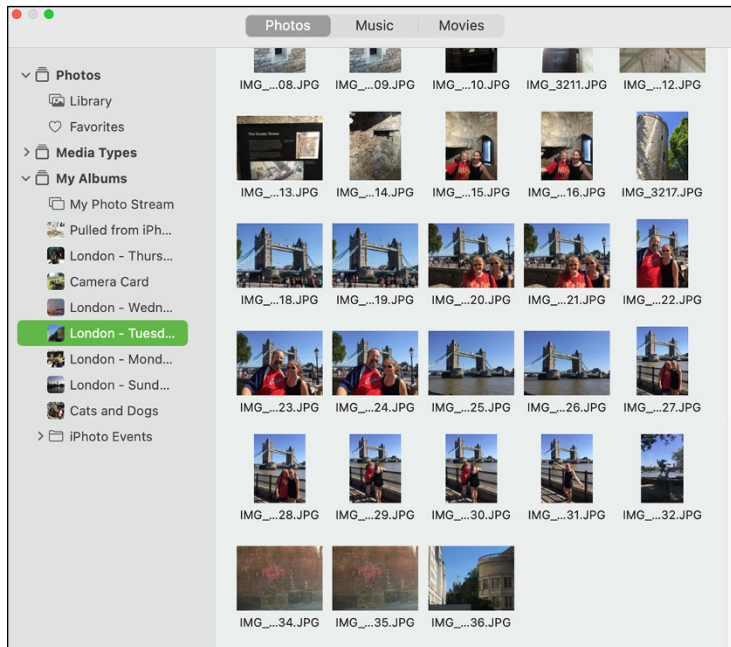


FIGURE 17-4:
Hey, isn't that the
Pages Media
Browser?

» **As an inline object:** The image flows with the surrounding text as you make layout changes. To add an inline object, hold down the ⌘ key as you drag an image file from a Finder window and place it where you want within your document. You can also click the Media toolbar button and then choose Photos to display the Media Browser. Navigate to the location where the file is saved, hold down the ⌘ key, and drag the image thumbnail to the spot where you want it in the document.



TIP

To resize an image object, click the image to select it and drag one of the selection handles that appear along its border. (The handles look like tiny squares.) The side-selection handles drag only that edge of the frame. The corner-selection handles resize both adjoining edges of the selection frame. Hold down the Shift key to make the vertical and horizontal proportions remain fixed.

Adding a Background Shape

To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. **Click the insertion cursor in the location you want.**
2. **Click the Shape button on the Pages toolbar and choose a shape.**

The shape appears in your document.

3. **Click the center of the shape and drag it to a new spot.**

Shapes can be resized or moved in the same manner as image boxes. See the preceding section.



REMEMBER



TIP

You can type over a shape set as a background. Before you do, though, select the shape and then choose Arrange ⇨ Send to Back.

If you've created a shape that you'd like to reuse in other documents, you can right-click that shape and choose Save to My Shapes; then type a memorable name for the shape. To see your custom shapes library, click the Shapes button in the Pages toolbar and click My Shapes at the bottom of the list on the left.

Are You Sure about That Spelling?

Pages can check spelling as you type (the default setting) or after you complete your document. If you find automatic spell-checking to be distracting, you should pick the latter method.



REMEMBER

As my technical editor reminds me, spell-checking only confirms that a word matches an entry in the Pages dictionary, *not* that it's the right word for the job! If you've ever red a document that someone else rote, you understand.

To check spelling as you type, follow these steps:

1. **Click the Edit menu and hover the cursor over the Spelling and Grammar menu item.**
2. **Choose Check Spelling While Typing from the submenu that appears.**

If a possible misspelling is found, Pages underlines the word with a red dashed line.

3. **Right-click the word to choose a possible correct spelling from the list, or choose Ignore Spelling if it's spelled correctly.**

To turn off automatic spell-checking, click the Check Spelling While Typing menu item again to deselect it.

To check spelling manually, follow these steps:

1. **Click within the document to place the text insertion cursor where the spell check should begin.**
2. **Click Edit, hover the cursor over the Spelling and Grammar menu item, and choose Check Document Now from the submenu that appears.**
3. **Right-click any possible misspellings and choose the correct spelling or choose Ignore Spelling if the word is spelled correctly.**

Setting Your Font Defaults to Speed Things Up

If you typically use the same font and font sizes for your projects — for example, if your company has a standard font that's used in all documents — you can save yourself time and trouble by setting those defaults for everything you create using the Blank template.

To set your Blank template font defaults, follow these steps:

1. **Click the Pages menu and choose Preferences.**
2. **Click the Set Font and Size for New Basic Documents check box.**
3. **Choose a font family and default font size for body text from the sheet that appears.**



TIP

Note that you can also set Pages to create a new document using a template you specify. Click the Use Template radio button and then click the Change Template button to choose your default template.

4. **Click OK to save your changes; then click the Close button on the Preferences dialog.**

Printing Your Pages Documents

Ready to start the presses? You can print your Pages document on real paper, of course, but don't forget that you can also save a tree by creating an electronic PDF instead of a printout. You'll find the PDF drop-down menu at the bottom of the standard Monterey Print dialog; just click it and then click Save As PDF.

To print your Pages document on old-fashioned paper, follow these steps:

1. **Within Pages, choose File ⇨ Print.**
Pages displays the Print sheet.
2. **Click the Copies field and enter the number of copies you need.**
3. **Select the pages to print:**
 - **To print the entire document,** select All.
 - **To print a range of selected pages,** select the From radio button and enter the starting and ending pages.
4. **Click the Print button to send the document to your printer.**



TIP

Note that it's possible to embed a video or audio clip into a Pages document, and content like that is lost in a printed document!

Sharing That Poster with Others

Besides printing (which is, after all, so *very passé* these days), you can choose to share your Pages document electronically via the Internet or your network:



REMEMBER

» **Send a Copy:** To send a copy of the actual document (which the recipient can open in Pages on their own Mac or iOS device), choose Share from the Pages menu and hover the cursor over the Send a Copy item. You can send the document via Mail, Notes, or Messages, or you can make it available through AirDrop (if the recipient is within range of your iMac's Wi-Fi signal).

If you decide to send your Pages document as an email attachment, don't forget that most Internet service providers have a maximum message size. If your document is too large, your mail server probably will reject it.

» **Export:** You're not limited to sharing over that Internet thing! Pages can also export your work directly to your drive in one of six formats: a PDF file, a Word document, an ePub file (for use with electronic book apps such as iBooks), a document that's compatible with the previous version of Pages, a Rich Text Format document, and even plain text. (Remember when everything was in plain text?) Choose File ⇨ Export To and pick your format; Pages displays any options you can set for that format. When you're ready, click Next and select the location where Pages should save the file. Click Export and then sit back while your favorite desktop publishing application does all the work.



TIP

If the recipient of your document doesn't need to edit your work, I recommend creating a PDF file, which keeps your document as close as possible to the way it appears in Pages.

- » Getting familiar with and navigating Numbers
- » Opening, saving, and formatting spreadsheets
- » Selecting cells, entering data, and editing data
- » Creating simple calculations
- » Adding charts to your spreadsheets
- » Printing a Numbers spreadsheet

Chapter **18**

Creating Spreadsheets with Numbers

Are you downright afraid of spreadsheets? Does the idea of building a budget with charts and all sorts of fancy graphics send you running for the safety of the hall closet? Well, good iMac owner, Apple has again taken something that everyone else considers to be super complex and turned it into something that normal human beings can use! (Much as Apple did with video editing and songwriting. Is there *any* type of software that Apple designers can't make intuitive and easy to use?) And Numbers is a free download from the App Store, to boot!

In this chapter, I demonstrate how the Numbers spreadsheet program can help you organize data and analyze important financial decisions for home and business — everything from a household budget to your company's sales statistics!

Before You Launch Numbers . . .

In case you're unfamiliar with applications such as Numbers and Microsoft Excel — and the documents they create — let me provide you a little background information.

A *spreadsheet* organizes and calculates numbers by using a grid system of rows and columns. The intersection of each row and column is a *cell*, which can hold either text or numeric values. Cells can also hold calculations called *formulas* and *functions*, which are usually linked to the contents of surrounding cells.

Spreadsheets are wonderful tools for making decisions and comparisons because they let you plug in different numbers — such as interest rates or your monthly insurance premium — and instantly see the results. These are some of the spreadsheets that I use regularly:

- » Car and mortgage loan comparisons
- » A college planner
- » My household budget (not that I pay any attention to it)



REMEMBER

Numbers can open, edit, and save documents created with Excel, but spreadsheets created with some advanced Excel features will not import properly, and Numbers will alert you if this happens. (The simpler the Excel spreadsheet, the more likely it is to open without significant errors.)

Creating a New Numbers Document

Like Pages (Apple's desktop publishing application, which I cover in Chapter 17), Numbers ships with a selection of templates you can modify quickly to create a new spreadsheet. After a few modifications, you can easily use the Budget, Loan Comparison, and Mortgage templates to create your own spreadsheets.

To create a spreadsheet project file, follow these steps:

1. Click the Launchpad icon on the Dock.
2. Click the Numbers icon.

3. Click the New Document button in the bottom-left corner of the Open dialog that appears.

Numbers displays the Choose a Template window, shown in Figure 18-1. (To display the Choose a Template window and start a new Numbers project at any time, just choose File ⇨ New.)

4. In the list on the left, select the type of document you want to create.

The document thumbnails in the center are updated with templates that match your choice.

5. Click the template that most closely matches your needs.

6. Click the Choose button to open a new document that uses the template you selected.

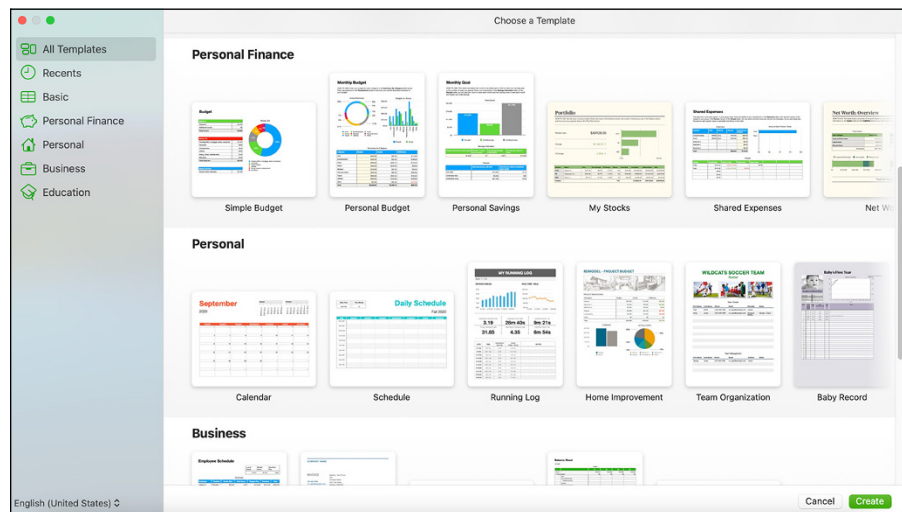


FIGURE 18-1:
Hey, these
templates aren't
frightening at all!

Opening an Existing Spreadsheet File

If you see an existing Numbers document in a Finder window (or you find it by using Spotlight), just double-click the Numbers document icon to open it. Numbers automatically loads and displays the spreadsheet.

It's equally easy to open a Numbers document from within the program. Follow these steps:

1. **In Launchpad, click the Numbers icon to run the program.**
2. **Press ⌘+O to display the Open dialog.**



TIP

As an iMac power user running macOS Monterey, you can save and load Numbers documents directly to and from your iCloud Drive. All three of Apple's productivity applications — Pages, Numbers, and Keynote — feature an Open dialog that can display the contents of your iCloud Drive as well as those of your iMac's internal drive. If the spreadsheet is stored in your iCloud Drive, click the Numbers item below the iCloud heading in the Sidebar on the left side of the dialog and then double-click the desired document thumbnail.

3. **If the document is stored in your iMac's internal drive, on your network, or in one of your Favorites locations, click the desired drive or folder in the Sidebar on the left side of the dialog.**
4. **Drill down through folders and subfolders until you locate the desired Numbers document.**



TIP

If you're unsure where the document is, click the Search box at the top of the Open dialog and type a portion of the document name or even a word or two of text that it contains. Note that you can choose to search your drive, your iCloud Drive, or both.

5. **Double-click the spreadsheet to load it.**



TIP

If you want to open a spreadsheet you've been working on over the past few days, choose File ⇨ Open Recent to display Numbers documents that you've worked with recently.

Save Those Spreadsheets!

Thanks to the Auto-Save feature in Monterey, you need not fear losing a significant chunk of work because of a power failure or a coworker's mistake. But if you're not a huge fan of retyping data, *period*, you can save your spreadsheets manually after making a major change. Follow these steps to save your spreadsheet to your iCloud drive or your internal drive:

1. **Press ⌘+S.**

If you're saving a document that hasn't yet been saved, the Save As sheet appears.

2. **Type a filename for your new spreadsheet.**
3. **Open the Where pop-up menu and choose a location in which to save the file.**

Common locations are your iCloud Drive, Desktop, Documents folder, and Home folder.



TIP

If the location you want isn't listed in the Where pop-up menu, click the down-arrow button next to the Save As text box to display the full Save As dialog. Click the desired drive in the Devices list on the left side of the dialog, and click folders and subfolders until you reach the desired location. Alternatively, type the folder name in the Spotlight Search box in the top-right corner, and double-click the desired folder in the list of matching names. (As a bonus, you can create a new folder in the full Save As dialog.)

4. **Click Save.**

After you save a Numbers document for the first time, you can create a version of that document by choosing File ⇨ Save. To revert to an older version of the current document, choose File ⇨ Revert To. You can revert to the last saved version or click Browse All Versions to look through multiple versions of the document and choose one of those versions to revert to.

Exploring the Numbers Window

Apple has done a great job of minimizing the complexity of the Numbers window. Figure 18-2 illustrates these major points of interest:

- » **Sheets tabs:** Because a Numbers project can contain multiple spreadsheets, they're displayed in the Sheets tabbed bar at the top of the window. To switch among spreadsheets in a project, click the desired tab.
- » **Sheet canvas:** Numbers displays the rows and columns of your spreadsheet in this section of the window; you enter and edit cell values within the sheet canvas.
- » **Toolbar:** The Numbers toolbar keeps the most common commands you'll use within easy reach.
- » **Inspector:** Located on the right side of the Numbers window, the Inspector displays editing controls for the object that's currently selected, whether it's text, a table, or a single cell. (If you enter an equal sign [=] in a cell to create a formula, the Inspector displays the Function list, where you can specify a calculation that Numbers should perform.)

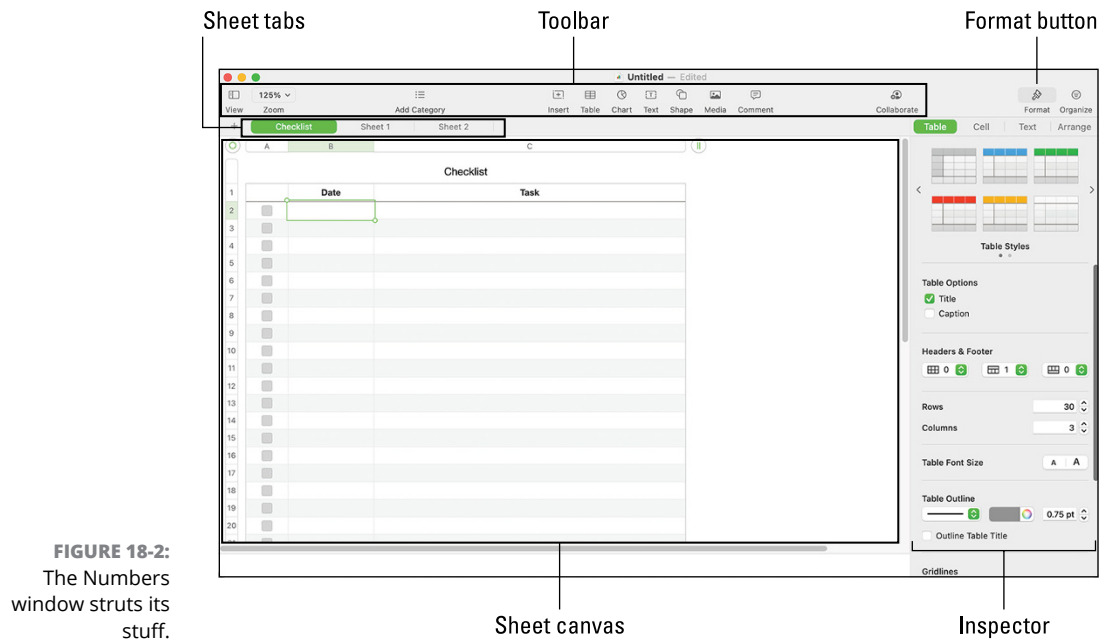


FIGURE 18-2:
The Numbers
window struts its
stuff.

Navigating and Selecting Cells in a Spreadsheet

You can use the scroll bars to move around in your spreadsheet, but when you enter data into cells, moving your fingers from the keyboard is a hassle. Numbers has various handy shortcut keys you can employ, as shown in Table 18-1. After you commit these keys to memory, your productivity level will shoot straight to the top.

You can also use the mouse or trackpad to select cells in a spreadsheet:

- » To select a *single* cell, click it.
- » To select a *range* of adjacent cells, click a cell in any corner of the range you want and drag in the direction you want.
- » To select a *column* of cells, click the alphabetic heading button at the top of the column.
- » To select a *row* of cells, click the numeric heading button at the far-left end of the row.

TABLE 18-1

Movement Shortcut Keys in Numbers

Key or Key Combination	Where the Cursor Moves
Left arrow (←)	One cell to the left
Right arrow (→)	One cell to the right
Up arrow (↑)	One cell up
Down arrow (↓)	One cell down
Home	To the beginning of the active worksheet
End	To the end of the active worksheet
Page Down	Down one screen
Page Up	Up one screen
Return	One cell down (also works within a selection)
Tab	One cell to the right (also works within a selection)
Shift+Enter	One cell up (also works within a selection)
Shift+Tab	One cell to the left (also works within a selection)

Entering and Editing Data in a Spreadsheet

After you navigate to the cell in which you want to enter data, you're ready to type your data. Follow these steps to enter That Important Stuff:

1. Click the cell or press the spacebar.

A cursor appears, indicating that the cell is ready to hold any data you type.

2. Enter your data.

Spreadsheets can use both numbers and alphabetic characters within a cell; either type of information is considered to be data in the Spreadsheet World.



REMEMBER

3. When you're ready to move on, press Return (to save the data and move one cell down) or press Tab (to save the data and move one cell to the right).

Made a mistake? No big deal:



TIP

» **To edit data:** Click the cell that contains the data error (to select the cell); then click the cell again to display the insertion cursor. Drag the insertion cursor across the characters to highlight them, and type the replacement data.

» **To delete characters:** Select the cell, highlight the characters, and press Delete.

You can quickly step backward through changes you've made and undo them by using the Undo command. Press Command+Z or choose Edit ⇨ Undo from the Numbers menu.

Selecting the Correct Number Format

After you enter your data (in a cell, row, or column), you may need to format it so that it appears correctly. Suppose that you want certain cells to display a specific type of number, such as a dollar amount, percentage, or date. Numbers gives you a healthy selection of number-formatting possibilities.



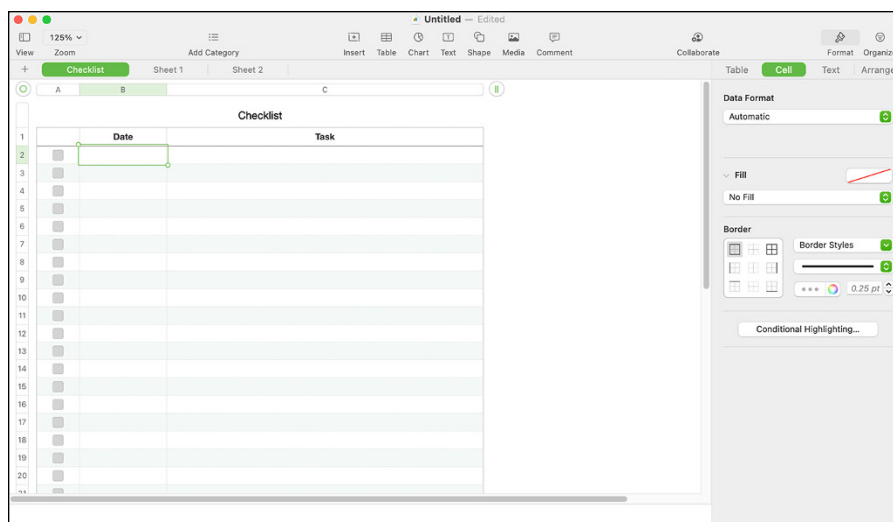
TIP

Characters and formatting rules — such as decimal places, commas, and dollar and percentage notation — are part of number formatting. If your spreadsheet contains units of currency, such as dollars, format it as such. Then all you need to do is type the numbers, and the currency formatting is applied automatically.

To specify a number format, follow these steps:

1. **Select the cells, rows, or columns you want to format.**
2. **Click the Format toolbar button to display the Inspector.**
3. **Click the Cell tab in the Inspector.**
4. **From the Data Format pop-up menu, choose the type of formatting you want to apply, as shown in Figure 18-3.**

FIGURE 18-3:
In the Inspector,
you can format
the data you've
entered.



Aligning Cell Text Just So

You can also change the alignment of text in the selected cells, which can make a big difference in readability for titles and “crowded” data that’s packed into close columns. The default alignments are flush left for text and flush right for numeric data. Follow these steps:

- 1. Select the cells, rows, or columns you want to format.**
See the earlier section “Navigating and Selecting Cells in a Spreadsheet” for tips on selecting stuff.
- 2. Click the Format toolbar button.**
- 3. Click the Text tab of the Inspector to display the settings shown in Figure 18-4.**
- 4. Click the corresponding Alignment button to choose the type of formatting you want to apply.**

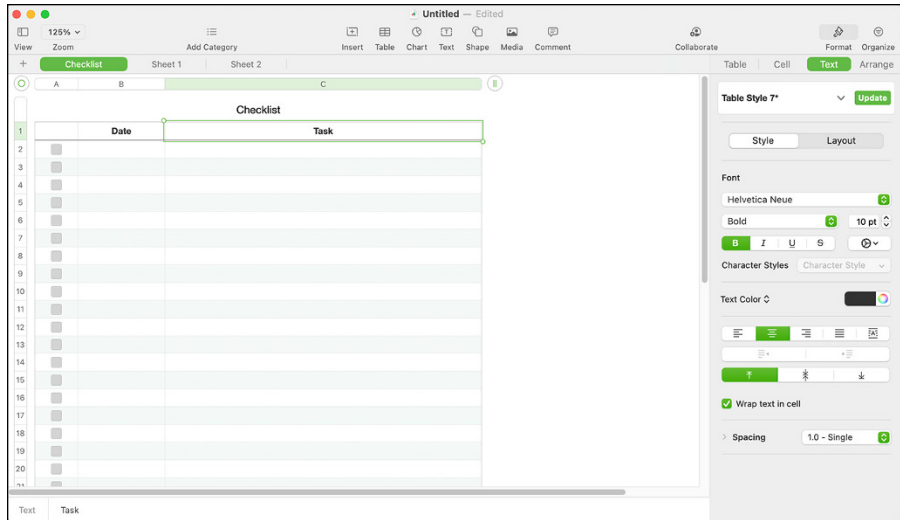
You can choose left, right, center, and justified text with the strip of buttons that appear under the Text Color section. Click the buttons in the second strip to specify the left and right indent levels for text. Text can be aligned at the top, center, or bottom of a cell using the third strip of buttons.



TIP

Do you need to set apart the contents of some cells? You might need to create text headings for some columns and rows or to highlight the totals in a spreadsheet, for example. To change such formatting, select the cells, rows, or columns you want to format; then click the Font Family, Font Size, or Font Color button on the Text tab.

FIGURE 18-4:
Set text
alignment
within a cell.



Formatting with Shading

Shading the contents of a cell, row, or column is helpful when your spreadsheet contains subtotals or logical divisions. Follow these steps to shade cells, rows, or columns:

1. **Select the cells, rows, or columns you want to format.**
2. **Click the Format toolbar button.**
3. **Click the Cell tab of the Inspector.**
4. **Click the triangle next to the Fill heading and choose a shading option from the Fill pop-up menu.**

Figure 18-5 shows the controls for a gradient fill.

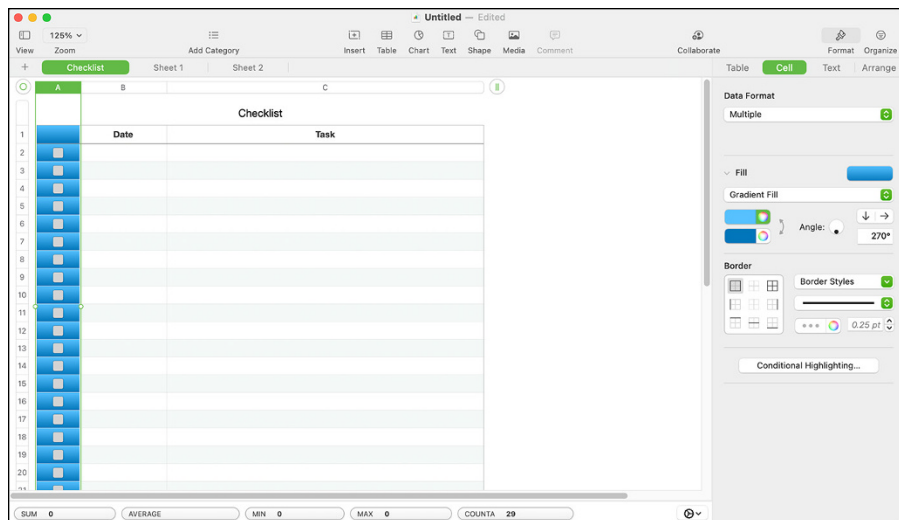
5. **Click the color box to select a color for your shading.**
Numbers displays a color picker wheel.
6. **Click at the desired spot within the wheel to select a color.**
7. **After you achieve the effect you want, click the color box again to close the color picker.**



TIP

You can also add a custom border to selected cells, rows, and columns from the Cell tab. Click the triangle next to the Border heading to select just the right border.

FIGURE 18-5:
Adding shading
and colors to
cells, rows, and
columns is easy
in Numbers.



Inserting and Deleting Rows and Columns

What's that? You forgot to add a row, and now you're three pages into your data entry? No problem. You can easily add — or delete — rows and columns. First, select the row or column adjacent to where you want to insert (or delete) a row or column, and do one of the following:

- » **For a row:** Right-click a row header and choose Add Row Above, Add Row Below, or Delete Row from the shortcut menu that appears.
- » **For a column:** Right-click a column header and choose Add Column Before, Add Column After, or Delete Column from the shortcut menu that appears.

If you select multiple rows or columns, right-click and choose Add from the shortcut menu. Numbers inserts the same number of new rows or columns that you selected. You can also copy the contents of a row or column and paste them into any location in your spreadsheet.



TIP

You can also insert rows and columns via the Table menu at the top of the Numbers window.

The Formula Is Your Friend

It's time to talk about *formulas*, which are equations that calculate values based on the contents of cells you specify in your spreadsheet. If you designate cell A1 (the cell in column A at row 1) to hold your yearly salary and cell B1 to hold the number 12, you can divide the contents of cell A1 by cell B1 (to calculate your monthly salary) by typing this formula in any other cell:

=A1/B1

Formulas in Numbers always start with an equal sign and may include one or more functions as well. A *function* is a preset mathematical, statistical, or engineering calculation that will be performed, such as figuring the sum or average of a series of cells.

“So what’s the big deal, Mark? Why not use a calculator?” Sure, you could. But maybe you want to calculate your weekly salary. Rather than grab a pencil and paper, you can simply change the contents of cell B1 to 52, and — boom! — the spreadsheet is updated to display your weekly salary.

That’s a simple example, of course, but it demonstrates the basics of using formulas (and the reason that spreadsheets are often used to predict trends and forecast budgets). It’s the what-if tool of choice for everyone who works with numeric data.

To add a simple formula within a spreadsheet, follow these steps:

- 1. Select the cell that will hold the result of your calculation.**
- 2. Type = (the equal sign).**
The Formula box appears within the confines of the cell.
- 3. Click the Format button on the Numbers toolbar to display the available functions in the Inspector, as shown in Figure 18-6.**
- 4. Click the category of calculation you want from the left column of the Inspector.**

Instead of scrolling through the entire function library, it's easier to choose a category — such as Financial for your budget spreadsheet — to filter the selection. (Alternatively, you can click the Search box and type a function name or keyword.)



TIP

To display more information about a specific function, click it in the right column of the Inspector. In Figure 18-6, choosing the SUM function brings up a description at the bottom of the Inspector.

5. After you select the perfect function in the right column, click the Insert Function button.

The function appears in the Formula box, along with any arguments it requires.

In case you're unfamiliar with the term *argument*, it refers to a value specified in a cell that a formula uses. The SUM formula, for example, adds the contents of each cell you specify to produce a total; each of those cell values is an argument.

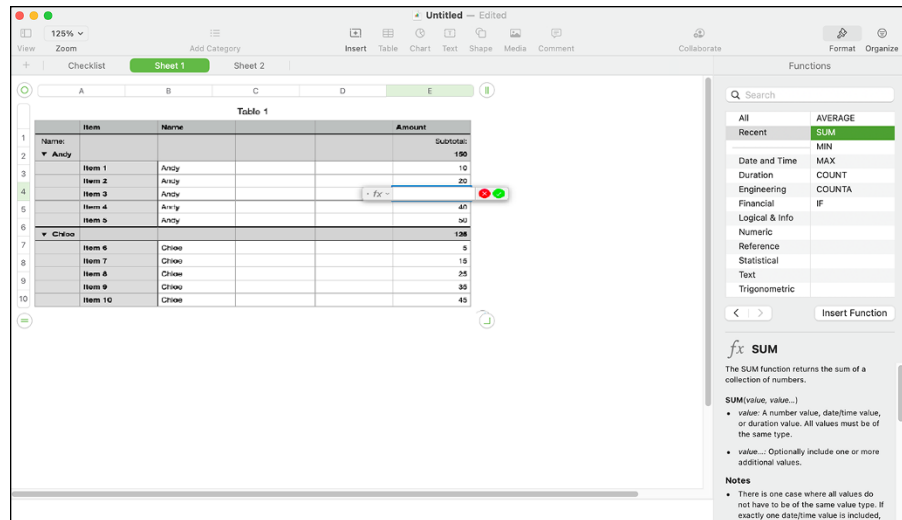
6. Click an argument button in the formula and click the cell that contains the corresponding data.

Numbers automatically adds the cell you indicated to the formula.

7. Repeat Step 6 for each argument in the formula.

8. When you finish, click the Accept button — the green check mark — to add the formula to the cell.

That's it! Your formula is ready to work behind the scenes, doing math for you so that the correct numbers appear in the cell you specified.



Adding Visual Punch with a Chart

Sometimes you just have to see something to believe it, so it can help to use the data you've added to a spreadsheet to generate a professional-looking chart. After you've entered the data you want to chart, follow these steps:



TIP

- 1. Select the adjacent cells you want to chart by dragging.**

To choose individual cells that aren't adjacent, you can hold down the ⌘ key as you click.

- 2. Click the Chart button on the Numbers toolbar.**

The Chart button bears the symbol of a bar graph.

Numbers displays the thumbnail menu shown in Figure 18-7. Note that you can display different categories of charts by clicking one of the three tabs at the top (2D/3D/Interactive), and you can scroll the menu to reveal additional thumbnails by clicking the left- and right-arrow buttons.



FIGURE 18-7: Numbers displays the range of chart styles you can use.

3. Click the thumbnail for the chart type you want.

Numbers inserts the chart as an object within your spreadsheet so that you can move the chart. You can drag by using the handles that appear on the outside of the object box to resize your chart.



TIP

With your chart selected, click the Format toolbar button to display your old friend the Inspector, complete with the controls you can use to customize your chart's appearance. You can change the colors and add (or remove) the title and legend, for example.

4. To change the default title, click the title box to select it; click it again to edit the text.

Printing Your Spreadsheet

You can easily send a Numbers spreadsheet to a USB or shared network printer. If you'd rather create an electronic copy of the document as an Adobe PDF file, you can click the PDF button that appears on the Numbers Print dialog; choose Save As PDF from the drop-down menu; and select a location where the file will be saved.

To print a Numbers spreadsheet on your default printer, follow these steps:

1. Choose File ⇨ Print from the Numbers menu bar.

Because a Numbers document can contain multiple spreadsheets, you can select a specific spreadsheet to print (by clicking it in the grid and then selecting the Print This Sheet radio button at the bottom-right corner of the window), or you can print all spreadsheets in the document (by selecting the Print All Sheets radio button in the same location).

2. Click the desired page orientation.

Spreadsheets with a large number of columns are often printed in landscape orientation to ensure that everything fits on the page. You can also scale the spreadsheet so that it automatically fits on the page by clicking the Fit button (next to the Content Scale slider).

3. Click Print at the bottom of the window.

Numbers displays the Print dialog. To display additional settings, click the Show Details button at the bottom of the sheet. (The PDF button appears in both views.)

4. Click the Copies field and enter the number of copies you need.

5. Select the pages to print:

- **To print the entire spreadsheet,** select All.
- **To print a range of selected pages,** select the From radio button and enter the starting and ending pages.



TIP

6. Click the Print button to send the document to your printer.

Click the Share menu item and choose the Send a Copy to share your spreadsheet masterpiece with others (as an actual copy of the document file). You can choose to send the copy via Mail, Messages, Notes, or AirDrop.

- » Creating, opening, and saving a presentation
- » Navigating Keynote
- » Working with slides
- » Adding notes, media, and a background shape
- » Putting together a slideshow
- » Printing slides and notes

Chapter 19

Building Presentations with Keynote

It seems like only yesterday that I was giving business presentations with a clunky overhead projector and black-and-white acetate transparencies. Fancy color gradients and animation were unheard-of, and the only sound my presentations made was the droning of the projector's fan. I might as well have been using tree bark and chalk.

Thank goodness those “cave painting” days are gone. Cutting-edge presentation software like Keynote makes slide creation easy and — believe it or not — *fun*! Keynote is the application Steve Jobs once used for his *Macworld* keynote addresses every year. So much visual candy is available that you'll never need to shout to wake your audience again. Even better, this jewel of an application is a free download from the App Store!

In this chapter, I first demonstrate how simple it is to build a stunning Keynote presentation. Then I show you how to start and control your slide display from the keyboard (or even your iPhone or iPad). And don't forget that you can print your slides and notes so that your audience can keep a copy of your brilliant work.

Creating a New Keynote Project

Like the other applications in the Apple productivity suite, Keynote begins the document-creation process with a Theme Chooser window. To create a new presentation project, follow these steps:

1. Click the Launchpad icon on the Dock.
2. Click the Keynote icon, which looks like a lectern.
3. Click the New Document button in the bottom-left corner of the Open dialog.

The Choose a Theme window, shown in Figure 19-1, appears. (I have to say that these stylish templates are probably the most stunning visual building blocks I've ever seen in a presentation application.)

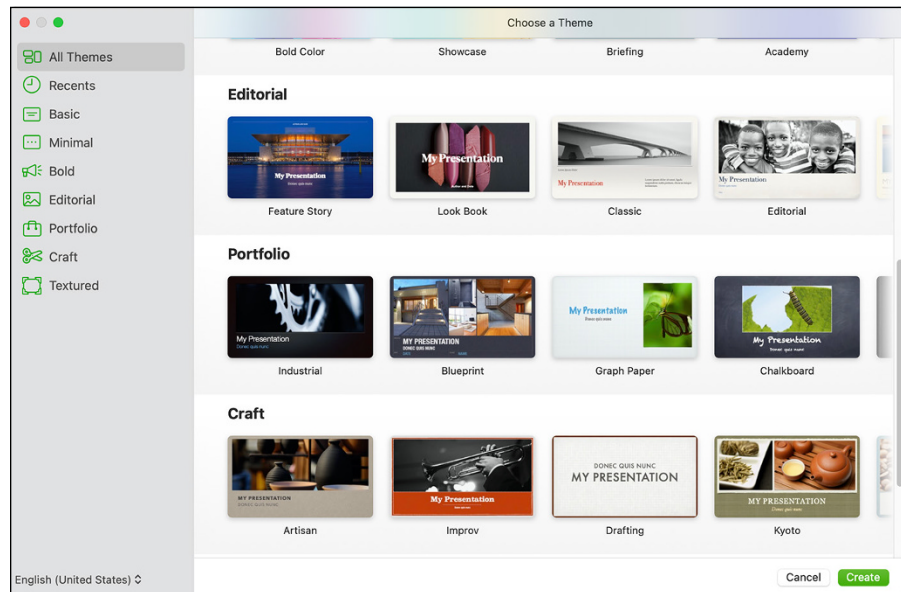


FIGURE 19-1:
Select a presentation theme from the Choose a Theme window.

4. Choose the aspect ratio, using either the Standard or Wide list box at the top of the window.

Although you don't necessarily need to select an exact match for your iMac's screen resolution, it's a good idea to select the value closest to your projector's maximum resolution. If someone else is providing the projector, Standard size is the more compatible choice. If you'll present on a typical high-resolution computer monitor, Widescreen provides a better display.



TIP

Nothing's stopping you from creating *two* documents of the same presentation: one in Standard and one in Wide. (As the Scouts say, "Be prepared!") After you've finished your project in either Standard or Wide aspect ratio, save it to disk. Without closing the project, click File ⇨ Change Theme and choose the other ratio; then click File ⇨ Save and use a different name to create the alternative version.

5. **Click the theme thumbnail that most closely matches your needs.**
6. **Click the Choose button to open a new document that uses the theme you selected.**

Opening a Keynote Presentation

If an existing Keynote presentation file is visible in a Finder window, you can double-click the document icon to open the project. If Keynote is already running, follow these steps to load a project from within the application:

1. **Press ⌘+O to display the Open dialog.**
2. **Click the desired drive in the Devices list at the left of the dialog; then click folders and subfolders until you locate the Keynote project.**

If the project is stored in your iCloud Drive, click the Keynote item below the iCloud heading in the Sidebar on the left side of the dialog; then double-click the desired project thumbnail. (By default, the Where drop-down list in the top center of the Open dialog is already set to the Keynote folder in your iCloud Drive.)

You can jump directly to any location or folder below the Favorites heading simply by clicking the entry. Oh, and don't forget that you can use the Search box at the top of the Open dialog to locate the document by name or by some of the text it contains.

3. **Double-click the filename to load it.**



TIP

If you want to open a Keynote document you've edited in the recent past, things get even easier! Just choose File ⇨ Open Recent, and you can open the document with a single click on the submenu that appears.



REMEMBER

Keynote can open, edit, and save documents created with PowerPoint. However, PowerPoint includes advanced features not found in Keynote, so not everything will import properly. If changes have to be made to a PowerPoint presentation in order to open it, Keynote will alert you.

Saving Your Presentation

Because Keynote provides full support for the macOS Auto-Save feature, saving your work often isn't as critical as it used to be. To safeguard your work in a world of power failures, though, follow these steps:

1. **Press ⌘+S.**

If you're saving a document that hasn't yet been saved, the familiar Save As sheet appears.

2. **Type a filename for your new document.**

3. **From the Where pop-up menu, choose a location in which to save the document.**

By default, Keynote saves the project directly to your iCloud Drive (iCloud appears on the Where pop-up menu), making it available to other Macs and iOS devices that use the same Apple ID. To choose a location that's not available on the Where pop-up menu, click the button with the down-arrow symbol to expand the sheet. You can also create a new folder from the expanded sheet.

4. **Click Save.**



REMEMBER

You can create a version of a Keynote presentation by choosing File ⇨ Save. To revert the current presentation to an older version, choose File ⇨ Revert To. Keynote gives you the option of reverting to the last saved version. Alternatively, you can click Browse All Versions to browse multiple versions of the presentation and revert to any saved version.

Putting Keynote to Work

Ready for the 5-cent tour of the Keynote window? Launch the application and create or load a project. You see the tourist attractions shown in Figure 19-2:

» **Slides list:** Use this thumbnail list of all the slides in your project to navigate quickly. Click a thumbnail to switch instantly to that slide.



TIP

The Slides list can also display your project in outline format, allowing you to check all your discussion points. (This list is a great way to ferret out any holes in your presentation's flow.) While you're in outline mode, you can jump directly to any slide by clicking the slide's title in the outline. To display the outline, choose View ⇨ Outline. You can switch back to the default Slides list view by choosing View ⇨ Navigator.

- » **Layout pane:** Your slide appears in its entirety in this pane. You can add elements and edit the content of the slide from the Layout pane.
- » **Toolbar:** As does the toolbar in Pages and Numbers, the Keynote toolbar makes it easy to find the most common controls you'll use while designing and editing your slides. Clicking an icon on the toolbar performs an action, just as choosing a menu item does.
- » **Presenter Notes pane:** You might decide to add notes to one or more slides for your own use or to print as additional information for your audience. Click the View icon on the toolbar, and choose Show Presenter Notes (or choose View ⇨ Show Presenter Notes) to open the Notes pane. This text box appears at the bottom of the Keynote window.
- » **Inspector:** Keynote displays this pane on the right side of the window when you click the Format button (shown in Figure 19-2), allowing you to format selected text and images on the fly.

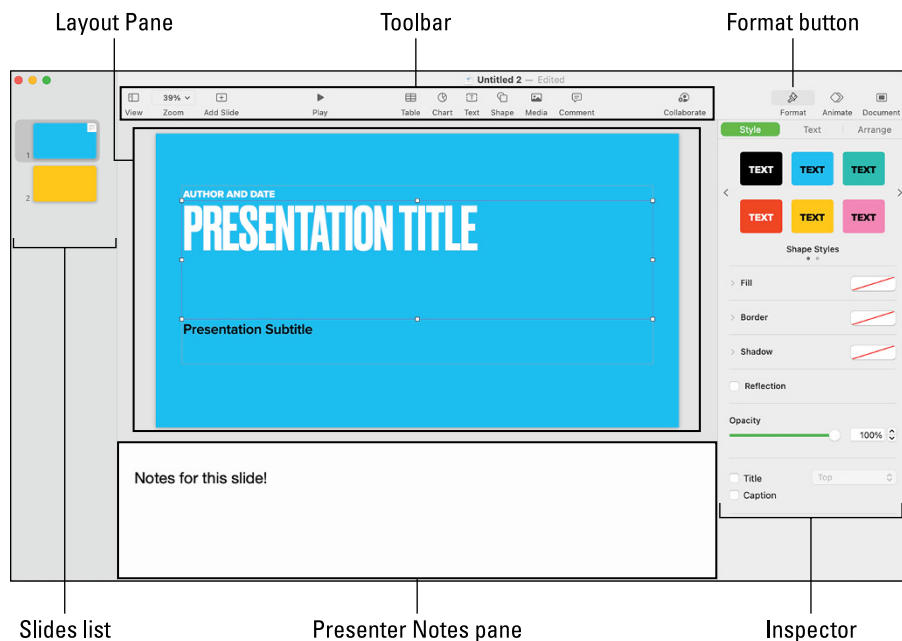


FIGURE 19-2:
The Keynote
window is
dominated by the
Layout pane.

Adding Slides

Keynote creates a single title slide when you create a project. But not many presentations are complete with just a single slide! To add more slides to your project, use one of these methods:

- » Click the Add Slide button on the toolbar.
- » Choose Slide ⇨ New Slide.
- » Press ⌘+Shift+N.
- » Right-click an existing slide in the Slides list, and choose New Slide from the shortcut menu that appears.

Keynote adds the new slide to your Slides list and automatically switches to the new slide in the Layout pane.



TIP

Need a slide that's very similar to a slide you've already designed? Right-click the existing slide and choose Duplicate from the shortcut menu to create a new slide just like it. (Consider this procedure to be cloning without the science.)

To move slides to different positions in the Slides list (that is, to change their order in your Keynote presentation), drag each slide thumbnail to the desired spot in the list.

Working with Text, Shapes, and Graphics Boxes

All the text, shapes, and graphics placeholders on your first title slide appear within boxes. Keynote uses these boxes to manipulate text, shapes, and graphics. You can resize a box (and its contents) by clicking the box and dragging one of the handles that appear around the edges of the box. (The cursor changes into a double-sided arrow when you're "in the zone.") Side selection handles drag only the edge of the frame, whereas corner selection handles resize both adjoining edges of the selection frame.



TIP

To keep the proportions of a box constrained, hold down the Shift key while dragging its corner handles.

Boxes make it easy to move text, shapes, and graphics together (as a single unit) to another location within the Layout pane. Click the center of the box and drag the box to the desired spot. Keynote displays alignment lines to help you align the box with other elements around it (or with regular divisions of the slide, such as horizontal center).



REMEMBER

To select a box, click it. To select text, shapes, or graphics within a box (see the next section, “Adding and Editing Slide Text”), double-click the box.

When you’re resizing a photo in a box, hold down the Shift key while you drag the frame. Doing so tells Keynote to preserve the image’s aspect ratio so that the vertical and horizontal proportions remain fixed. (Otherwise, it could end up looking “squished” or “stretched.”) You can also flip images horizontally or vertically from the Arrange menu. To delete an image, click it to select it and then press the Delete key.

Adding and Editing Slide Text

As with Pages, which also uses boxes for text layout, you can add or edit text in Keynote with ease. Suppose that you have a box with the placeholder text Double-click to edit. Just double-click that box, and the placeholder text disappears, leaving the field ready to accept new text. Any new text you type appears at the blinking cursor within the box.

Here are some additional ways to work with slide text:

- » **Add a new text box.** Just click the Text button in the Keynote toolbar, and click one of the sample styles that appear. Your new text box appears in the middle of the slide.
- » **Edit existing text.** Click — using the bar-shaped cursor to select just the right spot in the text — and drag the insertion cursor across the characters to highlight them. Then type the replacement text. Keynote obligingly replaces the old text with the new text.
- » **Delete text.** Click and drag across the characters to highlight them; then press Delete. You can also delete an entire box and all its contents: Right-click the offending box, and choose Delete from the shortcut menu that appears.

When a box’s contents are just right, and you’re finished entering or editing text, click anywhere outside the box to hide it from view. You can always click the text again to display the box later.

Formatting Slide Text for the Perfect Look

Keynote doesn't restrict you to the default fonts for the theme you chose. It's easy to format the text in your slides on the fly, using a different font family, font color, text alignment, and text attributes (such as boldface and italics).

Select the desired text by double-clicking a box and dragging the text cursor to highlight the characters. Then apply your formatting, using one of two methods:

- » **The Inspector:** The font controls in the Inspector work in one of two ways: After you've selected text, click a font control to display a pop-up menu, or click a button to perform an action immediately. Opening the Font Size pop-up menu, for example, displays a range of sizes for the selected text. With a single click of the B (bold) button, you add the bold attribute to the highlighted characters. To create bullets and lists, click the Text tab at the top of the Inspector.
- » **The Format menu:** When you've selected text, the controls on the Keynote Format menu generally mirror those in the Inspector. To change the alignment from the Format menu, click Format and hover the cursor over the Text submenu item to display the alignment choices. To change text attributes, click Format and hover the cursor over the Font submenu to display the different attribute settings.

Using Presenter's Notes in Your Project

As I mention earlier, you can type presenter's text notes in the Notes pane. I use them to display related topic points while presenting my slideshow. You can also print the notes for a project along with the slides, however, so presenter's notes are also great for including reminders and to-do points for your audience in handouts.

To type your notes, click within the Notes pane. If that pane is hidden, choose View ⇨ Show Presenter Notes, or click the View button at the far-left end of the Keynote toolbar and choose Show Presenter Notes from the menu that appears. When you're finished adding notes, click the Slides list or the Layout pane to return to editing mode.



TIP

To display your notes while practicing, use the Keynote Rehearsal feature. Choose Play ⇨ Rehearse Slideshow, click the Tools icon in the top-right corner of the window, and select the Presenter Notes check box to enable it. Now you can scroll through the notes while the slideshow runs! (More on slideshows in a second.)

Every Good Presentation Needs Media

Adding audio, photos, and movies to a slide is drag-and-drop easy in Keynote! Simply drag an image, audio, or movie file from a Finder window and place it at the spot where you want it within your presentation.

You can also use the Media Browser. To do so, follow these steps:

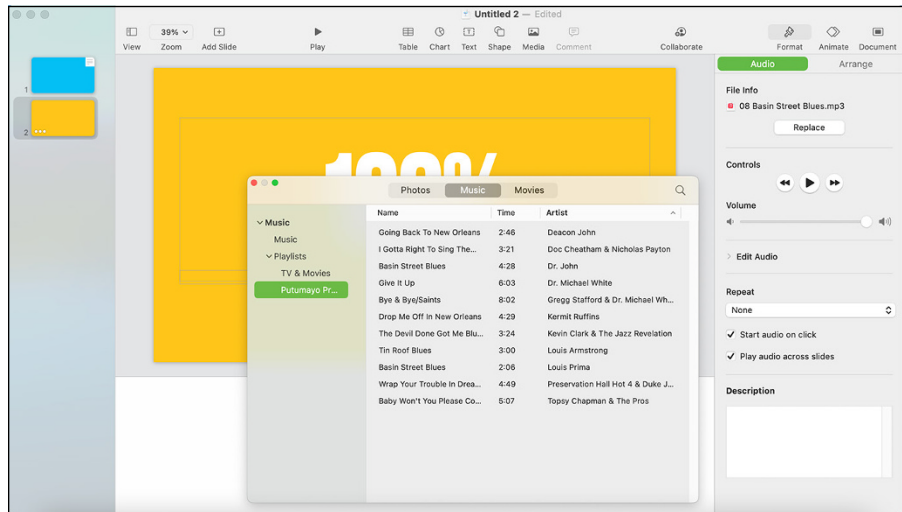
1. **Click the Media button on the toolbar and choose the desired type from the submenu that appears.**

Keynote displays the contents of your various media collections (such as your Photos, iMovie, and Music libraries).

2. **When you find the file you want to add, drag it to the spot where you want it in the Layout pane.**

Figure 19-3 shows the Media Browser in action.

FIGURE 19-3:
It's not just photos. You can add audio and movie clips to a slide, too!



TIP

Having trouble finding that specific photo or movie? Click the Search icon (which looks like a magnifying glass) in the top-right corner of the Media Browser, and you can specify a particular filename or keyword.

Adding a Background Shape

Text often stands out on a slide when it sits on top of a background shape. To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. **Click the insertion cursor in the location you want.**
2. **Click the Shape button on the Keynote toolbar and choose a shape from the menu that appears.**

The shape appears in your document.

3. **Click the center of the shape, and drag it to a new spot.**

As you can with image boxes, you can resize or move shapes. You can read how to do that in “Working with Text, Shapes, and Graphics Boxes,” earlier in this chapter.

4. **When the shape is properly positioned and sized, select it and choose Arrange ⇨ Send to Back.**

You want to “send the shape to the back” so that any text you enter is sitting in front of the shape, not hidden behind it.



TIP

You’re not limited to creating shapes and graphics within Keynote; consider using an application such as Adobe Photoshop or Illustrator to create graphics that you can import into your slides! As I mention earlier, you can easily drag and drop your new graphic into a slide from a Finder window.

Creating Your Keynote Slideshow

The heart of a Keynote presentation is the slideshow you build from the slides you’ve created. A Keynote slideshow is typically presented as a full-screen presentation, with slides appearing in linear order as they’re sorted in the Slides list.

You run a Keynote slideshow simply by clicking the Play button on the toolbar or by choosing Play ⇨ Play Slideshow. You can advance to the next slide by clicking or by pressing the right-bracket key, which looks like this:].



TIP

Are you running a presentation along with a videoconferencing app? You can choose to play a Keynote presentation in a window instead, which may be more convenient than the full-screen default. To use this feature, choose Play ⇨ Play Slideshow in Window.



You can connect an external monitor to your iMac and run a Keynote slideshow, which results in the presentation displaying full screen on the iMac itself and as a preview display on the external monitor. You even get an onscreen clock to monitor the time!

Other controls are available besides the ones that advance to the next slide. Table 19-1 lists the shortcuts you'll use most often during a slideshow.

TABLE 19-1

Keynote Slideshow Shortcut Keys

Key	Action
] (right bracket)	Move to the next slide.
[(left bracket)	Return to the preceding slide.
Home	Jump to the first slide.
End	Jump to the last slide.
C	Show or hide the pointer.
number	Jump to the corresponding slide in the Slides list.
U	Scroll the notes up.
D	Scroll the notes down.
N	Show the current slide number.
H	Hide the slideshow, and display the last application used. (The presentation appears as a minimized icon on the Dock.)
B	Pause the slideshow, and display a black screen. (Press any key to resume the slideshow.)
Esc	Quit.



Keynote offers several settings that you can tweak to fine-tune your slideshow. To display these settings, choose Keynote ⇨ Preferences and click the Slideshow button in the Preferences dialog.



If you have an iPhone or iPad handy, and you've installed the iOS version of Keynote on your device, choose Keynote ⇨ Preferences to display the Preferences dialog. Click the Remotes tab to link your device to your iMac and Keynote. Now you can use your handheld device as a remote during your slideshow. *Sweet!*



Are you creating a Keynote slideshow for a kiosk (where it should run unattended)? If so, choose Keynote ⇨ Preferences to display the Preferences dialog, and click the Slideshow tab. Deselect the Exit Presentation After Last Slide check box, and select the Require Password to Exit Slideshow check box. Now your slideshow will run continuously (a password you set is required to exit), and your audience can move backward and forward through the slides with the cursor keys.

Printing Your Slides and Notes

I'll be honest: I don't print handouts for every presentation I give. If, however, you're presenting a lengthy slideshow with plenty of information that you want your audience to remember or refer to later, nothing beats handouts that include scaled-down images of your slides (and, optionally, your presenter's notes).

You're not limited to paper. You can also use Keynote to create an electronic PDF (Portable Document Format) file instead of a printed handout, which your audience members can download from your website. Or, if you're an educator who has access to an interactive whiteboard (such as a Smart Board), you can use this cutting-edge technology with Keynote.

To print your slides and notes, follow these steps:

1. Within Keynote, choose File ⇨ Print or press ⌘+P.

Keynote displays the Print sheet, shown in Figure 19-4. (Note that some printer-specific features may be different on your screen.) If necessary, expand the Print sheet to show all the settings by clicking the Show Details button at the bottom of the sheet.

2. Choose one of the following formats (each of which displays a different set of layout options):

- **Slide:** Print each slide on a separate page at full size. You can choose to print the presenter notes for each slide as well.
- **Grid:** Print multiple slides on a page at a reduced size. From the Slides per Page pop-up menu, choose how many slides Keynote should print on each page.
- **Handout:** Print a handout with multiple slides per page (and, optionally, with presenter's notes). Again, you can choose how many slides appear on each page.
- **Outline:** Print the contents of your Slides list in Outline view.

3. **Select the pages to print:**
 - **To print the entire document,** select the All radio button.
 - **To print a range of selected slides,** select the From radio button and then enter the starting and ending pages.
4. **Select or deselect additional options in the Options section.**
5. **Click the Print button to send the job to your printer.**

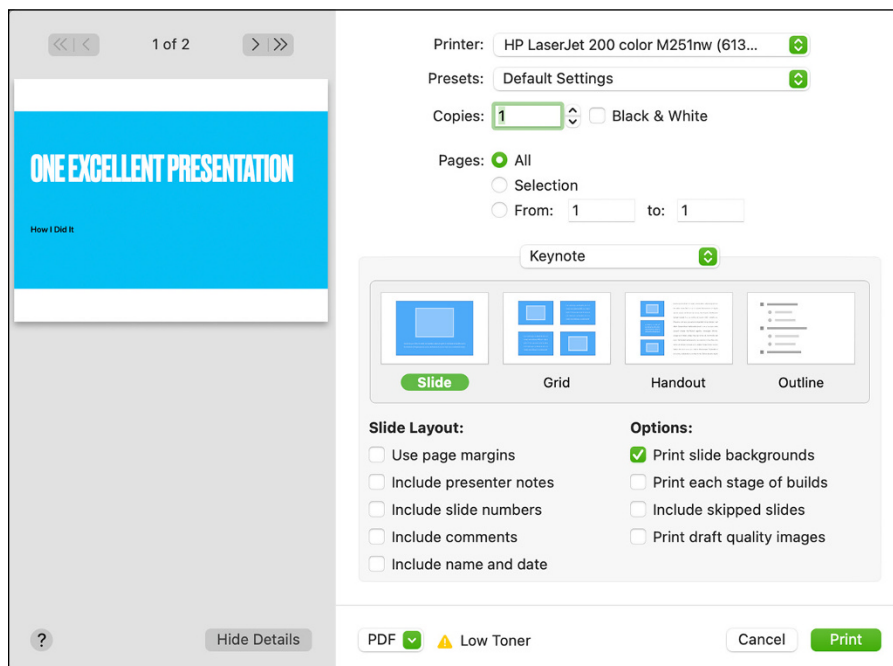


FIGURE 19-4: Keynote offers a wide range of printing options for your slides and notes.



TIP

You can also send a copy of your finished presentation as an attachment with Mail or Messages, or you can provide others a copy through Twitter or Facebook. Choose Share ⇨ Send a Copy to explore your options.

6

The Necessary Evils: Troubleshooting, Upgrading, and Maintaining

IN THIS PART . . .

Troubleshoot and fix problems with your iMac.

Expand your iMac with peripherals, external drives, and more.

Maintain your iMac properly for peak performance.

- » Avoiding the blame (righteously)
- » Putting basic troubleshooting precepts to work
- » Using Mark's Troubleshooting Tree
- » Getting help

Chapter 20

It Just . . . Sits . . . There

I wish you weren't reading this chapter.

Because you are, I can only surmise that you're having trouble with your iMac, and that it needs fixing. (The other possibility — that you just like reading about solving computer problems — is more attractive but much more problematic.)

Consider this chapter a crash course in the logical puzzle that is computer *troubleshooting*: the art of finding out What Needs Fixing. I tell you what to do when you just plain can't solve the problem yourself.

Not surprisingly, you're going to encounter a lot of Tips and Mark's Maxims in this chapter. I learned all of them the hard way, so I recommend committing them to memory.

Repeat after Me: Yes, I Am a Tech!

Anyone can troubleshoot. Believe it, and put these common troubleshooting myths to rest:

- » **It takes a college degree in computer science to troubleshoot.** Tell that to my troubleshooting college student. She'll think it's a hoot, because she has a MacBook Air and she fixes minor problems all the time. You can follow all the steps in this chapter without any special training.
- » **I'm to blame.** Ever heard of viruses? Failing hardware? Buggy software? Any of those things can cause the problem. It's Mark's Maxim time:



MARK'S
MAXIM

Don't beat yourself up! Your iMac can be fixed.

- » **I need to buy expensive utility software.** Nope. You can certainly invest in a commercial testing and repair utility if you like. My favorite is Drive Genius from Prosoft Engineering (www.prosofteng.com), but a third-party utility isn't a requirement for troubleshooting. (I do, however, consider an antivirus application a must-have; you should have one already. Hint, hint.)
- » **There's no hope if I can't fix it.** Sure, parts fail and computers crash, but your Apple Service Center can repair just about any problem. And (ahem) *if you backed up your computer* (as I preach throughout this book), you'll keep that important data (even if a new hard drive or motherboard is in your future).
- » **It takes forever.** Wait until you read the number-one rule in the next section; the first step takes but 10 seconds and often solves the problem. Naturally, not all problems can be fixed so quickly. But if you follow the procedures in this chapter, you should fix your iMac (or at least know that the problem requires outside help) in an afternoon.

With those myths banished, you can get down to business and start feeling better soon.

Step-by-Step iMac Troubleshooting

In the following sections, I walk you through my should-be-patented Troubleshooting Tree, as well as the macOS built-in troubleshooting application, Disk Utility. I also introduce you to several keystrokes that can make your iMac jump through hoops.

The number-one rule: Reboot!

The simple fact is that rebooting your iMac can often solve many problems. If you're encountering these types of strange behavior with your iMac, a reboot might be all you need:

- » Intermittent problems communicating over a network
- » A garbled screen, strange colors, or screwed-up fonts
- » The swirling Beach Ball of Doom that won't go away after several minutes
- » An application that locks up
- » An external device that seems to disappear or can't be opened



MARK'S
MAXIM

To put it succinctly, here's a modest Mark's Maxim:

Always try a reboot before beginning to worry. Always.

If you're in the middle of a program, try to save all your open documents before you reboot. That might be impossible, but try to save what you can.

As your first (and best) option for shutting down, click the Apple menu and choose Shut Down. If you need to force a *locked* application (one that's not responding) to quit so that you can reboot, follow these steps to quash that locked application:

- 1. Click the Apple () menu and choose Force Quit.**

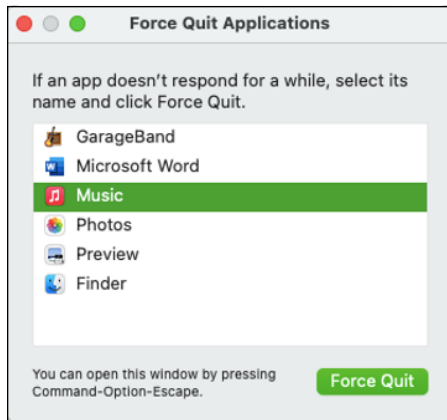
The dialog shown in Figure 20-1 appears.

- 2. Click the offending application and then click the Force Quit button.**

WHY IS REBOOTING SO DARNED EFFECTIVE?

Rebooting fixes problems because it resets *everything*. Your network connection, for example, might be acting up or might have timed out, and rebooting restores it. Hardware connections are reset when you reboot, which can “magically” bring recalcitrant external peripherals back to life. Rebooting also fixes problems due to brownouts or those notorious AC power flickerings you undoubtedly have noticed from time to time. Such interruptions in constant juice might not bother you or me (or your less-intelligent toaster), but they can play tricks on your iMac that rebooting can fix. (That's another reason I recommend — and use — an Uninterruptible Power Supply, or UPS.)

FIGURE 20-1:
Force a
recalcitrant
application to
take off.



When you get everything to quit, you should be able to click the Apple menu and choose Shut Down (not Restart) without a problem.

If your iMac simply won't shut down (or you can't get the offending application to quit), do what must be done:

- 1. Press and hold your iMac's Power button until it shuts itself off.**

You have to wait about 3 seconds for your Mac to turn itself off.



TIP

If holding the Power button down on your iMac doesn't do the trick, press the Power button and the Left Option+Left Shift+Left Control keyboard shortcut at the same time; then release them all at the same time. (This method also resets some of your iMac's internal hardware settings, which is often A Good Thing.)

- 2. Wait about 10 seconds.**

- 3. Press the Power button again to restart the computer.**

After everything is back up, check whether the problem is still apparent. If you use your iMac for an hour or two and the problem doesn't reoccur, you likely fixed it!

Special keys that can come in handy

Several keys have special powers over your iMac. I'm not kidding! These keys affect how your computer starts up, and they can really come in handy while troubleshooting.

Using Safe mode

You can use Safe mode to force macOS to run a directory check of your boot drive and disable any login items that might be interfering with your system.

If your iMac has an Intel processor, follow these steps:

- 1. Choose the Shut Down menu item from the Apple () menu to turn off your iMac.**
- 2. Press the Power button to restart the computer.**
- 3. Immediately after you hear the start-up tone, press and hold down the Shift key (and keep holding it down until you see the boot progress indicator).**

If your iMac has an Apple processor like the M1, follow these steps:

- 1. Choose the Shut Down menu item from the Apple () menu to turn off your iMac.**
- 2. Wait 10 seconds, then press and hold the Power button to display the macOS Startup Options screen.**
- 3. Click the entry for your internal drive.**
- 4. Press and hold the Shift key.**
- 5. Click Continue in Safe Mode and release the Shift key.**

After macOS boots, you're in Safe mode (the words *Safe Boot* appear at the right side of the Finder Menu bar), and you can check the operation of your iMac by using Disk Utility (or a commercial utility application). When you're ready to return to normal operation, restart your iMac again (this time, without holding down any keys).

Start-up keys

Table 20-1 provides the lowdown on start-up keys, which are available *only with Intel iMacs*. (iMacs with Apple processors use the macOS Startup Options screen instead, as described in the previous section.) Hold down the indicated key either *when you push the Power button* or *immediately after the screen goes blank during a restart*. (As I just mentioned, the Shift key shortcut to Safe mode for Intel iMacs is the exception; you should press it and hold it down after you hear the start-up tone.)

Some of the keys and combinations in Table 20-1 might never be necessary for your machine, but an Apple technician might instruct you to use them.

TABLE 20-1

Intel iMac Start-Up Keys and Their Tricks

Key	Effect on Your Intel iMac
C	Boots from the CD or DVD that's loaded in your optical drive (if you have one)
Media Eject	Ejects the CD or DVD in your optical drive (if you have one)
Option	Displays a system boot menu, allowing you to choose any bootable operating system on your iMac
Shift	Boots in Safe mode
T	Starts your iMac in Target Disk mode (using your Thunderbolt port)
⌘+V	Shows macOS Console messages
⌘+R	Boots from the macOS Recovery HD volume
⌘+S	Starts your iMac in Single User mode
⌘+Option+P+R	Resets Parameter RAM (PRAM)

All hail Disk Utility, the troubleshooter's friend

The macOS *Disk Utility* is a handy tool for troubleshooting and repairing your iMac's drive — you can use it to check the format and health of both drives and volumes (and automatically correct any problems). You can find Disk Utility in the Utilities folder in Launchpad.

DANGER, WILL ROBINSON!

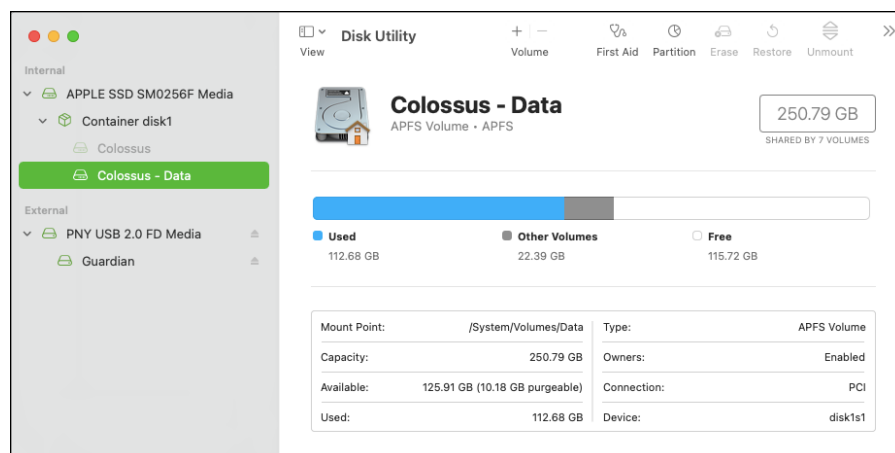
Many Disk Utility functions can actually *wipe your drives clean of data* instead of repairing them! These advanced functions are unlikely to help you with troubleshooting a problem with your existing volumes.

Remember: Don't use the following Disk Utility functions unless an Apple technician *tells* you to:

- Partitioning and erasing drives
- Setting up RAID arrays with the Raid Assistant
- Restoring files from disk images

Fire up Disk Utility to open the rather powerful-looking window shown in Figure 20-2.

FIGURE 20-2:
The physician of
drives: the
Monterey Disk
Utility.



In the left column of the Disk Utility window, you can now see:



TECHNICAL
STUFF

- » The *physical* drives in your system (the actual hardware).
- » The *containers* (the formatted portions of the drives on your system).
- » The *volumes* (the data stored on the drives).

You can always tell a volume, because it's indented below the Container entry. (If you don't see physical drives and containers as well as volumes, press ⌘+2 to show all devices.)

- » Any CD or DVD loaded on your iMac.
- » USB or Thunderbolt external drives.

Figure 20-2 shows that I have one internal drive (the Apple SSD entry) and one USB flash drive (the PNY USB 2.0 entry). The internal drive has one volume (Colossus), and the external USB flash drive has one volume (Guardian).



TECHNICAL
STUFF

The information in the bottom section of the Disk Utility window is the specifications for the selected drive or volume. This info includes capacity and available space for a volume, or connection type and total capacity for a drive.

SO EXACTLY WHAT IS A DISK PERMISSION, ANYWAY?

Because macOS is built on a Unix base, lots of permissions can apply to the files on your drive — that is, who can open (or read or change) every application, folder, and document on your drive. Unfortunately, these permissions sometimes get messed up by wayward applications or power glitches, or application installers that do a subpar job of cleaning up after themselves. And if the permissions on a file are changed, applications often lock up or refuse to run.

In Monterey, disk permissions are now automatically checked and repaired as part of the First Aid process.

Disk repair made easy

Disk Utility can check the format and health of both drives and volumes, and you can correct any problems it finds by clicking the First Aid button.



TECHNICAL
STUFF

Using Disk Utility to repair your hard drive carries a couple of caveats:

- » **You may not be able to immediately repair problems on your boot drive or boot volume.** This limitation actually makes sense, because you're actually using that drive and volume right now.

If First Aid finds a problem on your boot drive but reports that it can't fix that error, boot your iMac from the macOS Recovery HD volume using one of these methods:

- **For Intel iMacs**, reboot and then hold down the ⌘+R keyboard shortcut immediately after you hear the start-up chord.
- **For Apple Silicon iMacs**, shut down your iMac, wait 10 seconds, and then press and hold the Power button to display the macOS Startup Options screen. From there, click Options.

Then run Disk Utility from the window that appears. Because you've booted your iMac from the Recovery HD volume, you can repair those problems with your start-up drive. (You should be able to select your boot hard drive or volume and click the First Aid button.)

- » **You can't repair CDs and DVDs.** CDs and DVDs are read-only media and thus can't be repaired (at least by Disk Utility).

If your iMac is having trouble reading a CD or DVD, wipe the disc with a soft cloth to remove dust, oil, and fingerprints. Should that fail, invest in a disc-cleaning contrivance of some sort.

To check and repair problems using First Aid, follow these steps:

1. **Click the Go menu and choose Utilities; then double-click the Disk Utility icon.**
2. **In the list at the left side of the Disk Utility window, click the drive or volume you want to check.**
3. **Click the First Aid button, and click the Run button that appears.**
4. **Click Done to exit First Aid.**

If changes were made (or if you had to boot from the macOS Recovery HD volume), Disk Utility may prompt you to reboot after repairs have been made.

Figure 20-3 illustrates the details you see if you click Show Details to expand the display. Although some of the messages might include cryptic Linux details, you can still tell from the figure that the operation is successful (and you get that snazzy green check mark). All is well!

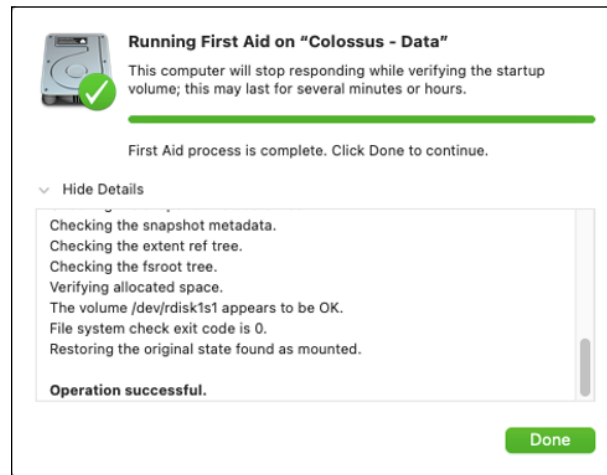


FIGURE 20-3:
First Aid reports
that this drive is
error-free.

Mark's iMac Troubleshooting Tree

As hip-hop artists say, "All right, kick it." And that's just what my iMac Troubleshooting Tree is here for. If rebooting your aluminum supercomputer didn't solve the problem, follow these steps in order until you either find the solution or run out of steps (more on that in the next section).



TIP

If you're not sure quite what's producing the error, this process is designed to be *linear* — followed in order — but if you already know that you're having a problem with one specific peripheral or one specific application, feel free to jump to the steps that concern only hardware or software.

Step 1: Investigate recent changes

The first step is a simple one that many novice iMac owners forget. Simply retrace your steps and consider what changes you made to your system recently. Here are the most common culprits:

- » **Did you just finish installing a new application?** Try uninstalling it by removing the application directory and any support files it might have added to your system. (And keep your applications current with the most recent patches and updates from the developers' websites.)
- » **Did you just apply an update or patch to an application?** Uninstall the application, and reinstall it without applying the patch. If your iMac suddenly works again, check the developer's website, or contact the application's technical support department to report the problem.
- » **Did you just update macOS?** Updating Monterey can introduce problems in your applications that depend on specific routines and system files. Contact the developer of the application, and look for updated patches that bring your software in line with the latest Monterey updates.
- » **Did you just make a change in System Preferences?** Return the options you changed to their original settings; then consult Chapter 5 for information on what might have gone wrong. (If the setting in question isn't listed in Chapter 5, consider searching the macOS Help system or the Apple support website for more clues.)
- » **Did you just connect (or reconnect) an external device?** Try unplugging the device and then rebooting to see if the problem disappears. Remember that many peripherals need software drivers to run; without those drivers installed, they don't work correctly. Check the device's manual or visit the company's website to search for software you might need.

If you didn't make any significant changes to your system before you encountered the problem, proceed to the next step.

Step 2: Run Disk Utility

The next step is to run Disk Utility and use First Aid. The earlier section "Disk repair made easy" shows how to complete this task on your Monterey boot drive.

Step 3: Check your cables

Cables can work themselves loose, and sometimes they fail. Check all the cables to your external devices — make sure that they're snug — and verify that everything's plugged in and turned on. (Oh, and don't forget to check for crimps in your cables or even Fluffy's teeth marks.)



TIP

If a Thunderbolt or USB device acts up, swap cables around to find whether you have a bad one. A faulty cable can have you pulling your hair out in no time.

Step 4: Check your Trash

Check the contents of the Trash to see whether you recently deleted files or folders by accident. Click the Trash icon on the Dock to display the contents. If you deleted something by mistake, right-click the item in the Trash and choose Put Back from the contextual menu.

I know this one from personal experience. A slight miscalculation while selecting files to delete made an application freeze every time I launched it.

Step 5: Check your Internet and network connections

Now that always-on DSL and cable modem connections to the Internet are the norm, don't forget an obvious problem: Your iMac can't reach the Internet if your ISP is down or your network is no longer working!

When you're at home, a quick visual check of your DSL or cable modem usually indicates whether a connection problem exists between your modem and your ISP. My modem has a set of informative activity lights that I always glance at first. If your iMac is connected to the Internet through a larger home or office network, however, and you can't check the modem visually, you can check your Internet connection by launching Safari and connecting to www.apple.com.

If you can't reach your network at all, the problem lies in your network hardware or configuration. (In an office environment, your network system administrator will be happy to help you at this point, especially if you're blood relatives.)

Step 6: Think virus

If you've made it to this point, it's time to run a full virus scan. Make sure that your antivirus application has the latest updated data files. My antivirus application of choice is Avast Security for Mac from Avast Software (www.avast.com). It's both excellent and free!



TIP

If a virus is detected and your antivirus application can't remove it, try *quarantining* it instead. This basically disables the virus-ridden application and prevents it from infecting other files.

Step 7: Check your login items

Monterey might encounter problems with applications you've marked as login items in System Preferences. Your account's login items are applications that run automatically every time you log in to your iMac. If one of these login items is to blame for your problems, your iMac will encounter some type of trouble every time you log in. (This is usually the case when you receive an application error message each time you start the computer.)

To check the boot process, it's time to use that fancy Safe Boot mode I discussed earlier in the chapter. Follow the instructions for starting in Safe mode. Login items are disabled when you're running in Safe mode, so if your computer starts up without any errors, you know that one or more login items are probably to blame.

If your computer starts without problems in Safe mode, the next step is to check your login items. Restart your iMac and then follow this procedure for each item in the login list:

- 1. Open System Preferences, click Users & Groups, and then click the Login Items button.**

- 2. Select the first item from the list and remove it.**

You can delete the selected item by clicking the Delete button, which bears a minus sign. (If a recurring error message mentions a specific application that appears in the Login Items list, that's your likely culprit, so start by deleting that item.)

- 3. Restart your iMac.**

- 4. If your iMac is still misbehaving, repeat Steps 2 and 3, and disable a new login item.**

When your Mac starts up normally, you have discovered the perpetrator.

- 5. Delete that application and reinstall it.**

Don't forget to add back each of the *working* login items to the Login Items list using the Add button (which carries a plus sign)!

Step 8: Turn off your screen saver

The next step is to turn off your screen saver. This remedy is a long shot, but it isn't unheard of to discover that a faulty, bug-ridden screen saver has locked up your iMac. If you are running a screen saver other than one from Apple, and your computer never wakes up from Sleep mode or hangs while displaying the screen saver, you've found your prime suspect.

Reboot your iMac (if necessary), open System Preferences, click Desktop & Screen Saver, and click the Screen Saver button. Then do one of the following:

- » Switch to an Apple screen saver.
- » Click the Start After pop-up menu and choose Never.

Step 9: Run System Information

Ouch. You've reached the final step, and you still haven't uncovered the culprit. At this point, you've narrowed the possibilities to a serious problem, such as bad hardware or corrupted files in your Monterey System folder. Fortunately, macOS includes the System Information utility, which displays real-time information on the hardware in your system. To start System Information, follow these steps:

1. Choose **About This Mac** from the Apple () menu.
2. Click the **System Report** button.
3. Click each of the **Hardware** categories in turn, double-checking to make sure everything looks okay.



REMEMBER

You don't have to understand all the technical hieroglyphics. If a Hardware category doesn't return what you expect or displays an error message, though, that's suspicious. (If your iMac doesn't have a specific type of hardware onboard — such as an optical drive — you won't see information in that category.)



TIP

The Diagnostics category shows whether your iMac passed the Power On self-test.

Okay, I Kicked It, and It Still Won't Work

Don't worry, friendly reader. Just because you've reached the end of my spiffy iMac Troubleshooting Tree doesn't mean you're out of luck. In the following sections, I discuss the online help available in macOS and on the Apple website, as well as local help in your own town.

Local service, at your service

In case you need to take in your iMac for service, an Apple Store or Apple Authorized Service Provider is probably in your area. To find the closest service, launch Safari and visit the Apple website Support page (www.apple.com/support); then click the Apple Authorized Service Providers link at the bottom of the page.

Always call your Apple Authorized Service Provider before you lug your iMac's svelte frame all the way to the shop. Make sure you know your iMac's serial number (which you can display in System Information) and which version of macOS you're using.

The macOS Help Center

Although most iMac owners tend to blow off the Help Center when the troubleshooting gets tough, that's never the best course of action. Always take a few moments to search the contents of the Help Center by choosing Finder ⇨ Help to see whether any mention is made of the problem you've encountered.

Apple Help Online

If you haven't visited the Apple iMac Support site yet, run, don't walk, to www.apple.com/support/imac. There, you find:

- » The latest patches, updates, and tutorials for the iMac line
- » iMac and macOS discussion boards, moderated by Apple
- » Tools for ordering spare parts, checking on your remaining warranty coverage, and searching the Apple knowledge base
- » Do-it-yourself instructions (PDF files) that you can follow to repair or upgrade your iMac

- » Adding memory
- » Upgrading your internal drive
- » Adding USB and Thunderbolt devices
- » Reviewing what add-ons are available

Chapter 21

I Want to Add Stuff

“**N**o iMac is an island.” Somebody famous wrote that, I’m sure.

Without getting too philosophical — or invoking the all-powerful Internet yet again — the old saying really does make sense. All computer owners usually add at least one *peripheral* (external device), such as a printer, backup drive, joystick, camera, or scanner. I talk about the ports on your iMac in Chapter 1. Those holes aren’t there to just add visual interest to the back end of your treasured iMac. Therefore, I cover your USB and Thunderbolt ports (and what you can plug in to them) in detail in this chapter.

Ah, but what about the stuff *inside* your supercomputer? That’s where things get both interesting and scary at the same time. In this chapter, I also describe what you can add to the innards of *some* iMac models as well as how to get inside there if you work up the courage to go exploring. (Don’t tell your family or your friends, but adding memory to a late-model 27” iMac is as simple as pressing a button and pulling a couple of plastic levers. There’s actually nothing to fear whatsoever.)

Here’s the trick: Just make it sound like an adventure from *Mission: Impossible*, and folks will crown you their new resident techno-wizard!

More Memory Will Help

Hey, wait a second. No *however* stuck on the end? You mean that, for once, there isn't an exception? Aren't all computers different? Hard as it is to believe, just keep in mind this Mark's Maxim:



MARK'S
MAXIM

More memory helps. Always.

Period. End of statement. No matter what type of computer you own, how old it is, or what operating system you use, adding more memory to your system (to the maximum it supports, of course) significantly improves the performance of your operating system (and practically every application that you run).



TECHNICAL
STUFF

Memory maximizes the power of your computer: The more memory you have, the less data your iMac has to temporarily store on its slower internal drive. Without getting into virtual memory and other techno-gunk, just consider that extra memory as extra elbow room for your applications and your documents. Believe me, both macOS and Windows efficiently make use of every kilobyte of memory that you can provide.

If your iMac is already stuffed with the maximum amount of memory it can hold, you can skip this section. However, if you're using macOS Monterey on an older iMac with upgradeable memory — or a current 27" Intel iMac — read on!

Figuring out how much memory you have

To see how much memory you have on your computer, click the Apple menu () and choose About This Mac.



TIP

The 8GB of standard memory supplied by Apple on any current iMac is enough for running any of the Apple applications bundled with Monterey. If your primary applications include video editing, playing the latest crop of immersive 3D games, or image editing, though, you can use all the memory your iMac can hold.

Ah, but there's a caveat. (Go figure.) At this writing, only the 27" iMac from the current lineup has memory sockets that you — a Regular Human Being — can access. The 27" models provide slots for four 2666MHz DDR4 SO-DIMM memory modules at up to 32GB each. (Don't fret over what those abbreviations mean. Rest assured that this memory type is fast.)

Unfortunately, the memory in the late-model 21.5" Intel iMac and the 24" M1 iMac can't be replaced or upgraded by anyone except an authorized Apple Service Center technician. So if you're using a 21.5" or 24" iMac, upgrading your memory

by yourself is impossible. For this reason, if you're ready to order a new 21.5" or 24" iMac from Apple, I *strongly* recommend that you opt for as much additional memory as you can afford while configuring your dream machine, since you can't upgrade it yourself later.

In the past, Apple's prices for RAM were . . . well . . . *outrageous* (as in, "Boy, howdy, I can't afford that!"). Recently, however, Apple's memory prices have become far more competitive, so I now recommend that you add memory while configuring and ordering either model of iMac.

How you plan memory upgrades depends on how much memory you want. If your 27" iMac uses the two default 4GB modules (8GB total) supplied by Apple, you can add RAM by inserting memory modules in the empty slots. At this writing, a 4GB memory module should set you back about \$35 or so.

If your iMac already has all four memory slots filled and you'd still like to add more system RAM, it's time to remove one or all of the existing modules and replace them with full 8GB, 16GB, or 32GB modules. (Current prices for an 8GB module hover around \$80.) With all four slots filled with 8GB modules (bringing you to 32GB), 16GB modules (delivering 64GB) or 32GB modules (arriving at that coveted 128GB total), you'll have a 27" iMac that marks you as one of the "In People." (Oh, and it will *fly*. Trust me.)

If you've already bought your 27" iMac and you'd like to shop around for the best memory prices, I can heartily recommend any one of these online sources that cater to Mac owners:

- » MacMall (www.macmall.com)
- » CDW (www.cdw.com/content/brands/apple/default.aspx)
- » Crucial (www.crucial.com)
- » Small Dog Electronics (www.smalldog.com)
- » Newegg (www.newegg.com)

Installing memory modules

I'm happy to report that adding extra memory to a 27" iMac is one of the easiest internal upgrades that you can perform. Therefore, I recommend that you add memory yourself unless you simply don't want to mess with your iMac's internal organs. Of course, your local Macintosh service specialist will be happy to install new RAM modules for you (for a price).

As you've concluded by this point in this book, Apple has designed the world's best all-in-one computer. That even includes making it EZ-Open. (Forgive me if your treasured work of art now reminds you of a longneck beer bottle. Come to think of it, the level of technical knowledge required to gain access to either one is about the same.)

Unlike earlier "picture frame" iMac models, however, you can't remove the back completely. In fact, Apple allows the owner of a 27" iMac to perform only one kind of upgrade, and there's only one opening you need to worry about. Naturally, an Apple repair technician can get deeper into the machine, but I hope that you never need aid from those folks.



WARNING

You'll void your warranty by tinkering with anything other than your memory slots, so don't even *think* about it. (Even if your warranty has expired, I'd still keep my distance.)

To add memory modules to a late-model 27" iMac, follow these steps:

- 1. Get ready to operate:**
 - (a) Spread a clean towel on a stable work surface, like your kitchen table.**

The towel helps protect your screen from scratches.
 - (b) Shut down your iMac.**
 - (c) Unplug all cables from the computer.**
- 2. Tilt the computer over and lay the screen flat (face-down) on top of the towel.**
- 3. Press the button directly above the power-cord socket.**

The memory access door pops open.
- 4. Remove the memory access door.**
- 5. Stow the memory access door safely out of reach of kids and cats.**

Tah-dah! That wasn't much of a challenge, was it? Take a moment to gaze with rapt fascination at a small portion of the bare innards of your favorite computer.
- 6. Ground thyself!**

Check out the "Let's get grounded!" sidebar.
- 7. Gently pull outward on the two plastic securing levers and then pull them toward the bottom of the access door (as shown in Figure 21-1).**



TIP

- 8. Remove a module by gripping it by the corners and gently pulling it straight upward.**

Save the old module in the static-free packaging that held the new module. Your old RAM (which you can now sell on eBay) will be protected from static electricity.

- 9. Position the new module in the socket:**

- (a) Line up the module's copper connectors toward the socket.**
- (b) Line up the notch in the module aligned with the matching spacer in the socket.** See what I mean in Figure 21-2, which shows the correct orientation for a late-2013 27" iMac.

- 10. Press gently (but firmly) on both ends of the module until the module clicks into place.**

- 11. Repeat Steps 8–10 for each module you're replacing.**

- 12. Push the two securing levers back into their original positions.**

You should hear a click when they're seated.

- 13. Replace the memory access door.**

- 14. Return your iMac to its natural upright stance, and plug any cables you removed back into the back of the computer.**

Waxing nostalgic: This is rather like changing the oil on my Dad's 1970 Ford pickup truck.

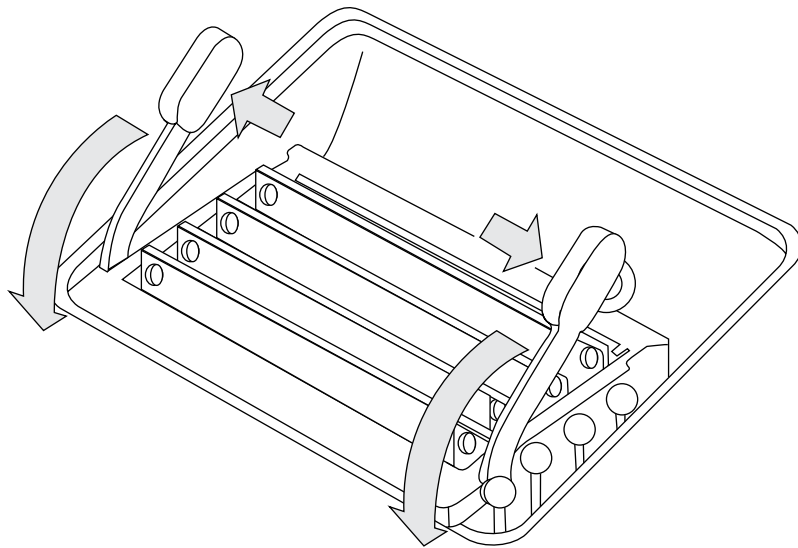


FIGURE 21-1:
Remove a
memory module
like a pro.

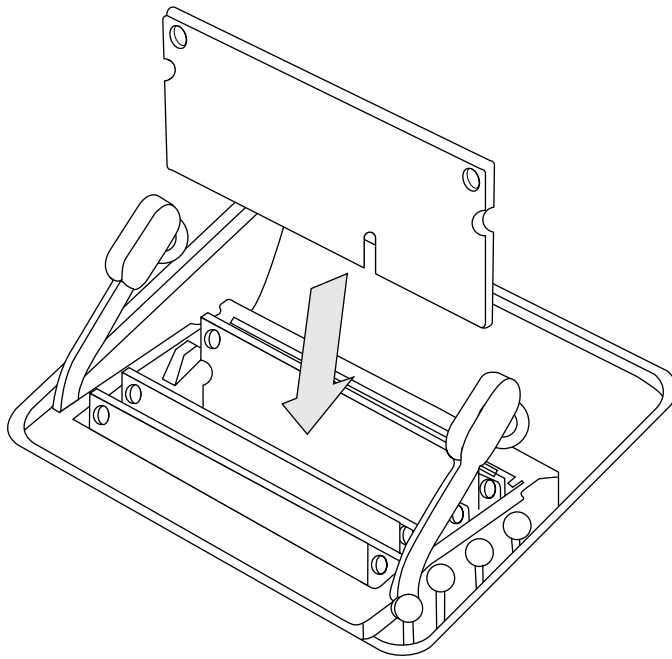


FIGURE 21-2:
Installing the new
module is a snap
(pun intended)!

LET'S GET GROUNDED!

Follow one cardinal rule when the unguarded insides of any computer are in easy reach: *Always ground yourself before you touch anything!* Your body can carry enough static electricity to damage the RAM you're installing or removing, and touching those modules without grounding yourself is an invitation for disaster.

Grounding yourself is easy to do: Just touch any metal surface around your work table, such as a chair leg or your local metal sink. After you ground yourself, you can then safely handle RAM modules that you remove (if any) as well as the new ones that you're installing. (If you often swap RAM modules on different computers, you can also invest in a device called a grounding strap that ensures you're always grounded.)

If you walk anywhere in the room — say, taking a sip of liquid reinforcement that you stashed a comfortable and safe distance away — you *must* ground yourself again before you get back to work. **Remember:** You can actually pick up a static charge by simply walking. Go figure.

Congratulations! You’ve done it — and you’re now an iMac memory guru! To verify that all is well with your iMac, boot the computer, click the Apple menu, and choose About This Mac. Your iMac should report the additional memory. If your iMac doesn’t boot, check to make sure that the modules you installed are properly seated in the sockets.

Can I Upgrade My Internal Drive?

Asking whether you can upgrade your iMac’s internal drive is a trick question. Yes, you certainly *can* upgrade your drive. But before you start cruisin’ the Internet for a 4TB monster, I have two suggestions:

» **Be sure you really *need* an internal drive upgrade.**

Apple is pretty generous when configuring drive storage for its base systems. (Current models run with anywhere from a 256GB to a whopping 8TB drive — yep, that’s 8 *terabytes*, or 8,000GB! Something tells me that your prized walnut brownie recipe will have plenty of elbow room on a 8TB drive, as will as a huge amount of digital video.) Naturally, if you’re purchasing a new iMac and you want to avoid a bad case of “storage pinch” in the future, I definitely recommend that you opt for as much storage as you can afford.

I’ll be honest here: Most folks simply don’t need more than 1 or 2TB of internal drive space. You’re likely to find that you still have plenty of wide-open spaces for a typical family’s needs on your internal drive unless you’re heavily into:

- Digital video (DV) or a large collection of movies
- Cutting-edge video games
- Tons of high-quality digital audio
- Four generations of high-resolution digital photos of your family (hey, it’s possible!)

» **If you decide that you do need to upgrade, don’t install your internal drive yourself.**

Read more about dealing with the installation of an internal hard drive in the upcoming section “Gotta have internal.”



TIP

If you’re short on drive space, first clean up your existing internal drive by deleting all the crud you don’t need, such as game and application demos, duplicate or “work” copies of images and documents, archived files you downloaded from the Internet, and the contents of your Trash. You can read how in Chapter 22.

Consider your external options

If you *do* need additional drive space, I recommend using an external drive. Use a high-speed Thunderbolt 3 or USB 3.0 port to connect a second drive the quick and easy way. You simply plug a device into one of these ports, and it works. And you can move your external drive between different Macs with a minimum of fuss and bother.

An external drive can do virtually anything that your internal drive can do. You can boot from it, for example, or install (and boot from) a different version of macOS (great for beta testers like me).



Here's one problem with external drives, though. Even Thunderbolt 3 connections transfer data more slowly this way than via an internal drive. That's why most Mac owners (especially graphics and video professionals) use their external drives for storing backups, digital media, and little-used documents and applications. Their favorite applications, works in-progress, and often-used documents are housed on the internal drive.

Putting a port to work

Current iMac models carry two kinds of high-speed ports, either of which is a good match for connecting any external device.

USB 3.0

The USB standard is popular because it's just as common in the PC world as in the Mac world. (Most PCs don't have a Thunderbolt port.) Your iMac carries its USB 3.0 ports on the back of the case, which are fully compatible with older USB 2.0 devices. Hardware manufacturers make one USB device that works on both Macs and PCs.



If you're using an older iMac with USB 2.0 ports, there's no need to spend extra money on USB 3.0 devices, because you won't get the performance boost. 'Nuff said.

THUNDERBOLT 2 AND 3

Talk about raw speed. An older iMac's second-generation Thunderbolt 2 connection provides a respectable 20Gbps, which is twice as fast as USB 3.0 — and the latest iMac models sport the Thunderbolt 3 port, which doubles that transfer speed to an unbelievable 40Gbps maximum! You can use a Thunderbolt port to connect an external drive or even a high-resolution monitor or HD-TV. Luckily, the price for Thunderbolt external drives has dropped significantly since the port first appeared on the Mac, so you no longer have to pay a premium price for Thunderbolt devices.

Connecting an external drive

With Thunderbolt or USB, you can install an external drive without opening your iMac's case. With your iMac turned on and the external drive disconnected from the AC outlet, follow these steps:

1. **Connect the Thunderbolt or USB cable betwixt the drive and your computer.**
2. **If the drive requires an AC adapter, plug the external drive into a convenient surge protector or UPS (uninterruptible power supply).**
3. **Switch on the external drive.**
4. **If the drive is unformatted (or formatted for use under Windows), partition and format the external drive.**

The drive comes with instructions or software to help you do this. (Don't worry, external drives typically come from the factory completely empty, and you won't damage anything by formatting it. To be sure, check the drive's manual.) *Partitioning* divides the new drive into one (or more) volumes, each of which is displayed as a separate drive under macOS.



TIP

If the drive comes preformatted for use with a Windows PC, I *strongly* suggest reformatting it for use with macOS. Doing so results in much faster performance and more efficient use of space.

After the drive is formatted and partitioned, it immediately appears on the Desktop. *Shazam!*

Gotta have internal

If you decide that you absolutely have to upgrade your existing internal drive — or if your internal drive fails and needs to be replaced — you *must take your iMac to an authorized Apple Service Center* and allow the techs there to sell you a drive and make the swap. Here are four darned good reasons why:

- » **Warranty:** As I mention earlier, you'll void your iMac's warranty by attempting a drive upgrade yourself.
- » **Selection:** If you're worried about picking the proper drive, an Apple technician can order the right drive type and size for you . . . no worries.
- » **Difficulty:** Swapping a hard drive in your iMac is nothing like adding RAM modules. It's quite complex and involves breaking into your iMac — not A Good Thing, even for the knowledgeable Mac guru.
- » **Backup:** That very same Apple service technician can back up all the data on your existing drive and move it to the new drive, saving you from losing a single document. That will save you time and possible angst.



WARNING

To those who *truly* won't be satisfied with their lives until they upgrade an internal drive in an iMac all by themselves: Yes, I'm sure you can find a magazine article that purports to show you how. Even better, I've seen many how-to videos on YouTube that will lead you down a rosy path to an internal drive upgrade. Here's my take on those seemingly savvy instructions: You're walking into a field of land mines with someone else's map, so you had better have *complete* faith in your tech skills. (And a darn good backup.)

Weighing Attractive Add-Ons

The external toys I cover in this section might add a cord or two to your collection at the back of your iMac, but they're well worth the investment. And they can really revolutionize how you look at technologies such as television, digital audio, and computer gaming.

Game controllers

If you're ready to take a shot at the enemy — whether they be Nazi soldiers, chit-tering aliens, or the latest jet fighters — you'll likely find your keyboard and mouse somewhat lacking. (And if that enemy happens to be a friend of yours playing across the Internet, you'll be ruthlessly mocked while you're fumbling for the right key combination.) Instead, either pick up a USB joystick (for flying games) or a gamepad (for arcade and first-person shooting games)!

External drive arrays

In case you're not familiar with a drive array (typically called a *RAID array*), it's just a fancy moniker for an enclosure that holds multiple drives. "Grouping" hard drives like this provides a boost in speed, or you can use an array to make a self-maintaining redundant backup of all your data. Your Thunderbolt port is perfect for this high-tech magic. You can also pick up a wired or wireless network storage unit (commonly called a NAS, short for *network-attached storage*), which is essentially drive storage that's connected and available to your entire Ethernet network.

Video controllers

For armchair directors, specialized USB digital video controllers make editing easier. The ShuttlePRO V2 from Contour Design (www.contourdesign.com) provides a 15-button jog control that can be configured to match any DV editor. For around \$100, you'll have the same type of editing controller as do those dedicated video-editing stations that cost several thousand dollars.

Audio hardware and MIDI controllers

Ready to put GarageBand to the test with your favorite version of “Chopsticks”? You need a USB piano keyboard, and I recommend the Keystation 88 MK3 from M-Audio (www.m-audio.com), which retails online for around \$250. It provides 88 keys and uses a USB connection.

- » Cleaning unnecessary stuff off your internal drive
- » Backing up your data
- » Fixing permissions errors
- » Automating tasks in Monterey
- » Updating macOS automatically

Chapter 22

Tackling the Housekeeping

Nothing runs better than a well-oiled machine, and your iMac is no exception. (But please, don't *ever* oil your iMac; that's just a figure of speech.) In this chapter, I demonstrate how you can make good use of every byte of storage space provided by your internal drive.

With a little macOS maintenance, such as Time Machine (for backing up and restoring your data) and frequent scans of your internal drive for disk errors, you can ensure that your iMac is performing as efficiently as possible. Automator allows your iMac to perform tasks automatically that used to require your attention. In addition, configuring Software Update to run automatically can allow you to live life free and easy, watching your favorite reality TV and eating ice cream (or yogurt — your pick).

Cleaning Unseemly Data Deposits

Criminy! Where does all this stuff *come* from? Suddenly, that spacious 1TB solid-state drive has 19GB left, and you start feeling pinched.

Before you consider buying a new internal or external drive (which you can read about in Chapter 21), take the smart step: Sweep your internal drive clean of unnecessary and space-hogging software.

Managing your storage in macOS (or cleaning things the elegant way)

Apple includes the Manage Storage feature within macOS to help identify and display (and optionally delete) those huge files that are taking up so much of your drive's real estate. Right-click the Desktop icon for the hard drive you want to clean, and choose Manage Storage. After a pause (which may be considerable, depending on the capacity of the drive), you'll see the window shown in Figure 22-1.

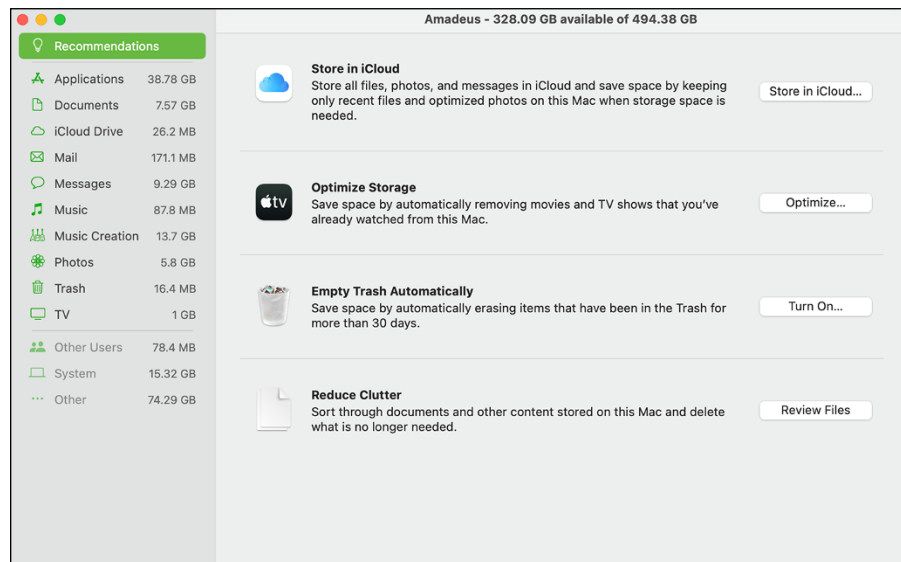


FIGURE 22-1:
Manage your
storage to reclaim
drive space.

Note the categories in the list at the left side — from here, you can see the approximate amount of space taken up by notoriously spacious items like your documents and your Music media. Click a category to display the worst offenders, sorted by size. If you see an item that you no longer need (like that 2GB happy cat video you downloaded 2 years ago), move your cursor over that item and click the X button that appears to delete it. If only cleaning your house were this easy!



TIP

The Recommendations category is unique because it offers space-saving features that macOS offers rather than displaying files. For example, if you've invested in additional iCloud storage, you can choose to “offload” files, photos, and messages to iCloud rather than store them locally. (Naturally, you must be connected to the Internet to retrieve them.) You can also choose to empty your Trash automatically from here.

Getting dirty (or cleaning things the manual way)

If you're willing to dig into your data a little, you can eschew the Manage Storage feature and dive elbow-deep into your drive to hunt down every unnecessary file. All you really need is the willpower to announce, “I simply don't need this particular item any longer.” (Sometimes, that's tougher than it may seem.)

Unnecessary files and unneeded folders

Consider all the stuff that you probably don't really need:

- » Game demos and shareware that you no longer play (or even remember)
- » Movie trailers and other QuickTime video files that have long since passed into obscurity
- » Temporary files that you created and promptly forgot
- » Log files that chronicle application installations and errors
- » GarageBand loops and iMovie video clips you'll never use
- » Zip archive files that you downloaded and no longer covet
- » Music, video, and movies that no longer appeal

How hard is it to clean this stuff off your drive? Easier than you might think!

- » You can quickly delete files.
- » You can remove items from your Music and TV media library (especially movies, which take up several gigabytes of space *each*). If you've purchased an item from the iTunes Store, don't forget that you can download that item again in the future for free — perhaps when you've added an external drive to hold some of your stuff. You can also choose to stream your music and movies directly from the Music and TV apps, which takes up no space on your drive at all — just a fast broadband Internet connection.

- » You can move seldom-used files and folders to external storage (such as a USB flash drive or a DVD).
- » You can uninstall applications purchased from the App Store using Launchpad. From the Launchpad display, click and hold down the icon until it wiggles. If an X button appears on the icon, you can click the X to remove the application from your iMac. Again, these applications can be reinstalled at any time.
- » You can get rid of most of the space taken by any application (often the whole application) by deleting its application folder that was created during the installation process.



WARNING

Always check the application's README file and documentation for any special instructions before you manually delete any application's folder! If you created any documents in that folder that you want to keep, don't forget to move them before you trash the folder and its contents. In fact, some applications may come with their own uninstall utility, so checking the README file and documentation may save you unnecessary steps.

Removing an application or file from your drive usually takes two simple steps:

1. **Display the file or application folder in a Finder window.**
2. **Delete the file or folder with one of these steps:**
 - Drag the icon to the Trash.
 - Select the icon and press ⌘+Delete.
 - Right-click the icon and choose Move to Trash from the contextual menu.
 - Select the icon and click the Delete button on the Finder toolbar (if you added one).

Truly, no big whoop.



TECHNICAL
STUFF

Unlike programs in the Windows world, most macOS applications don't need a separate, silly uninstall program (although some larger Mac applications include one for convenience).



REMEMBER

Don't forget to actually *empty* the Trash, or you'll wonder why you aren't regaining any drive space. (macOS works hard to store the contents of the Trash until you manually delete it, just in case you want to undelete something.) To get rid of that stuff permanently and reclaim the space, do the following:

1. **Click the Trash icon on the Dock and hold down the button — or right-click — until the pop-up menu appears.**
2. **Choose Empty Trash.**

As I mention earlier in the chapter, if you use the Manage Storage feature you can elect to set your Trash to empty automatically.

Associated files in other folders

Some applications install files in different locations across your internal drive. (Applications in this category include the Microsoft Office suite and Adobe Creative Cloud applications like Adobe Photoshop.) How can you clear out these orphan files after you delete the application folder?

The process is a little more involved than deleting a single folder, but it's still no big whoop. Here's the procedure:

1. **Click the Search text box in a Finder window.**
You can read more about Search and Finder windows in Chapter 7.
2. **Type the name of the application in the Search text box and choose Name Matches from the pop-up menu.**

Figure 22-2 shows a typical search. I wanted to remove orphan files associated with Adobe After Effects; I had already deleted the application itself. By searching for the word *Adobe*, I found a folder of After Effects startup scripts that are now no longer needed and could also be deleted. This trick displays files created in other folders that include your search word in their names, such as project files, PDF files, and the font files that appear in the system Fonts folder.

3. **Decide which of these files belong to the to-be-deleted application.**



WARNING

Be sure that the files you choose to delete are part of the deleted application. If necessary, right-click the file and choose Get Info from the shortcut menu to display more information. In Figure 22-2, the Adobe Bridge folder is included in the search results, but it's definitely not part of After Effects!

Many associated files either have the same icon as the parent application or are in the Preferences, Caches, or Application Support folder.

4. In the Search Results window, click the associated file(s) that you want to delete and just drag them to the Trash.



WARNING

Don't empty the Trash immediately after you delete these files. Wait a few hours or a day. That way, if you realize that you deleted a file that you truly need, you can easily restore it from the Trash.

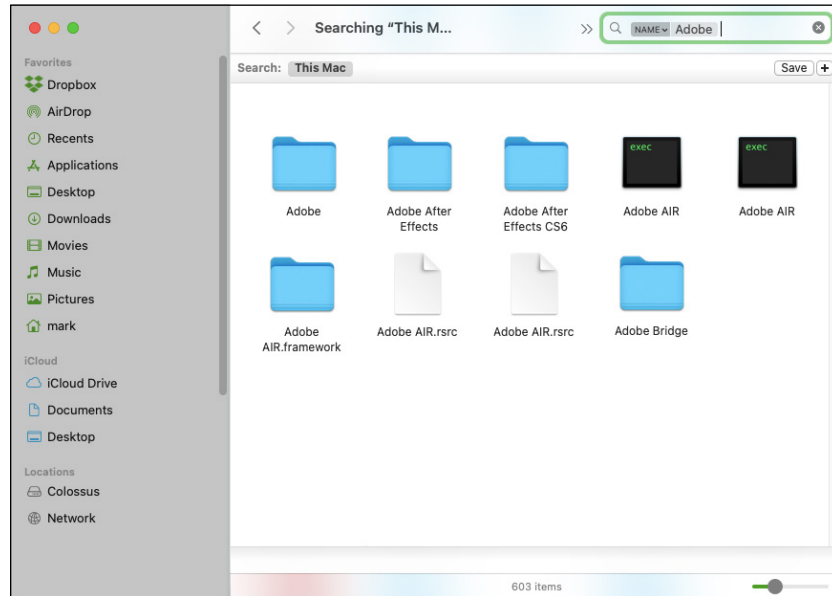
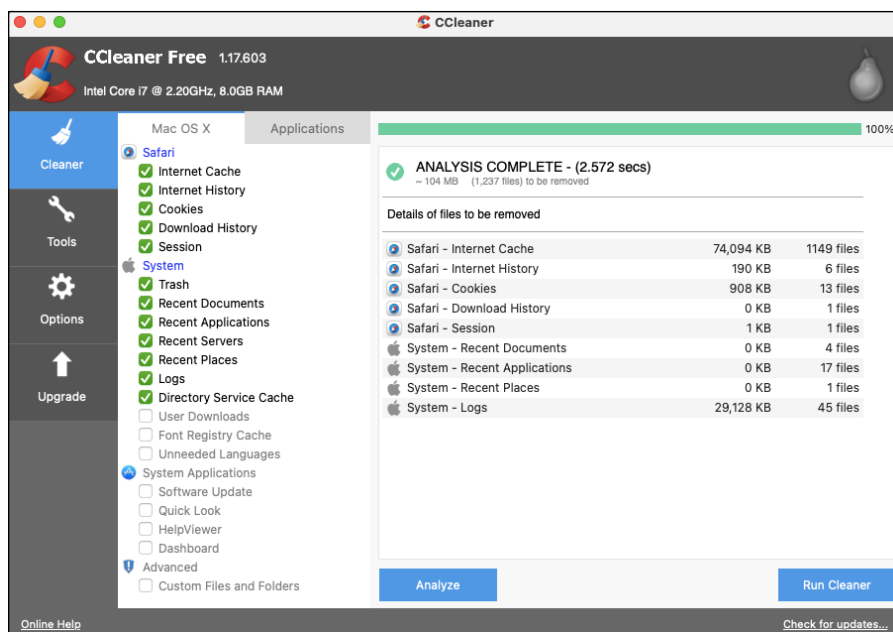


FIGURE 22-2:
Mine your internal drive for additional files to delete.

Using a commercial cleanup tool

If you'd rather use a commercial application to help you clean up your drive, several applications are available, but most are shareware applications that perform only one task. For a good all-around cleanup utility, I recommend CCleaner for Mac, from Piriform (<https://www.ccleaner.com/ccleaner-mac>), as shown in Figure 22-3. This great utility can clean everything from Internet crud (browser cookies and your surfing history) to those macOS system caches that can grow so doggone huge. And you can easily fine-tune whatever CCleaner for Mac wants to remove. The utility can also uninstall many applications with a single click. Oh, and did I mention that it's free? I *really* like free!

FIGURE 22-3:
Piriform's
CCleaner for Mac
is a great tool for
cleaning your
iMac's drive.



Backing Up Your Treasure

Do it.

I'm not going to lecture you about backing up your internal drive . . . well, perhaps just for a moment. Imagine what it feels like to lose *everything*: names, numbers, letters, reports, presentations, saved games, photographs, video, and music. Then ask yourself, "Self, isn't all that irreplaceable stuff worth safeguarding?"

Time for a Mark's Maxim:



**MARK'S
MAXIM**

Back up. On a regular basis.

Take my word for it; you *will* thank me some day!

You can back up your files either by saving them to external media or — as I strongly recommend — by using the awesome Time Machine feature included with Monterey. Read more about Time Machine in the "Putting Things Right with Time Machine" section, later in this chapter.

Saving Files

The simplest method of backing up files is simply to copy the files and folders to an external drive, USB flash drive, or a DVD. Nothing fancy — in fact, I call this procedure the “quick-and-dirty backup” — but it *works*.

Backing up to an external drive

If you have an external drive or USB flash drive on your iMac, you can easily drag backup files to it from your internal drive (I cover external drives in Chapter 21):

- 1. Open separate Finder windows for:**

- The external drive
- The internal drive

Because you’re using macOS, you can also open a Finder tab within a single Finder window to accomplish the same task — from the keyboard, press ⌘+T.

- 2. Select the desired files that you want to back up from your internal drive.**

- 3. Drag the selected files to the external drive window.**



TIP

“Mark, can I back up individual files to cloud-based storage like iCloud Drive, Dropbox, Google Drive, and OneDrive?” Of course! These services are fine for your most important files (much like backing up a handful of critical files to DVD or flash drive), but these cloud drives aren’t suitable for backing up the entire contents of your iMac’s internal drive. (You should always use Time Machine with an external drive for that important chore.) Also, don’t forget that you need an Internet connection to save or retrieve files from cloud storage – with Time Machine, no Internet connection is necessary. (If you’d like to store just the most important stuff in the cloud, I would suggest the contents of your Desktop and Documents folders.)

Backing up to DVD

You can burn backups of your most important files to a recordable DVD, if you have an external optical drive. Saving your data is more labor-intensive this way — especially compared to backing up to cloud-based storage — but the end result is a truly bulletproof backup that doesn’t rely on an Internet connection or external drive. Plus, the backup can be read in any DVD drive for decades to come.

Burning backups from the Finder

To use the Finder's Burn feature to create a backup DVD, follow these steps:

- 1. Load a blank disc into your iMac's optical drive.**

If you're using the default settings in the CDs & DVDs pane in System Preferences, a dialog appears, asking you to choose an action.

- 2. From the Action pop-up menu, choose Open Finder and then click OK.**

An icon named Untitled DVD appears on your Desktop. Double-click the icon to open a Finder window.

- 3. Drag the files and folders that you want to back up into the disc's Finder window.**

They can be organized any way you like. Don't forget that the total amount of data shouldn't exceed 4GB or so (on a standard recordable DVD) or 8GB (on a dual-layer recordable DVD). You can see how much free space remains on the disc at the bottom of the disc's Finder window.

- 4. When you're ready to record, click File and then choose Burn Disc from the Finder menu.**

You can also click the Action button that appears at the top of the disc's Finder window and choose Burn Disc from the pop-up menu.

- 5. Choose the fastest recording speed possible.**

- 6. Click Burn.**

Burning backups from other recording applications

If you've invested in Toast 19 Titanium from Roxio (www.roxio.com) or another DVD recording application, you can create a new disc layout to burn your backup disc. (Think of a *layout* as a road map indicating which files and folders Toast should store on the backup.)



TIP

If you do decide to back up to DVD or to an external backup drive without using Time Machine, it's a good idea to store that backup media somewhere safe, away from calamities. On the other hand, if you back up with Time Machine — as I'm about to demonstrate — you should instead leave your external drive plugged in to your iMac.

Putting Things Right with Time Machine

If you enable backups via the macOS Time Machine feature, you can literally move backward through the contents of your iMac's internal drive, selecting and restoring all sorts of data (including the entire drive). Files and folders are ridiculously easy to restore — and I mean easier than *any* restore you've ever performed, no matter what the operating system or backup program. Time Machine can even handle some deleted items, like Contacts cards! To sum it up, Time Machine should be an important and integral part of every Mac owner's existence.



TIP

If you don't mind investing in legacy hardware on eBay, Apple's Time Capsule device (which has been discontinued) is designed as a wireless storage drive for your Time Machine backup files. If you're interested in a single Time Machine backup location for multiple Macs across your wireless network, a Time Capsule is a great addition to your home or office.



REMEMBER

Before you can use Time Machine, you must have it enabled within the Time Machine pane in System Preferences. I cover the Time Machine configuration settings (and how to turn the feature on) in more detail in Chapter 5. You'll also need an external drive that provides considerably more storage capacity than the drive you're backing up. I recommend that your external Time Machine backup drive be at least twice the capacity of the drive you're backing up. (To check on the size of a drive displayed on your desktop, right-click the drive and choose Get Info from the contextual menu.)

Here's how you can turn back time, step by step, to restore a file that you deleted or replaced in a folder:

1. **Open a Finder window and navigate to the folder that contained the file you want to restore.**
2. **Click the Time Machine icon on the Finder menu bar (which bears a clock with a counterclockwise arrow) and then click Enter Time Machine.**

The oh-so-ultra-cool Time Machine background appears behind your folder, complete with its own set of buttons at the bottom of the screen (as shown in Figure 22-4). On the right, you see a timeline (that series of stacked boxes) that corresponds to the different days and months included in the backups that macOS has made.

3. **Click any segment within the timeline to jump directly to a date (displaying the folder's contents on that date).**

Alternatively, use the Forward and Back arrows at the right to move through the folder's contents through time. (You should see the faces of Windows users when you riffle through your folders to locate something you deleted several weeks ago!)



REMEMBER

The backup date of the items you're viewing appears in the button bar at the bottom of the screen.

4. **After you locate the file you want to restore, click it to select it.**
5. **Click the Restore button at the right side of the Time Machine button bar.**

If you want to restore all the contents of the current folder, click the Restore All button instead.

Time Machine returns you to Finder, with the newly restored file now appearing in the folder. *Outstanding!*

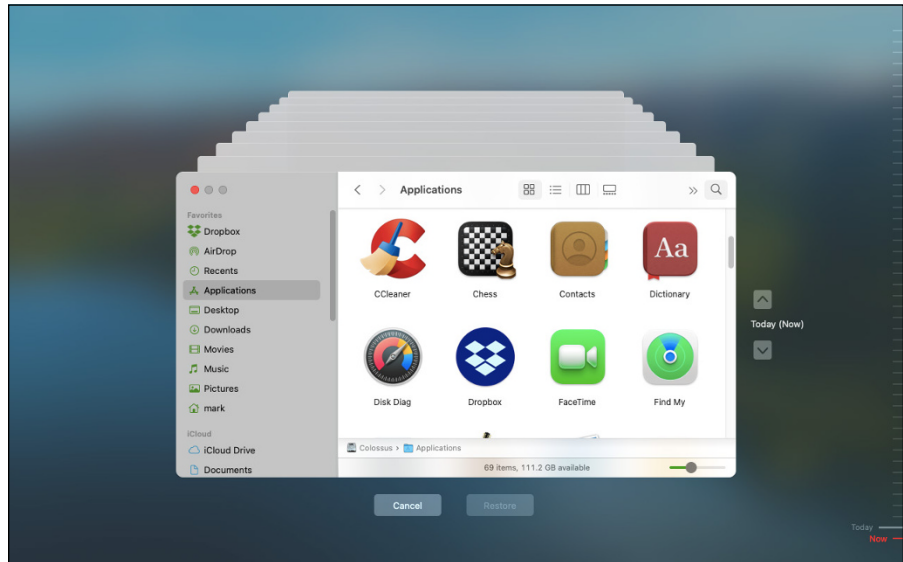


FIGURE 22-4:

Yes, Time Machine really *does* look like this!



TIP

To restore specific data from your Contacts database, launch the Contacts application first and then launch Time Machine. Instead of riffling through a Finder window, you can move through time within the application window.



TIP

As I mention earlier, you can easily restore the *entire* contents of your iMac's internal drive from your Time Machine backup, too. Reboot your iMac and hold down the $\text{⌘}+\text{R}$ startup key sequence to boot using the macOS Recovery HD volume; then use the Restore function.

For robust backup and restore protection, Time Machine is all that a typical Mac owner at home is likely to ever need. Therefore, a very easy Mark's Maxim to predict:



Get an external drive, connect it, and turn on Time Machine. Do it now. Don't make a humongous mistake.

Maintaining Drive Health

Shifty-eyed, sneaky, irritating little problems can bother both your internal and external drives: *permissions errors*. Incorrect disk and file permissions can:

- » Make your iMac lock up
- » Make applications act screwy (or refuse to run at all)
- » Cause weird behavior within a Finder window or System Preferences

And that's not all: Problems with your drive's catalog file can also result in corrupted data and files that won't open.

To keep macOS Monterey running at its best, I recommend that you fix permissions and catalog errors at least once per week. Follow these steps:

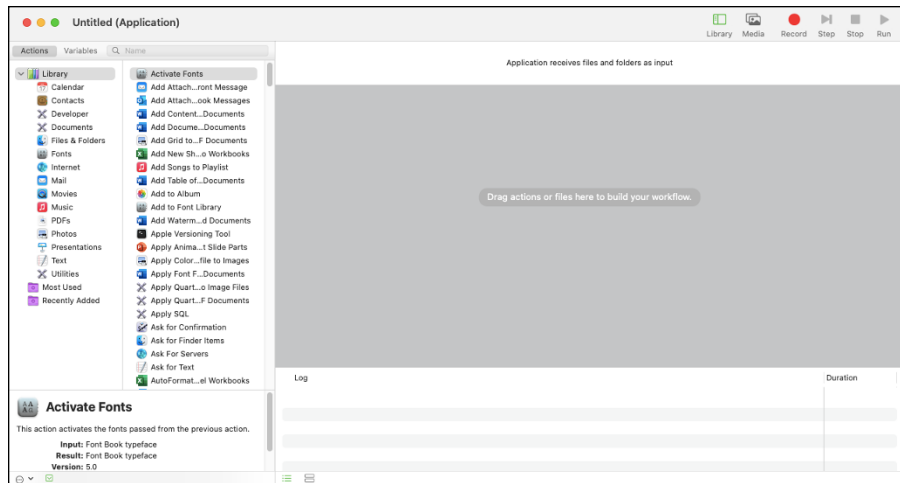
1. **Click the Launchpad icon on the Dock and then click the Search box at the top of the window.**
2. **Type the word disk.**
3. **Double-click the Disk Utility icon.**
4. **Click the volume or named partition at the left that you want to check.**
5. **Click the First Aid button and then click Run.**

Disk Utility does the rest and then displays a message about whatever it has to fix, if anything. (When will someone invent a *car* with a Repair Me button?)

Automating Those Mundane Chores

The macOS Automator application is a big hit among iMac power users. You use Automator (shown in Figure 22-5) to create customized tools that automate repetitive tasks. Of course, writing an application might sound daunting — akin to singlehandedly building your own nuclear submarine over a long weekend — but Automator is actually easy to use. Heck, you might find it downright *fun*!

FIGURE 22-5:
Automator is a
dream come true
for those who
hate repetitive
tasks.



You can also create *workflows*, which are sequential (and repeatable) operations that are performed on the same files or data, and then your Automator application can automatically launch whatever applications are necessary to get the job done.

Here's a great example: You work with a service bureau that sends you a huge .zip file every week with new product shots for your company's marketing department. Unfortunately, these images are flat-out *huge* — taken with a 24-megapixel camera — and they're always in the wrong orientation. Before you move them to the Marketing folder on your server, you have to use Preview to laboriously resize each image and rotate it, and then save the smaller version.

With help from Automator, you can build a custom application that automatically reads each image in the folder, resizes it, rotates it, generates a thumbnail image, prints the image, and then moves the massaged images to the proper folder — and all with a single double-click! Of course, you can run Automator from Launchpad, or from your Applications folder in a Finder window. Currently, Automator can handle specific tasks within many applications (including Finder), as well as a number of applications from third-party developers.

Creating an application in Automator

To create a simple application with Automator, launch the application and follow these steps:

1. Click the **New Document** icon.
2. Select **Application** and click the **Choose** button.

3. Click the desired application in the Library list.

Automator displays the actions available for that application.

4. Drag the desired action from the Library window to the workflow window on the right.

5. Modify any specific settings provided for the action you chose.

6. Repeat Steps 3–5 until you complete the workflow.

7. Click the Run button (at the upper right) to test your script.

Use sample files while you're fine-tuning your application lest you accidentally do something deleterious to an original (and irreplaceable) file!



WARNING

8. When the application is working as you like, press ⌘+S to save it.

9. In the Save dialog that appears, type a name for your new application.

10. Click the Where pop-up menu and specify a location where the file should be saved.

11. Click the File Format pop-up menu and choose Application.

12. Click Save.

Your new Automator application icon includes the Automator robot standing on a document. Most normal human beings would call you a *programmer*, so make sure you're inscrutable from now on! If you plan to use your new Automator application often, don't forget that you can make it more convenient to use by dragging the application icon to the Dock or to the desktop.



TIP

To find all the actions of a certain type in the Library list, click in the Search box at the top of the Library list and type a keyword, such as *save* or *burn*. You don't even need to press Return!

Creating an Automator login item

If you want your Automator application to run every time you log in (to track your time on a project, for example), follow these steps to set up the Automator application as a login item:

- 1. Open System Preferences.**
- 2. Display the Users & Groups pane.**
- 3. Click the Login Items button.**
- 4. Click the plus button at the bottom of the list.**
- 5. Navigate to the location of your new Automator application.**

6. Click Add.

Now your Automator application is *really* automatic. Watch your significant other gape in amazement as your iMac begins to work without your touching the keyboard! (If you've added the application icon to your Dock, you can also simply right-click the icon and choose Options ⇨ Open at Login from the menu that appears. Either way, your iMac gets the message.)

Updating macOS Automatically

I prefer my iMac to take care of cleaning up after itself, so updating macOS should be automatic as well. In macOS Monterey, operating system updates are performed by the Software Update pane within System Preferences.



TIP

Software Update uses the Internet, so you need an Internet connection to shake hands with the Apple server and download any updates.

Updates are available in two convenient spots:

- » **The Apple menu:** Click the Apple menu () and then choose About This Mac. Click the Software Update button, which alerts you to anything new that's available.
- » **System Preferences:** Click the Software Update icon in the System Preferences window.

To set Software Update to check for critical system updates and install them automatically, simply select the Automatically Keep My Mac Up To Date check box to enable it, click the Advanced button and make sure that all the check boxes are enabled, and then click OK.



REMEMBER

If you'd rather handle updates manually — perhaps your iMac performs critical work in a video production house or lab and you'd prefer to verify that your software will be unaffected by the update — you can always disable this check box. When you're satisfied that the update is safe, display the Software Update pane again and click the Update button to start the ball rolling.



TIP

If you're using the same Apple ID on more than one Mac, the applications you've purchased through the App Store on your other Macs can be automatically downloaded to this computer as well. Click the Advanced button on the Software Update pane; then select the Install App Updates From the App Store check box to enable it; then sit back and watch convenience happen.

A large, bold, white number 7 is positioned on the left side of the image. It has a subtle drop shadow to its right, giving it a three-dimensional appearance against the light gray background.

The Part of Tens

IN THIS PART . . .

Improve your iMac's performance.

Avoid costly mistakes.

- » Adding memory
- » Using Dictation and Siri
- » Banishing the Desktop background
- » Using column mode and keyboard shortcuts
- » Customizing the Dock and Finder windows
- » Launching recent stuff and using the Go menu

Chapter **23**

Ten Ways to Speed Up Your iMac

Even an iMac with the latest Apple M1 processor can always go just a bit faster . . . or *can* it? There's actually a pretty short list of tweaks that you can apply to your iMac's hardware to speed it up, and these suggestions are covered in this chapter.

You can also work considerably faster within Monterey by customizing your Desktop and your Finder windows, which makes it easier to spot and use your files, folders, and applications. That's in this Part of Tens chapter, too.

Finally, you can enhance your efficiency and make yourself a power user by tweaking yourself. (Sounds a bit tawdry or even painful, but bear with me, and you'll understand.)

Nothing Works Like a Shot of Memory

Okay, maybe *shot* is the wrong word, but adding memory to your iMac (by either replacing or adding a memory module) is the single surefire way to speed up the performance of your entire system. That includes every application as well as macOS itself.

With more memory, your iMac can hold more of your documents and data simultaneously, and thus has to store less data temporarily on your internal drive. It takes your iMac much less time to store, retrieve, and work with data when that data is in RAM (short for *random access memory*) rather than being read from your internal drive. That's why your system runs faster when you can fit an entire image in Adobe Photoshop in your iMac's system memory.

At this writing, you can cram up to 16GB of memory in a 24" M1 iMac when you order from the Apple online store; the 27" Intel iMac model maxes out at 128GB, and 21.5" Intel models can be configured with up to 16GB of memory.



REMEMBER

Only 27" iMacs can be upgraded with additional memory by the owner *after* purchase — the M1 iMac 24" and iMac Intel 21.5" models are sealed units, and they must be upgraded by an Apple Authorized Service Provider (and usually at quite a cost). Therefore, it's *always* a good idea to order your iMac with the maximum amount of memory already onboard.

Hold a Conversation with Your iMac

Many Mac owners will attest that you *can* significantly increase your own efficiency by using the Dictation feature, which allows you to dictate text by speaking within many applications. Your voice is indeed faster than your fingers!

To enable Dictation, choose System Preferences ⇨ Keyboard, click the Dictation tab and click the On radio button next to Dictation. Remember that by default, Dictation is active only when you press the Fn (Function) key twice. (You can change the Dictation shortcut from the Dictation tab.)

What's Up, Siri?

And speaking of — well, *speaking* — to your iMac, you can also speed things up around macOS by using Siri as your own personal assistant! You can summon Siri by clicking the Siri icon in the Finder Menu bar, or by using the keyboard shortcut (by default, hold down ⌘+spacebar).

Siri can do all sorts of tasks that you might imagine require a keyboard or mouse, like:

- » Launching apps (say “Open Pages”)
- » Searching for files, Calendar events, Contacts, or Notes (say “Find files created on July 18” or “Show me my schedule today”)
- » Searching for content on the web (“Who was Steve Jobs” or “Show me pictures of puppies”)
- » Controlling settings in System Preferences (“Lock my iMac” or “Volume Up”)
- » Answering general questions about your iMac! (“How much memory do I have” or “What version of macOS am I running”)

You can change the keyboard shortcut for Siri — as well as select a different voice or language — from the Siri pane in System Preferences.

Keep Your Desktop Background Simple

It's funny that I still include this tip in a chapter dedicated to improving performance. After all, I recommended using a solid-color background in my first books on Mac OS 8 and Windows 98, written decades ago! Just goes to show you that some things never change.

If you're interested in running your Retina 5K iMac Pro system as fast as it will go, choose a solid-color background from the Desktop & Screen Saver pane in System Preferences. (In fact, there's even a separate category that you can pick called Solid Colors. Someone at Apple has *the right idea*.)

Column Mode Is for Power Users

One of my favorite features of macOS is the ability to display files and folders in column view mode. Just click the Column button on the standard Finder window toolbar, and the contents of the window automatically align in well-ordered columns.

Other file-display options require you to drill through several layers of folders to get to a specific location on your hard drive — such as `Users/mark/Pictures`, which I visit on a regular basis. In column mode, however, a single click drills a level deeper, and often you won't even have to use the Finder window's scroll bars to see what you're looking for. Files and folders appear in a logical order. Also, it's much easier to move a file (by dragging it from one location on your drive to another) in column mode.

Make the Dock Do Your Bidding

Just about every Mac owner considers the macOS Dock a good friend. But when's the last time you customized it — or have you ever made a change to it at all?

You can drag files and folders to the Dock, as well as web URLs, applications, and network servers. You can also remove applications and web URLs just as easily by dragging the icon from the Dock and releasing it on your Desktop.

I find that I make a significant change to my Dock icons at least once every week. I find nothing more convenient than placing a folder for each of my current projects on the Dock or adding applications to the Dock that I might be researching for a book or demonstrating in a chapter.



REMEMBER

You can position the Dock at either side of the Desktop or even hide the Dock to give yourself an extra strip of space on your Desktop for application windows. Click the Apple menu at the left side of the Finder Menu bar and then hover your pointer over the Dock item to display these commands.

It All Started with Keyboard Shortcuts

Heck, keyboard shortcuts have been around since the days of WordStar and Visi-Calcul, back when a mouse was still just a living rodent. If you add up all those seconds of mouse-handling that you save by using keyboard shortcuts, you'll see that you can literally save hours of productive time every year.

You're likely already using some keyboard shortcuts, such as the common editing shortcuts ⌘+C (Copy) and ⌘+V (Paste). When I'm learning a new application, I often search the application's online help to find a keyboard shortcut table and then print that table as a quick reference. Naturally, you can also view keyboard shortcuts by clicking each of the major menu groups within an application. Shortcuts are usually displayed alongside the corresponding menu items.

Hey, You Tweaked Your Finder!

Here's another speed enhancer along the same lines as my earlier tip about customizing your Dock: You can reconfigure your Finder windows to present just the tools and locations that you actually use (rather than what Apple *figures* you'll use).

You can right-click the toolbar in any Finder window and choose Customize Toolbar, for example. By default, the macOS Finder toolbar includes only the default icon set that you see at the bottom of the sheet, but you can drag and drop all sorts of useful command icons onto the toolbar. You can save space by displaying small icons, too.

With Finder tabs, you can even open multiple tabs within a Finder window (making it just about as efficient as it can possibly be for operations such as moving files, quickly navigating between locations, and comparing items in different locations).



TIP

The Finder Sidebar — which hangs out at the left side of the Finder window — is a healthy, no-nonsense repository for those locations that you constantly visit throughout a computing session. I have both a Games folder and a Book Chapters folder that I use countless times every day (it's important to balance work with pleasure, you know), and I've dragged both of those folders to the Sidebar.

Keep in Touch with Your Recent Past

Click that Apple menu and use that Recent Items menu! I know that sounds a little too simple, but I meet many new Apple computer owners every year who either don't know that the Recent Items menu exists or forget to use it. You can access both applications and documents that you've used within the past few days. Consider the Dock and Finder Sidebar to be permanent or semi permanent solutions and the Recent Items menu to be more of a temporary solution to finding the stuff that you're working on Right Now.

Go Where the Going Is Good

To round out this Part of Tens chapter, I recommend another little-known (and underappreciated) Finder menu feature (at least among Macintosh novices): the Go menu, which is located on the Finder Menu bar.

The Go menu is really a catch-all, combining the most important locations on your system (such as your Home folder) with folders that you've used recently. Also, the Go menu is the place where you can connect to servers or shared folders across your local network or across the Internet.

Pull down the Go menu today — and don't forget to try out those spiffy keyboard shortcuts you see listed next to the command names. (Press ⌘+Shift+H to go immediately to your Home folder, for example.) And if a Finder window isn't open at the moment, a new window opens automatically. Such convenience is hard to resist!



TIP

Hold down the Option key when you click the Go menu, and you'll be able to choose your personal Library folder (which is normally hidden) from the menu. This comes in handy when you have to troubleshoot problems with applications that save files or store configuration data in your Library folder.

- » Overheating and dirt are the enemy
- » Phishing (without a pole)
- » Using a single password
- » Mac meltdowns
- » Antique and illegal software
- » That nasty root account
- » Refurbished stuff

Chapter 24

Ten Things to Avoid Like the Plague

If you've read other books that I've written in the *For Dummies* series, you might recognize the title of this chapter: It's a favorite Part of Tens subject of mine that appears often in my work. I don't like to see any computer owner fall prey to pitfalls. Some of these pitfalls are minor, like being less than diligent about keeping your iMac clean. Others are downright catastrophic, like providing valuable information over the Internet to persons unknown.

All these potential mistakes, however, have one thing in common: They're *easily prevented* with a little common sense as long as you're aware of them. That's my job. In this chapter, I fill in what you need to know. Consider these pages as experience gained easily (for you, that is!).

Keep Things Cool

I've met several iMac owners over the years who've parked their supercomputers next to a heat source, shoehorned an iMac under a shelf, or draped something over the top of the screen. (That last one happens more often than you think, just because such a cover helps prevent dust from accumulating on the top of any computer.)

What, dear reader, do these three mistakes have in common? In a word, *heat*, which is something you must avoid. Don't forget that your iMac has the same heat-generating CPU, video card, and internal devices that any other computer has these days but only a single pathway for air to flow. Trust me: Your motherboard and internal devices will suffer if you don't allow your iMac's internal fan to perform its job!

As I discuss in Chapter 1, the location of the fan exhaust on your iMac varies with the model: On older iMacs, the exhaust is the slot at the top back of the case, while recent iMacs have vents at the bottom and center back of the case. No matter where your fan exhaust is located, *don't ever cover it* with anything, and locate your iMac in a spot where there's plenty of ventilation directly above, below and behind the computer. Also, avoid major heat sources anywhere around your iMac that could significantly raise its temperature.

Phishing Is No Phun

Phishing refers to an attempt by criminals to illegally obtain your personal information. If that sounds like an invitation to identity theft, it is — and thousands of sites have defrauded individuals like you and me (along with banks and credit card companies) out of billions of dollars.

A phishing scam works like this: You get an email purporting to be from a major company or business (think eBay), government agency, social networking site, or major credit card company. The message warns you that you have to “update” your login or financial information to keep it current, or that you have to “validate” your information every so often — and the message ever-so-conveniently even provides you a link to an official-looking web page (although sometimes full of spelling errors and always with a bogus address). After you enter information on that bogus page, it's piped directly to the bad guys, and they're off to the races.

Here's a Mark's Maxim that every Internet user should take to heart:



MARK'S
MAXIM

No legitimate company or agency will ever solicit your personal information through a text or an email message!



WARNING

Never respond to these messages. Don't use the link provided in the phishing email! If you smell something phishy, open your web browser and visit the company's site (the *real* one) by typing the actual address directly; then contact the company's customer support department to report the scam.

In fact, sending any valuable financial information through unencrypted email — even to those whom you know and trust — is a bad idea. Email messages can be intercepted or can be read from any email server that stores your message.

Don't Rely on a Single Password

Okay, confess: Are you using a single password for *everything* you do on your iMac? Is your Apple ID password the same as your user account password — and also the same as your password on every website you visit? Even your online banking? (Oh, my!)

If so, you're taking a big risk with both your personal data and your online reputation. All it takes is a single moment of weakness (perhaps when your friend or coworker asks to use your iMac, or you use that “oh-so-convenient” universal password on a phishing website). No matter how your password gets out, you and your iMac are suddenly wide open to malicious attacks.

I follow the same security measure that I recommend to my clients, family, and friends: Use a different password for each of the important websites you visit often, and keep a separate password reserved for your user account. I know it's a hassle to remember multiple passwords, but the alternative is no security at all.

You may also choose to use a password manager application (like Apple's iCloud Keychain) to store and automatically enter data for websites, including your login and credit card information. I personally don't use iCloud Keychain (in fact, I show you how to turn it off in Chapter 8), but if you don't share access to your iMac with others, it can indeed be convenient.

Do You Really Want a Submerged Keyboard?

Your answer should be an unequivocal “No!” — and that’s why everyone should make it a rule to park all beverages well out of range of keyboards, speakers, mice, backup drives, and any other piece of external hardware. Especially when kids or cats are in close proximity to your iMac.

Cleaning up a hazardous soda spill is hard enough in the clear, but if that liquid comes in contact with your hardware, you’re likely to be visited with intermittent keyboard problems (or, in the worst-case scenario, a short in an external peripheral or your iMac’s motherboard).

Suffice it to say that 12 inches of open space can make the difference between a simple cleanup and an expensive replacement!

Don’t Use Antiquated Utility Software

If you’re using macOS Monterey, you should upgrade your older utility programs. These older disk utility applications can actually do more damage than good to an internal drive under Monterey. Things always change when Apple makes the leap to a new version of macOS, including subtle changes to disk formats and memory management within applications. With an out-of-date utility, you could find yourself with corrupted data. (Note that some out-of-date utilities actually refuse to run on newer versions of macOS that they don’t recognize, but other antique utilities attempt to soldier on, sometimes with *nasty* results.) Make sure that you diagnose and repair disk and file errors by using only a utility application that’s specifically designed to run in Monterey, like our hometown favorite Disk Utility or a third-party utility such as Drive Genius from Prosoft Engineering (www.prosofteng.com). Your iMac’s hard drive will definitely thank you.

(Oh, and while you’re at it, don’t forget to check the manufacturer’s website for any updates to drivers or application software for your third-party external hardware! ’Nuff said.)

Don't Endorse Software Piracy

This one's a real no-brainer. Bear in mind that Apple's overall market share among worldwide computer users currently weighs in at little more than 10 percent. Software developers know this, and they have to expect (and *receive*) a return on their investment or they're going to find something more lucrative to do with their time. As a shareware author, I can attest to this fact firsthand.

Avoid downloading “free” versions of commercial software (typically referred to online as “cracked” applications) from any source, and ignore so-called “universal” serial numbers for Mac software.

An iMac is a great machine, and Monterey is a great operating system, but even the best hardware and the sexiest desktop won't make up for an absence of good applications. Pay for what you use, and everyone benefits.

Call It the Forbidden Account

You might never have encountered the *root*, or *System Administrator*, account within macOS — and that's always A Good Thing. Note that I'm not talking about a standard administrator (or admin) account here. Every iMac needs at least one admin account (in fact, it might be the only visible account on your computer), and any standard user account can be toggled between standard and admin status with no trouble at all (by another admin account).

The root account, though, is a different beast altogether, and that's why it's disabled by default. All Unix systems have a root account; because macOS Monterey is based on a Unix foundation, it has one, too. Anyone logging in with the root account can do *anything* on your system, including deleting or modifying files in the System folder (which no other account can access). Believe me: Deliberately formatting your internal drive is about the only thing worse than screwing up the files in your System folder.

Luckily, no one can accidentally access the root/System Administrator account. In fact, you can't assign the root account with System Preferences; you must use the Terminal application in Utilities (within your Applications folder). Unless an Apple support technician tells you to enable and use it, you should promptly forget that the root account even exists.

Don't Settle for a Surge Suppressor

Technically, nothing is wrong with using a surge suppressor (also called a *power strip*) to feed power to your iMac and all your external peripherals, but it doesn't do the *entire* job. Your system is still wide open to problems caused by momentary brownouts, not to mention the occasional full-fledged blackout. Losing power in the middle of a computing session will likely lead to lost documents and might even result in disk or file errors later. With an uninterruptible power supply (UPS), you can rest more easily, knowing that your iMac will have a few minutes more of iLife. (Incredibly sad pun unfortunately intended.)

Most Mac owners know about the backup battery power that a UPS provides, but they don't know about the extra work performed by most UPS units — namely, filtering your AC current. A filtering UPS prevents electronic noise (think about a vacuum being used next to a TV set) and momentary current spikes. These days, you'll find good UPS models for less than \$100.

Refurbished Hardware Is No Deal at All

Boy, howdy, do I hate refurbished stuff. To quote someone famous, "If the deal sounds too good to be true, it probably is."

Examine what you get when you buy a refurbished (often called *recertified*) magnetic hard drive. It's likely that the drive was returned as defective, of course, and then sent back to the factory. There, the manufacturer probably performed the most cursory of repairs, perhaps tested the unit for a few seconds, and packed it up again. (I should, however, note that Apple sells refurbished Macs and generally has a good reputation for value on these computers.)



REMEMBER

Before you spend a dime on a bargain that's *remanufactured* — I can't get over that term — make sure that you find out how long a warranty you'll receive, if any.

If at all possible, I recommend spending the extra cash on trouble-free, brand-new hardware that has a full warranty.

iMacs Appreciate iCleanliness

Clean your machine, including your keyboard, mouse, and trackpad. Your iMac case needs only a thorough wiping job with a soft cloth to stay spotless, but don't be surprised at the primordial nastiness that can build up on your keyboard and the underside of your mouse over time!

Your screen should be cleaned at least once every two or three days. Never spray anything — cleaners, water, *anything!* — directly on your screen or your iMac's case. I highly recommend using premoistened LCD cleaning wipes to clean your iMac monitor safely.

Index

A

- AAC (Advanced Audio Coding) files, 222
- Accent Color setting, 96
- access, restricting, 240–241
- account name, 171
- actions, 125
- activation hot corner, 93
- Add List button (Reminders), 119
- add-ons
 - audio hardware, 375
 - external drive arrays, 374
 - external drives, 372–373
 - game controllers, 373
 - internal drive, 371
 - memory, 366–370
 - MIDI controllers, 375
 - overview, 365
 - video controllers, 375
- Add Reminder button (Reminder), 119
- Add to Favorites toolbar button (Photos), 248
- administrator, 169
- AIFF files, 222
- AirDrop, 196
- air flow, checking for, 27
- AirPlay, 90, 238
- AirPort Express, 193
- AirPort Extreme, 193
- AirPort Time Capsule, 31, 193
- AirPort wireless devices, 14
- ALAC (Apple Lossless), 222
 - album, 251
- alerts, 124
- Alert Style buttons, 105
- aliases
 - creating, 51
 - e-mail addresses, 83
 - icons, 51
 - reasons for, 52
- Allow Handoff Between this Mac and Your iCloud
 - Devices check box, 163
- Allow Handoff Between this Mac and Your iCloud
 - Devices setting, 97
- Allow My iCloud Account to Unlock My Disk option, 185
- Allow Wallpaper Tinting in Windows setting, 96
- AMD Radeon Pro cards, 15
- Animate Opening Applications check box, 98
- Appearance setting, 95
- AppleCare, 27
- Apple ID
 - and iCloud, 160
 - iCloud configuration, 163–164
 - preferences, 102–104
- Apple Lossless (ALAC), 222
- Apple menu
 - icon, 38
 - launching applications, 42–43
 - overview, 38
 - quitting applications, 45
- Apple Music
 - Apple ID requirement, 236
 - finding songs, 379
 - Internet connection requirement, 236
 - Listen Now, 234–235
- Apple Music Radio, 236
- Apple Service Providers, 27, 364, 373
- Apple Silicon processor, 8
- Apple TV, 225, 241
- Application menu, 38
- applications (apps)
 - adding to the Dock, 68
 - associated files, 381–382
 - Help, 74
 - launching/quitting, 42–45
 - migrating to new iMac, 30
 - printing from, 73–74
 - removing, 380–381
 - switching between, 49
 - troubleshooting, 360
 - windows, 38–39
- Application Windows corner, 94

App Store

- creating Apple ID, 161
 - downloading free office productivity apps, 19, 306, 319, 335
 - launching, 42–43
 - uninstalling apps purchased from, 380
- Arrangement marker (GarageBand), 296–297
- Arrangement track (GarageBand), 296–297
- Ask to Keep Changes When Closing Documents setting, 96
- aspect ratio (Keynote presentation), 336–337
- associated files, 381–382
- assumptions, 1–2
- At a Location check box, 120
- audiobooks, 222
- audio CD
- burning from GarageBand, 301–302
 - burning from Music, 238
 - defined, 238
 - playing, 224, 225
- audio files
- burning to CDs, 238–239
 - buying, 242–244
 - formats, 222
 - importing into iMovie, 272–274
 - playing, 223–226
 - ripping, 232–233
- audio line out jack, 14
- Audio Mute key, 57
- audio options, 12
- Auto Enhance button (Photos), 260
- Auto Enhance button (Photos app), 260
- AutoFill button (Safari), 142
- Auto Login, 182–183
- Automatically Hide and Show the Dock check box, 98
- Automatically Hide and Show the Menu Bar check box, 99
- Automatically Hide and Show the Menu Bar in Full Screen check box, 99
- Automatically Rearrange Spaces Based on Most Recent Use check box, 93
- Automatic Login, 184
- Automator, 390–391
- Auto-Save feature, 308
- AVCHD files, 272

B

- Back button (Safari), 141
- background
- adding to Keynote presentations, 344
 - adding to movies, 281
 - adding to Pages documents, 315
 - desktop, 65–66, 91, 397
- backing up
- to cloud, 384
 - to DVDs, 384–385
 - to external drives, 384
 - Time Machine, 385–388
 - before upgrading internal drive, 373–374
- Back Up Automatically check box, 101
- Badge App Icon check box, 105
- base stations, 192–194
- Bluetooth
- bonus chapter on, 4, 27, 207
 - as built into every iMac, 15
 - checking connection, 27
 - pairing, 3
 - as requirement for AirDrop, 196
 - as requirement for Handoff, 162–163
 - as requirement for Sidecar, 163
 - wireless Bluetooth speakers, 12, 14
- bonus chapter, 4
- bookmarks, 145–147
- Bookmarks button (Safari), 142
- Brightness slider, 90
- burning
- audio CDs from GarageBand, 301–302
 - audio CDs from Music, 238–239
 - backups from Finder, 385
- buttons, defined, 41

C

- cables
- buying, 23
 - cables, 18–19
 - Cat5/ Cat5E/Cat6 cables, 197, 198
 - Ethernet cable, 18–19, 198
 - power cable, 12

- Thunderbolt cable, 31, 197
- troubleshooting, 361
- Calendar
 - notifications, 124
 - overview, 21–22
 - pushing events to and from your iOS devices, 103, 164
 - Spotlight search, 109, 111, 112
- Calibrate button, 90
- camera, 15
- Cat5/ Cat5E/Cat6 cables, 197, 198
- CCleaner for Mac, 382–383
- CD audio, 222. *See also* audio CD
- CDW (website), 367
- cells
 - column, 324
 - defined, 320
 - navigating/selecting, 324
 - range, 324
 - row, 324
 - single, 324
- channels, 133–134
- charts (Numbers), 332–333
- Cheat Sheet, 4
- check boxes
 - Allow Handoff Between this Mac and Your iCloud Devices check box, 163
 - Animate Opening Applications check box, 98
 - Automatically Hide and Show the Dock check box, 98
 - Automatically Hide and Show the Menu Bar check box, 99
 - Automatically Hide and Show the Menu Bar in Full Screen check box, 99
 - Back Up Automatically check box, 101
 - Badge App Icon check box, 105
 - On Day check box, 120
 - Double-Click a Window's Title Bar to Minimize/Zoom check box, 98
 - Exit Presentation After Last Slide check box, 346
 - At a Location check box, 120
 - Look Up check box, 41
 - Minimize Windows into Application Icon check box, 98
 - Play Sound for Notifications check box, 105
 - Prevent Cross-Site Tracking check box, 155
 - Recent Applications check box, 44
 - Require Password to Exit Slideshow check box, 346
 - Secondary Click check box, 41
 - Show in Control Center check box, 67
 - Show Indicators for Open Applications check box, 99
 - Show in Notification Center check box, 105
 - Show Notifications on Lock Screen check box, 105
 - Show Recent Applications in Dock check box, 99
 - Show Time Machine in Menu Bar check box, 102
 - Sync Library check box, 244
 - Tap to Click check box, 41
 - Three Finger Drag check box, 41
- children. *See* parental controls
- cleaning, recommendation for, 407
- Clipboard, 311
- Close button, 45
- closed wireless networks, 195
- Close Windows When Quitting an App setting, 96
- cloud storage, 384
- collections (bookmarks), 147
- ColorSync profile, 90
- column (spreadsheet), 324, 329
- Column view (Pages), 398
- Command key, 57
- composing (GarageBand), 288
- connecting
 - to Ethernet ports, 18–19
 - to Internet, 18–19
 - power cable, 18
 - printers, 207–209
 - to wired networks, 197
 - to wireless networks, 192
- Contacts, 21, 103
- Contacts list, 215
- Content & Privacy pane, 179
- Content & Privacy Restrictions panel, 239–240
- Content library (iMovie), 268
- Content pane
 - News app, 133
 - Safari, 138
- Contour Design (website), 375
- Control Center
 - customizing, 66–67
 - displaying, 66
 - overview, 36
- controllers (MIDI), 299
- conventions, 2–3
- conversation, 217

cookies, 154–155

copying

- on different drive, 54
- multiple items to another location, 54
- one item to another location, 54
- on same drive, 55

Create New Message icon, 216–217

cropping, 258–260

Crucial (website), 367

Ctrl key, 57

D

damages, checking for, 17, 26–27

data CD, 238

dead pixels, 27

Default for Display radio button, 90

default locations, 62

Default Web Browser setting, 96

Delete key, 57

Desktop

- background, 65–66, 91
- corner, 94
- creating, 64
- displaying peripherals and network connections, 66
- icons, 65
- launching applications, 43
- overview, 34–35
- personalizing, 64–66
- Stacks, 69
- switching with Spaces, 63–64

desktop publishing application, 305

DHCP server, 192

Dictation feature, 396

Disk Utility, 356–359, 360

display (screen)

- checking for damages, 26
- LED, 9
- Retina, 9

Display Calibrator, 90

Display Login Window As login setting, 184

Displays Have Separate Spaces check box, 94

Displays pane, 90–91

Dock

- adding applications, 68
- adding individual files and volumes, 68
- adding several files or folder, 68
- adding websites, 68
- customizing, 67–71
- overview, 35–36
- preferences, 48
- quitting applications, 45
- Recent Applications feature, 69
- resizing, 71
- speeding up your iMac, 398
- Stacks, 69–71

Dock and Menu Bar pane, 98–99

documents

- background, 315
- creating, 305–306
- exporting, 318
- iCloud, 160–162
- importing documents from previous iMac, 30–31
- importing documents from Windows, 31–32
- opening, 306–307
- printing, 317
- sending, 318
- sharing, 318

Documents folder

- defined, 61
- migrating to new iMac, 30
- subfolders, 61

Do Not Disturb feature, 125

Double-Click a Window's Title Bar to Minimize/Zoom check box, 98

downloading

- files, 149–150
- free productivity apps, 19
- printer software, 210

Downloads folder, 61

dragging items, 53

drive arrays, 374

Drive Genius, 404

Drummer track (GarageBand), 290

Duplicate command, 55

duplicating items, 55

Duration Settings button (Photos), 262

- DVD drives, 384–385
- DVD Player, 21
- DVD-ROM, 238
- DVDs, 384–385
- DV files, 272
- DV widescreen files, 272

E

- Edit button (Photos), 248
- Edit sheet, 119–120
- Effects button, 212–213
- 802.11ac standard, 193
- Eject icon, 71
- Electric Guitar and Bass tracks (GarageBand), 290
- e-mail. *See also* Mail app
 - “alias” email addresses, 83
 - Hide My Email, 82
 - iCloud Mail, 102, 165
 - notifications, 125
 - sending messages with web links, 143, 154
 - sending movie as attachment, 284
 - sending presentations as attachments, 347
 - Spotlight search, 109, 112
 - web page links, 143
 - web page links in, 125
- emojis, 216
- Energy Saver pane, 97
- equalizer, 233–234
- Ethernet cables, 198
- Ethernet port, 13, 197
- Event/Project Library pane (iMovie), 268, 275
- Excel spreadsheets, opening in Numbers, 320
- Exclude These Items From Backups list, 102
- Exit Presentation After Last Slide check box, 346
- external devices, 360
- external drives, 101, 372–373, 384

F

- Facebook, 284
- FaceTime
 - about, 21
 - Contacts list, 215

- exporting video clips to iMovie, 270–271
- group calls, 215
- HD camera, 15
- inviting in, 215
- overview, 214–215
- Recent Calls list, 215
- starting calls, 215
- web links, 83
- FaceTime HD camera, 212
- Fast User Switching, 181–183, 184
- Favorites
 - news reports, 133–134
 - Safari, 138
- files
 - adding to the Dock, 68
 - deleting unnecessary files, 379–380
 - downloading, 150
 - network file sharing, 202
 - sending through Messages app, 217
 - transferring by AirDrop, 196
- FileVault, 185–186
- filters, 261
- Finder
 - launching applications, 44
 - menu bar, 38
 - search window, 112–113
 - speeding up your iMac, 399
- Finder Tabs, 56
- Finder windows
 - closing, 49
 - Column view, 46
 - List view, 46
 - minimizing and restoring windows, 47–48
 - moving and zooming windows, 48
 - opening new tab, 56
 - scrolling in and resizing windows, 46–47
- Find My Mac, 103, 165
- firewall, 203–205
- First Aid, 359
- Flag button, 119
- flash drives, 23
- flubs, 300

Focus

- creating, 125
- enabling, 125
- overview, 81–82, 125
- preferences, 104–105
- setting up, 125

folders

- adding to the Dock, 68
- deleting unnecessary folders, 379–380
- duplicating, 56
- opening in tabs, 56

Folders list, 121

fonts (Pages), setting default, 316–317

foot, 11

footprint, 11

Force Quit, 45, 353

For Dummies (website), 75

formulas, 320, 330–331

Forward button (Safari), 141

“free” versions of commercial software, 405

full-screen mode, 48

function keys, 57

functions, 320

Fusion Drive, 14

G

Gallery view, 46

game controllers, 374

gamepad, 374

games, 22

GarageBand

- adding loops, 295
- adding score to iMovie, 294
- adding songs from, 273
- adding tracks, 289–291
- Arrangement track, 296–297
- burning audio CD, 301–302
- changing volume or balance of tracks, 296
- choosing loops, 291–294
- composing, 288
- controls, 286–288
- creating song files in Music, 300–301
- deleting tracks, 289
- exporting project, 301
- How Did I Play feature, 300

Learn to Play feature, 300

muting tracks, 296

overview, 285

repeating loops, 294–295

resizing loops, 294–295

sharing your songs, 299–302

Songwriter project, 291

tracks, 290

tweaking settings for tracks, 297–298

using MIDI instruments with, 299

Visual Equalizer window, 298

Gear icon, 62

General pane, 95–97

Genius, 225

Go menu, 400

Go to Beginning button (GarageBand), 287

graphics box (Pages), 310

Grid layout (Keynote), 346

Group Windows by Application check box, 94

Guest accounts, 175–176

Guides feature (Maps app), 130–132

H

Handoff, 162–163

handouts (Keynote), 346

hard drive

- external, 372–373, 384
- maintaining drive health, 388
- partitioning, 372
- permission errors, 388
- remotely wiping, 165
- troubleshooting, 358–359

HDV files, 272

headphone jack, 14

heat, keeping iMac away from, 402

Help Center, 364

help resources

- about, 74
- Apple web-based support center, 75
- Help menu, 74
- local Mac user groups, 75
- magazines, 75

Help system, 32

Hide My Email, 83, 102, 165

History button (Safari), 143

- History list, 150–151
- Home app, 104
- Home button (Safari), 142
- Home folder
 - launching, 61–62
 - overview, 60–61
 - subfolders, 61
- Hot Corners, 94
- Hot Corners button, 93
- housekeeping
 - automating chores, 388–391
 - backing up, 383–385
 - cleaning data deposits, 377–383
 - cleaning things manually, 379–381
 - deleting unnecessary files/unneeded folders, 379–380
 - maintaining drive health, 388
 - managing storage, 378–379
 - removing applications, 380–381
 - removing associated files in other fields, 381–382
 - Time Machine, 386–388
 - updating macOS automatically, 391
 - using commercial cleanup tool, 382–383
- How Did I Play feature (GarageBand), 300

I

- iBooks Store, 161, 179
- iCloud
 - configuring, 163–165
 - Find My Mac, 165
 - free online storage, 161
 - Handoff, 162–163
 - Hide My Email, 165
 - how it works, 159–161
 - managing storage, 165
 - moving, saving, and opening documents, 160
 - overview, 159
 - PhotoStream, 164–165
 - pushing in, 160
 - saving Keynote presentations, 338
 - Sidecar, 163
 - Universal Clipboard feature, 163
- iCloud Drive, 102
- iCloud ID, 28
- iCloud Keychain, 156
- iCloud Mail, 102, 165
- iCloud Photos, 164–165, 262–263, 347
- iCloud Tabs button (Safari), 143, 152
- icons
 - alias icons, 51
 - applications icons, 51
 - Desktop, 36–37, 65
 - Document icons, 51
 - file icons, 51
 - Hardware icons, 51
 - overview, 50
 - removing from Dock, 68
 - used in this book, 3
- iMac
 - described, 8
 - Intel, 8
 - as Internet-sharing device, 191
 - location for, 15–16
 - M1, 8
 - major parts, 9–15
 - registering, 29
 - unpacking, 17–18
- iMac Pro, 15
- iMac Troubleshooting Tree, 359–363
- images. *See also* Photos app
 - importing, 248–250
 - making use of still images (iMovie), 272
 - organizing and sorting, 250–257
- iMovie
 - adding clips to movies, 275–276
 - adding GarageBand score, 294
 - adding maps and backgrounds, 281
 - adding songs from Music and GarageBand, 273
 - adding sound effects, 273–274
 - adding still images, 272
 - browsing video library, 283
 - building cinematic basics, 275–281
 - controls and displays, 267–269
 - creating new movie project, 265
 - cropping video clips, 278
 - editing clips, 278–279
 - importing/adding audio, 272–274
 - importing building blocks, 270–275
 - importing movie files, 270–271
 - launching, 266
 - marking clips, 276–277
 - moviemaking process, 269

iMovie (*continued*)

- overview, 265–266
- pulling in video clips, 270–271
- removing clips, 277
- reordering clips, 277
- rotating video clips, 278
- saving movie on hard drive, 284
- sharing your movie, 284
- themes, 267
- titles, 280–281
- trailers, 266, 281–283
- transitions, 279–280
- trimming video clips, 279
- video formats, 272
- voiceover narration, 274–275

Import button (iMovie), 268

importing documents/data

- from previous Mac, 30–31
- from Windows, 31–32

Info button (Photos), 248

Inspector (Numbers), 323

Inspector pane (Keynote), 339

Inspector window (Pages), 309

Intel iMac, 356–359

- overview, 8
- repairing hard drives, 358
- Safe mode, 355

Intelligent Tracking Prevention, 155

internal drive

- importing images from, 272
- overview, 14
- replacing, 373
- storage capacities, 14
- upgrading, 371–374

Internet

- connecting to Ethernet ports, 18–19
- sharing connection wirelessly, 201–202
- troubleshooting, 361
- wired connections, 18–19

Internet Protocol(IP), 192

Internet radio station

- creating custom Music Radion Station, 235
- described, 234–235
- playlists, 235
- tuning in your own stations, 234

Internet routers, 191–192, 197–198

Internet-sharing device, 191–192, 197

invoice, storing, 18

iPad, 21, 28, 40, 43, 60, 80, 91, 105, 117, 120, 126, 143, 147, 159, 160, 161, 163, 164, 165, 193, 216, 225, 237, 244, 247, 248, 249, 250, 262, 268, 269, 270, 272, 288, 290, 335, 345

iPhone, 21, 28, 40, 43, 60, 80, 105, 117, 120, 126, 143, 147, 160, 161, 163, 165, 193, 216, 225, 237, 244, 247, 248, 249, 250, 262, 268, 269, 270, 272, 288, 290, 335, 345

iPod touch, 160, 248, 269, 272

items

- adjacent, 53
- copying, 54
- duplicating, 55
- login items, 176–177, 362
- moving, 54
- nonadjacent, 53
- recent, 97
- selecting, 52–53

iTunes Store

- access restrictions, 179, 239–240
- buying music, 242–244
- cover art, 232
- downloading deleted items in the future, 379
- finding songs, 227
- iCloud storage for purchased items, 161
- overview, 225

K

keyboard

- checking for damages, 27
- described, 10–11
- function keys, 57
- keeping beverages away from, 404
- layout, 11
- setting up Monterey, 28

keyboard shortcuts, 58, 94

Keynote slideshow, 345

Music Library, 224

Numbers, 325

speeding up your iMac, 399

Keychain, 103, 156

Keynote app

- adding and editing slide text, 341
- adding background shape, 344
- adding slides, 340

- aspect ratio, 336
- creating new Keynote project, 335
- creating slideshow, 344–345
- deleting slide text, 341
- formatting slide text, 342
- media for presentation, 343
- opening presentations, 337
- overview, 335
- printing slides and notes, 346–347
- saving your presentation, 338
- selecting themes, 336
- slideshow shortcut keys, 345
- using Presenter's Notes, 342
- window, 338–339
- working with text, shapes, and graphics boxes, 340–341

keys

- Audio Mute, 57
- Command, 57
- Ctrl, 57
- Delete, 57
- Media Eject, 11
- Option, 57
- Page Down, 48
- Page Up, 48
- special keys, 57
- start-up, 355–356
- Volume Up/Volume Down, 57

Keystation 88 MK3, 375

keywords, 254–256

“kracked” applications, 405

L

- language, setting up Monterey, 28
- Launchpad
 - corner, 95
 - customizing, 44
 - launching applications, 43
 - launching from keyboard, 11
- layout, Desktop & Screen Saver pane, 92
- Layout pane (Keynote), 339
- Layout pane (Pages), 309
- LCD cleaning wipes, 407
- Learn to Play feature (GarageBand), 300
- LED screen, 9

- Leisure Mode, 212
- Libraries list (iMovie), 268
- lighting, 16
- Listen Now, 234–235
- List login, 181
- local Mac user groups, 75
- location of iMac
 - cool, 16
 - lighting, 17
 - outlets, 16–17
 - picking the right, 15–16
 - plan to expand, 17
 - wall-mounted iMacs, 15–16
- Location Services, 120
- locked application, 353
- logging out, 184
- login items, 176–177, 362
- Login Items list, 44
- login options, 181–183
- Look Up check box, 41
- Loop Browser (GarageBand), 291–293
- loops (GarageBand)
 - adding, 295
 - choosing, 291–294
 - cutting/copying/pasting, 296
 - defined, 287
 - repeating, 295
 - resizing, 295

M

- M1 iMac
 - graphics, 15
 - overview, 8
 - repairing hard drives, 358
 - Safe mode, 355
 - Touch ID keyboard, 9
 - wall-mounted, 15
- M1 processor, 8
- MacMall (website), 367
- macOS Monterey. *See* Monterey
- Macworld (website), 75
- magazines, 75
- Magic keyboard, 10–11
- Magic Mouse, 41

- Magic Mouse 2, 10–11, 40
- Magic Trackpad 2, 9
 - configuring, 40
 - Multi-Touch gestures for, 41
 - tracking speed, 41
- Magnification slider, 98
- Mail app
 - configuring accounts, 28
 - described, 21
 - Focus settings for, 125
 - notifications, 125
 - overview, 21
 - sending FaceTime invites, 347
 - sending presentations, 347
 - Spotlight search, 112
 - synchronizing account settings between devices, 103
 - web page links using, 125, 143, 154
- Mail button (Safari), 143
- Manage Storage feature, 378–379
- manual, 18
- maps, adding to movies, 281
- Maps app
 - default mode, 128
 - entering information, 127
 - getting directions, 128–130
 - overview, 126
 - Satellite mode, 128
 - switching views in, 128
 - Transit mode, 128
 - zooming in/out, 127
- Mark's maxims
 - access restrictions, 168
 - applications bundled with printer/scanner, 212
 - backing up, 383
 - buying Apple hardware and software, 184
 - deleting unnecessary user accounts, 175
 - encryption, 195
 - firewall, 100–101, 203
 - fixing your iMac, 352
 - on Home folder, 61
 - keeping the boxes for the life of the machine, 18
 - logging out, 184
 - memory, 366
 - only one window can be active at one time, 50
 - phishing, 403
 - power of M1 iMac, 9
 - rebooting, 352, 353
 - registering your iMac, 29
 - saving work often in GarageBand, 298
 - Time Machine, 387–388
 - user accounts, 168
- M-Audio (website), 375
- Media Browser, 343
- Media Eject key, 11
- memory
 - figuring how much you have, 365–366
 - installing memory modules, 367–370
 - online sources for, 367
 - speeding up your iMac by adding, 396
- Menu Bar, 48
- menu commands, 3
- menus
 - Apple menu, 38, 42–43
 - Application menu, 38
 - Finder, 38
 - Go menu, 400
 - menu bar, 37–38
 - Monterey, 37–38
 - Recent Items menu, 400
 - right-click menu, 38, 40–41
 - shortcut menu, 40
- Messages
 - account name, 171
 - communicating with friends and family, 188
 - overview, 21
 - sending and receiving messages, 216–217
 - sending FaceTime invites, 215, 347
 - sending links, 83
 - sending Pages documents, 318
 - sending presentations, 347
 - sharing maps, 130
 - sharing notes, 122
 - sharing photos, 247
- MIDI (Musical Instrument Digital Interface), 299
- MIDI controllers, 299, 375
- Migration Assistant
 - defined, 29
 - launching, 29
 - using, 30–31
- Minimize Windows into Application Icon check box, 98

- Minimize Windows Using pop-up menu, 98
- Mission Control
 - corner, 94
 - launching, 62–63
 - launching from keyboard, 11
 - preferences, 93–95
 - Spaces feature, 63–64
- MMS text messaging, 216
- Monterey
 - Control Center, 36
 - Desktop, 34–35
 - Dock, 35–36
 - Help system, 74
 - icons, 36–37
 - menu, 37–38
 - as personal operating system, 34–39
 - setting up, 28–29
 - Setup Assistant, 26
 - updating, 360, 391
- mouse
 - checking for damages, 27
 - shortcuts, 94
- Mouse pane, 40–41
- MOV (Quicktime) files, 272
- movies. *See also* iMovie
 - adding clips to, 275–276
 - adding songs from Music and GarageBand, 273
 - adding sound effects, 273–274
 - adding still images, 272
 - browsing video library, 283
 - building cinematic basics, 275–281
 - creating, 265
 - cropping video clips, 278
 - editing clips, 278–279
 - importing/adding audio, 272–274
 - importing building blocks, 270–271
 - importing movie files, 270–271
 - marking clips, 276–277
 - moviemaking process, 269
 - pulling in video clips, 270–271
 - removing clips, 277
 - reordering clips, 277
 - rotating video clips, 278
 - saving movie as file, 284
 - sharing, 284
 - themes, 267
 - titles, 280–281
 - trailers, 266, 281–283
 - transitions, 279–280
 - trimming video clips, 279
 - video formats, 272
 - voiceover narration, 274–275
- Movie tracks (GarageBand), 290
- MP2 files, 222
- MP3 CD, 238
- MP3 files, 222
- MPEG-2 files, 272
- MPEG-4 files, 272
- Multi-Touch gestures, 41
- multiuser iMac
 - adding users, 169–170
 - administrator, 169
 - changing login settings, 182–183
 - deleting user accounts, 174–175
 - FileVault, 185–186
 - guest accounts, 175–176
 - logging out, 184
 - login items, 176–177
 - login options, 181–183
 - managing account's access settings, 177–180
 - modifying user accounts, 172–174
 - overview, 167
 - passwords, 171–172
 - Shared folder, 184
 - user accounts, 168
- music. *See* audio files; GarageBand
- Musical Instrument Digital Interface (MIDI), 299
- Musical Typing keyboard (GarageBand), 289–291
- Music Library
 - adding songs from, 273
 - browsing, 226
 - cover art/album artwork, 232
 - deleting songs, 227
 - described, 223
 - finding old music, 227
 - keyboard shortcuts, 224
 - knowing your songs, 230–232
 - playing songs, 223–224
 - playlists, 228–229
 - removing songs, 227

Music Library (*continued*)
 setting/changing song information manually, 231
 setting the song information automatically, 231
 song information, 226
 syncing with iPhone and iPad, 237
 viewing, 224–225
Music Sidebar, 224, 229, 241, 243
My Photo Stream, 263–264

N

Name and Password login, 181
narration, 274–275
network-attached storage (NAS), 374
network printers, 210–211
networks
 advantages of, 188
 connecting to, 200–203
 file sharing, 202
 firewall, 203–205
 migrating network settings to new iMac, 30
 network Internet connections, 201–202
 overview, 187–189
 troubleshooting, 361
 wired connections, 197–200
 wired versus wireless, 189–190
 wireless connections, 192–196
Newegg (website), 367
New Note button, 121
News, 103
News app, 132–133
News Sidebar, 132
New Track button (GarageBand), 287
Night Shift feature, 90–91
non-Apple base stations, 194
Notes app, 103, 121–123
Notes label, 120
Notes list, 121
Notification Center, 123–125
Notification Center corner, 95
Notification Grouping drop-down list, 105
notifications, setting of in Safari, 157
Notifications preferences, 104–105
Numbers app
 adding chart, 332–333
 aligning cell text, 327–328

 creating new Numbers document, 320–321
 deleting characters, 326
 entering/editing data, 325–326
 formatting with shading, 328–329
 formulas, 330–331
 inserting/deleting rows and columns, 329
 keyboard shortcuts, 325
 navigating/selecting cells, 324
 opening existing spreadsheet file, 321–322
 overview, 319
 printing spreadsheets, 334–335
 saving spreadsheets, 322–323
 selecting correct number format, 326–327
 window, 323–324

O

On Day check box, 120
OneDrive, 160
online help, 364
opening
 documents on iCloud, 160
 existing Pages document, 306–307
 existing spreadsheet file, 321–322
 Keynote presentation, 337
optical discs, 22
optical drive, 224
Option key, 57
outlets, 16
Outline layout (Keynote), 346
Outline tab (iMovies), 282
out-of-date utility programs, avoiding, 404

P

packing materials, 17–18
Page Down key, 48
Pages app
 adding background, 315
 adding photos, 314–315
 adding tables, 312–313
 Auto-Save feature, 308
 components and controls, 309
 copying text and images, 311
 creating new document, 305–306
 cutting, 311

- Document mode, 309
- entering/editing text, 310
- exporting documents, 318
- Format mode, 309
- formatting text, 311–312
- opening existing documents, 306–307
- overview, 305
- pasting, 311
- printing documents, 317
- reverting to older version of document, 308
- saving your work, 308
- sending documents, 318
- setting default fonts, 316–317
- spell-checking, 316
- using text, shapes, and graphics boxes, 310
- Pages list, 309
- Page Up key, 48
- pairing, 27
- panes
 - Content & Privacy pane, 179
 - Content & Privacy Restrictions, 239–240
 - Content pane (News), 133
 - Content pane (Safari), 138
 - Desktop & Screen Saver pane, 92–93
 - Displays pane, 90–91
 - Dock and Menu Bar pane, 98–99
 - Energy Saver pane, 97
 - Event/Project Library pane (iMovie), 268, 275
 - General pane, 95–97
 - Inspector pane (Keynote), 339
 - Layout pane (Keynote), 339
 - Layout pane (Pages), 309
 - Presenter Notes pane (Keynote), 339
 - Printers & Scanners pane, 211
 - Project pane (iMovie), 268, 275
 - Screen Time pane, 239–240
 - Sharing pane, 100–101
 - Thumbnails pane, 247
 - Time Machine pane, 101–102
 - Trailer pane (iMovie), 282
 - Users & Groups pane, 170, 172, 174, 175–176, 180, 183
- parental controls, 239–241
- partitioning, 373
- parts
 - audio, 12
 - Bluetooth, 14
 - connections for external audio, 14
 - FaceTime HD camera, 15
 - foot, 11
 - internal drive, 14
 - keyboard, 10–11
 - mouse, 10–11
 - overview, 9
 - ports, 12–13
 - power button, 12
 - power cable, 12
 - screen, 9
 - SDXC card slot, 15
 - video cards, 15
 - wireless Ethernet, 14
- passwords
 - for locked notes, 123
 - multiuser iMac, 171–172
 - not relying on single, 403
 - Safari, 156
- patch, 360
- People tool, 253–254
- permission errors, 388
- personal information, 28
- phishing, 402–403
- Photo Booth, 212–214
- photos
 - adding as floating object in Pages, 314
 - adding as inline object in Pages, 315
 - adding to reminders, 121
 - applying effects, 213–214
 - deleting, 213
 - importing from internal drive to Photos, 250
 - Photo Booth, 214–215
- Photos app
 - Add to Favorites toolbar button, 248
 - album, 251
 - Auto Enhance button, 260
 - browsing your memories, 257
 - cropping, 258–260
 - digging through your library with keywords, 256
 - Edit button, 248
 - Edit mode, 257–262
 - filters, 261
 - Full Screen, 247
 - iCloud Photos, 262–263
 - importing images from, 248–250

- Photos app (*continued*)
 - importing images into iMovie, 272
 - Info button, 248
 - My Photo Stream, 263–264
 - Organize mode, 254–256
 - organizing and sorting images, 250–257
 - overview, 245
 - People tool, 253–254
 - pushing to other devices, 102
 - removing red-eye, 260–261
 - retouching, 260
 - Rotate Counterclockwise button, 248
 - rotating tipped-over shots, 258
 - Search button, 248
 - searching by locations where photos were taken, 256–257
 - Share button, 248
 - Show Thumbnails as Square or Full Aspect Ratio, 247
 - Sidebar, 246
 - slideshow, 261–262
 - Smart Album, 251–252
 - tagging face, 253–254
 - Thumbnails pane, 247
 - toolbar, 246–247
 - Viewer, 247
 - Zoom slider, 247
- PhotoStream, 164–165
- pinned tabs, 153
- Piriform (website), 382
- Play button (GarageBand), 287
- Play Full Screen button (iMovie), 276
- Playhead (GarageBand), 287
- Playhead (iMovie), 269
- playlists
 - creating, 228–229
 - described, 225, 228
 - Internet radio stations, 235
 - Smart, 229
- Play Sound for Notifications check box, 105
- pointer, 41
- POP3/IMAP mail server, 28
- pop-up ads, allowing/blocking, 157
- pop-up banners, 125
- ports, 12–13
- Position on Screen button (Dock and Menu Bar pane), 98
- power button, 12
- power cable, 12
- PowerPoint presentations, opening in Keynote, 337
- power strip, 406
- power switch, 25–26
- Prefer Tabs setting, 96
- presentations
 - adding background shape, 344
 - adding slides, 340
 - aspect ratio, 336–337
 - creating, 336–337
 - creating slideshow, 344–345
 - deleting slide text, 341
 - formatting slide text, 342
 - media for, 343
 - opening, 337
 - overview, 335
 - PowerPoint, 337
 - rehearsing slideshows, 342
 - saving, 338
 - themes, Chrome, 336–337
 - using Presenter's Notes, 342
- Presenter Notes check box (Keynote), 342
- Presenter Notes pane (Keynote), 339
- Prevent Cross-Site Tracking check box, 155
- preview
 - Finder, 46
 - iMovie, 269, 275
 - notification, 105
 - Print sheet, 73
 - screen saver, 92–93
 - slideshow (Photos), 262
 - thumbnail (Photo Booth), 213
 - trailer, 282–283
- Print button, 74
- Print button (Safari), 143
- printing
 - connecting printers, 207–209
 - Keynote slides and notes, 346–347
 - network printers, 210–211
 - overview, 72–73
 - Pages documents, 317
 - sharing network printer, 203
 - spreadsheets, 334–335
 - USB printers, 208–210
 - web pages, 153–154

- Print sheet, 74
- privacy
 - cookies, 154–155
 - protecting, in Safari, 154–156
- Privacy Report, 155
- Project pane (iMovie), 268, 275
- Prosoft Engineering (website), 404
- Public folder, 61
- pushing, 160

Q

- Quick Actions, 60
- Quick Look, 44
- Quicktime movies, 272
- QuickTime Player, 150
- Quit command, 45

R

- Radio, 233–234
- Radio and Listen Now, 225
- RAID array, 374
- random access memory (RAM). *See* memory
- Random Order check box, 92
- Real instrument tracks (GarageBand), 290
- rebooting, 353–354
- Recent Applications check box, 44
- Recent Applications feature, 69
- Recent Calls list, 215
- Recent Items menu, 400
- Recent Items selection, 43
- Recent items setting, 97
- recertified hardware, 406
- Recommendations category, 378
- red-eye, removing, 260–261
- refurbished hardware, 406
- registering your iMac, 29
- registration information, 29
- remanufactured hardware, 406
- Reminders, 103, 118–121
- Reminders Sidebar, 118–121
- Remove History Items pop-up menu, 156–157
- repeating reminders, 120
- Require Password to Exit Slideshow check box, 346
- resolution, 90
- Retina display, 9

- Retouch feature (Photos app), 261
- Rewind/Forward One Measure buttons (GarageBand), 287
- right-click menu, 38, 40
- ripping, 232–233
- RJ-45 connectors, 197
- root account, 405
- Rotate Counterclockwise button (Photos), 248
- routers, 191–192, 197–198
- row (spreadsheet), 324, 329
- Roxio (website), 385

S

- Safari
 - about, 20
 - address box, 149
 - bookmarks, 145–147
 - clearing history, 156–157
 - configuring home and start pages, 144–145
 - downloading files, 149–150
 - major sections of Safari window, 138–139
 - navigational controls, 141–143
 - notifications, 157
 - overview, 137–139
 - passwords, 156
 - pinned tabs, 153
 - pop-up ads, allowing/blocking, 157
 - printing web pages, 153–154
 - privacy, 154–156
 - Reading List, 147–148
 - synchronizing bookmarks, 103
 - tabbed browsing, 151–152
 - Translation feature, 148
 - using History, 150–151
 - visiting websites, 138
- Safe Boot, 355
- Safe mode, 355
- Satellite mode (Maps app), 128
- saving
 - in GarageBand, 298
 - iCloud documents, 160
 - in iMovie, 284
 - presentations (Keynote), 338
 - spreadsheets (Numbers), 322–323
 - work in Pages, 308
- Scaled radio button, 90

- scanners, 211–212
- Schedule button (Energy Saver pane), 98
- scoring, 290
- screen (display), 9
- screen saver
 - settings, 92–93
 - turning off, 363
- Screen Time pane, 239–240
- screen wipes, 23
- scroll bars, 47, 96
- SDXC card slot, 15
- search box
 - Help, 75
 - Notes, 121
 - Reminders, 118
 - Spotlight, 89, 108, 110, 114–115
- Search button (Photos), 248
- secondary click, 40
- Secondary Click check box, 41
- selecting items, 52–53
- service center, 27
- setting up Monterey, 28–29
- Setup Assistant, 26
- shapes box (Pages), 310
- Share button (Notes), 122
- Share button (Photos), 248
- Shared folder, 184
- sharing
 - iMovie, 284
 - Internet connection wirelessly, 201–202
 - network file sharing, 202
 - news, 133
 - Pages documents, 318
 - Safari bookmarks, 147
 - songs, 299–302
 - web pages, 143–144
- Sharing pane, 100–101
- Sheet canvas (Numbers), 323
- Sheets tab (Numbers), 323
- shortcut menu, 40
- Shortcuts
 - adding to collections, 60
 - adding to Finder menu bar, 60
 - creating, 59, 81
 - features, 80
 - overview, 59
- Shot List tab (iMovies), 283
- Show/Exit Tab Overview button (Safari), 142
- Show in Control Center check box, 67
- Show Indicators for Open Applications check box, 99
- Show in Notification Center check box, 105
- Show Notification Preview, 105
- Show Notifications on Lock Screen check box, 105
- Show Recent Applications in Dock check box, 99
- Show Screen Saver After, Desktop & Screen Saver pane, 92
- Show Scroll Bars setting, 96
- Show Tab Overview button (Safari), 151
- Show Time Machine in Menu Bar check box, 102
- Show with Clock check box, 93
- shutting down, 353
- ShuttlePRO V2, 375
- Sidebar, 47, 55
- Sidebar (Safari), 138, 143
- Sidebar Icon Size setting, 96
- Sidcar, 163
- Siri
 - about, 21
 - launching applications, 43
 - sending messages, 216
 - speeding up your iMac by using, 397
 - synchronizing configurations, 104
- Size slider, 98
- slides (Keynote), adding, 340
- slideshow
 - Keynote, 344–345
 - Photos, 261–262
- Slides list (Keynote), 338
- slide text (Keynote), adding and editing, 341
- Small Dog Electronics (website), 367
- Smart Album, 251–252
- Smart Controls tab (GarageBand), 298
- Smart playlist, 229
- smileys, 216
- SMS text messaging, 216
- SMTP mail server, 28
- sneakernet, 187
- software, pre-installed, 19–21
- Software instrument tracks (GarageBand), 291
- software piracy, 405
- solid-state drive (SSD), 14
- songs

- adding, 283
- buying, 242–244
- deleting, 227
- finding, 227, 379
- knowing your, 230–232
- playing, 223–224
- sharing your, 299–302
- Songwriter project, 291
- sound effects (iMovie), 273–274
- Spaces, 63–64
- special keys, 57
- speeding up your iMac
 - column mode, 398
 - desktop background, 397
 - Dictation feature, 396
 - Dock, 398
 - Finder, 399
 - Go menu, 400
 - keyboard shortcuts, 399
 - memory, 396
 - overview, 395
 - Recent Items menu, 400
 - Siri, 397
- spell-checking (Pages), 316
- Spotlight
 - basic searches, 108–110
 - customizing, 114–116
 - Finder search window, 112–113
 - overview, 107
 - search criteria, 111–112
 - security, 111–112
- Spotlight Search box (System Preferences), 89
- spreadsheets, 326–327
 - adding chart, 332–333
 - aligning cell text, 327–328
 - cells, 320
 - creating, 320–321
 - defined, 320
 - deleting characters, 326
 - entering/editing data, 325–326
 - Excel, 320
 - formatting with shading, 328–329
 - formulas, 320, 330–331
 - functions, 320
 - inserting/deleting rows and columns, 329
 - navigating/selecting cells, 324
 - opening, 321–322
 - printing, 334–335
 - saving, 322–323
- Stacks
 - Desktop, 69
 - Dock, 69–71
- stand, 11
- standard user accounts, 169–170
- Start Page button (Safari), 142
- start-up keys, 355–356
- Status bar, 138
- step-by-step troubleshooting
 - check your Internet and network connections, 361
 - check your login items, 362
 - check your Trash, 361
 - disk repair, 358–359
 - Disk Utility, 356–359, 360
 - iMac Troubleshooting Tree, 359–363
 - investigate recent changes, 360
 - myths about, 352
 - overview, 351, 353
 - rebooting, 353–354
 - running System information, 363
 - start-up keys, 355–356
 - using Safe mode, 355
 - viruses, 361–362
- still images, adding, 272
- Stocks, 103
- Stop/Reload button (Safari), 142–143
- Storyboard tab (iMovies), 283
- streaming Internet radio, 222–223
- subfolders, 61
- surge protector, 16
- surge suppressor, 22–23, 406
- switch, 197–198
- Sync Library check box, 244
- System Administrator account, 405
- System Information, running, 363
- System Preferences
 - Apple ID, 102–104
 - changes to, 360
 - Desktop & Screen Saver pane, 92–93
 - Displays pane, 90–91
 - Dock and Menu Bar pane, 98–99

System Preferences (*continued*)

- Energy Saver pane, 97
- General pane, 95–97
- launching, 86
- migrating to new iMac, 30
- Mission Control preferences, 93–94
- Notifications and Focus preferences, 104–105
- overview, 86–88
- Printers & Scanners pane, 211
- Screen Time pane, 240
- searching for controls, 89
- Sharing pane, 100–101
- special setting, 88–89
- Spotlight, 89
- Time Machine pane, 101–102

T

- Tab bar (Safari), 138
- tabbed browsing, 151–152
- tab groups, 152
- tables (Pages), 312–313
- Tab Overview, 151
- tagging face, 253–254
- tags, 82
- Tap to Click check box, 41
- terabyte, 14
- text (Pages)
 - box, 310
 - cutting/copying/pasting, 311
 - editing, 310
 - entering, 310
 - formatting, 311–312
- Theme Picker button (Photos), 262
- Three Finger Drag check box, 41
- three-key shortcuts, 59
- Thunderbolt 2, 372
- Thunderbolt 3, 13, 372
- Thunderbolt cable, 31, 197
- Timeline (GarageBand), 287
- Time Machine, 31, 383, 385–388
- Time Machine pane, 101–102
- Time/Tempo display (GarageBand), 287–288
- title bar, 48
- Toast 19 Titanium, 385
- toolbars
 - defined, 49
 - iMovie, 269
 - Keynote, 339
 - News, 132
 - Numbers, 323
 - Pages, 309
 - Safari, 138
 - showing/hiding, 49
- Touch ID keyboard, 9
- trackers, 155
- tracking speed, adjusting, 41
- Track list (GarageBand), 286
- trackpad, 9
- Trackpad pane, 40–41
- tracks (GarageBand)
 - adding, 289–291
 - address, 290
 - Arrangement, 296–297
 - changing volume or balance of, 296
 - defined, 286
 - deleting, 289
 - muting, 296
 - tweaking settings for, 297–298
- Trailer pane (iMovie), 282
- trailers, 266, 281–283
- transitions, 279–280
- Transit mode (Maps app), 128
- Translation feature (Safari), 147–148
- Trash
 - ejecting removable devices, 68
 - emptying, 72, 380
 - overview, 71
 - rescuing items from, 72
 - sending items to, 72
 - troubleshooting, 361
- troubleshooting
 - Apple Service Providers, 364
 - check your Internet and network connections, 361
 - check your login items, 362
 - check your Trash, 361
 - disk repair, 358–359
 - Disk Utility, 356–359, 360
 - iMac Troubleshooting Tree, 359–363
 - investigate recent changes, 360
 - macOS Help Center, 364

- myths about, 352
- online help, 364
- overview, 351
- rebooting, 353–354
- running System information, 363
- start-up keys, 355–356
- step-by-step, 352–363
- using Safe mode, 355
- viruses, 361–362

TWAIN device standard, 211

U

- uninterruptible power supply (UPS), 16, 22–23, 353, 406
- Universal Clipboard, 163
- “universal” serial numbers, 405
- UNIX, 39
- unpacking your iMac, 17–18
- updating macOS, 360, 391
- upgrading
 - internal drive, 371–374
 - memory, 366–370
 - out-of-date utility programs, 404
 - overview, 365
- USB (Universal Serial Bus) cables, 159, 208, 237, 249, 288, 373
- USB ports, 13, 207–208, 237, 292
- USB 3.0 connections, 13, 23, 372
- USB-C ports, 13
- USB flash drives, 23
- USB joystick, 374
- USB printers
 - compatibility, 208
 - connections, 208
 - downloading software, 210
 - installing software, 208–209
 - installing without software, 209–210
- USB scanners, 211–212
- user accounts
 - account name, 171
 - adding, 169–170
 - Admin (administrator), 169
 - changing login settings, 182–183
 - defined, 168
 - deleting, 174–175

- guest, 175–176
- managing access settings, 177–180
- migrating to new iMac, 30
- modifying, 172–174
- standard, 169–170

Users & Groups pane, 170, 172, 174, 175–176, 180, 183

V

- VESA mounting adapter, 11
- video
 - adding to iMovie, 276
 - cropping, 278
 - editing, 278–279
 - marking, 276–277
 - pulling in, 270–271
 - removing from movie, 277
 - reordering, 277
 - rotating, 278
 - trimming, 279
 - watching with TV, 241–242
- video cards, 15
- video controllers, 375
- Viewer (iMovie), 268
- View/Hide Loop Browser button (GarageBand), 287
- View/Hide Media Browser button (GarageBand), 287
- Vimeo, 284
- viruses, 361–362
- visual bookends, 279
- Visual Equalizer window, 298
- visualizer, 239
- voiceover narration, 274–275
- Volume slider (GarageBand), 287–288
- Volume Up/Volume Down key, 57

W

- warranty, 373, 406
- WAV files, 222
- web pages
 - muting audio, 152
 - printing, 153–154
 - reminder, 120
 - sharing, 143–144
- Website Preferences button (Safari), 143

websites

- adding to the Dock, 68
- Apple, 75
- Apple Service Providers, 364
- CDW, 367
- Contour Design, 375
- cookies, 154–155
- Crucial, 367
- For Dummies, 75
- MacMall, 367
- Macworld, 75
- M-Audio, 375
- Newegg, 367
- online help, 364
- Piriform, 382
- Prosoft Engineering, 404
- Roxio, 385
- Small Dog Electronics, 367
- visiting, 139–141

web surfing, 21, 137, 141–144

When Switching to an Application check box, 93

widescreen aspect ratio, 9

windows

- applications, 38–39
- closing, 49
- Column view, 46
- List view, 46
- minimizing and restoring, 47–48
- Monterey, 38–39
- moving and zooming windows, 48
- only one active at once, 50

- scrolling in and resizing, 48

Windows, switching from, 31–32

Windows Migration Assistant, 31

wired networks

- advantages of, 189–190
- connecting to, 197
- grafting wireless access to, 190
- hardware, 197–198
- security, 190
- speed, 189

wireless Ethernet, 14

wireless networks

- advantage of, 190
- base stations, 192–194
- closed, 195
- connecting iMac to, 192
- convenience, 190
- Internet routers, 191–192
- joining, 194–196
- using iMac as sharing device, 191

Word documents, opening in Pages app, 308

workflows, 389

wrist rest, 23

Y

YouTube, 284

Z

Zoom button (Safari), 142

Zoom feature, 48

About the Author

Mark L. Chambers has been a technology author, computer consultant, BBS sysop, programmer, and hardware technician for more than 30 years — pushing computers and their uses far beyond “normal” performance limits for decades now. His first love affair with a computer peripheral blossomed in 1984 when he bought his lightning-fast 300 BPS modem for his Atari 400. Now he spends entirely too much time on the Internet and drinks far too much caffeine-laden soda.

With a degree in journalism and creative writing from Louisiana State University, Mark took the logical career choice: programming computers. However, after five years as a COBOL programmer for a hospital system, he decided there must be a better way to earn a living, and he became the Documentation Manager for Datas-torm Technologies, a well-known communications software developer. Somewhere in between writing software manuals, Mark began writing computer how-to books. His first book, *Running a Perfect BBS*, was published in 1994 — and after a short 25 years of fun (disguised as hard work), Mark is a best-selling technology author. Go figure!

His favorite pastimes include collecting gargoyles, watching St. Louis Cardinals baseball, playing his three pinball machines and the latest computer games, supercharging computers, and rendering 3D flights of fancy — and during all that, he listens to just about every type of music imaginable. Mark’s worldwide Internet radio station, *MLC Radio* (at www.mlcbooks.com), plays only CD-quality classics from 1970 to 1979, including everything from Rush to Billy Joel to the *Rocky Horror Picture Show*.

Mark’s rapidly expanding list of books includes *MacBook All-in-One For Dummies*, 2nd Edition; *MacBook For Dummies*, 9th Edition; *OS X Yosemite All-in-One For Dummies*; *Macs for Seniors For Dummies*, 4th Edition; *Build Your Own PC Do-It-Yourself For Dummies*; *Building a PC For Dummies*, 5th Edition; *Scanners For Dummies*, 2nd Edition; *CD & DVD Recording For Dummies*, 2nd Edition; *PCs All-in-One Desk Reference For Dummies*, 6th Edition; *Mac OS X Tiger: Top 100 Simplified Tips & Tricks*; *Microsoft Office v. X Power User’s Guide*; *BURN IT! Creating Your Own Great DVDs and CDs*; *The Hewlett-Packard Official Printer Handbook*; *The Hewlett-Packard Official Recordable CD Handbook*; *The Hewlett-Packard Official Digital Photography Handbook*; *Computer Gamer’s Bible*; *Recordable CD Bible*; *Teach Yourself the iMac Visually*; *Running a Perfect BBS*; *Official Netscape Guide to Web Animation*; and *Windows 98 Troubleshooting and Optimizing Little Black Book*.

His books have been translated into 15 different languages so far — his favorites are German, Polish, Dutch, and French. Although he can’t read them, he enjoys the pictures a great deal.

Mark welcomes all comments about his books. Visit MLC Books Online, his website, at www.mlcbooks.com.

Dedication

This book is dedicated to my youngest daughter, Rose Chambers — she of the Billie Jean — with all the love and happiness I can send her way.

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A guide to Apple's iMac should be as elegantly designed and straightforward as the computer itself . . . and luckily, I had just the right mix of folks to make sure that it turned out that way!

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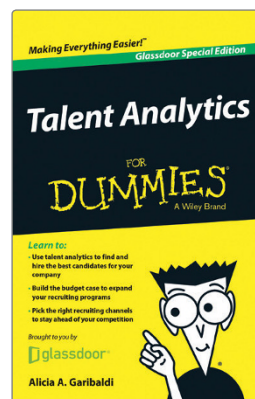
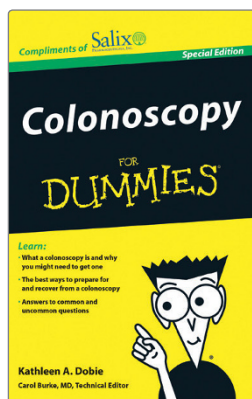
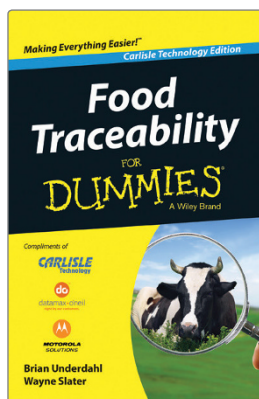
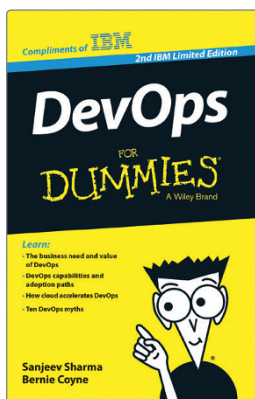
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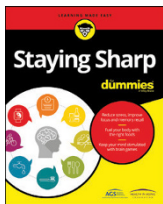
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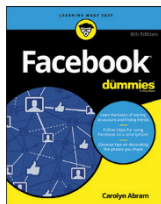
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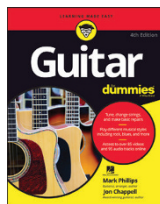
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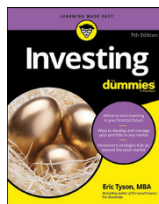
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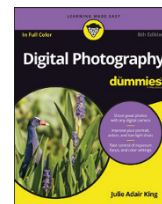
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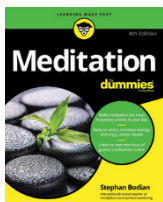
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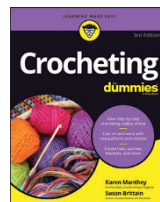
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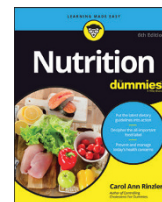
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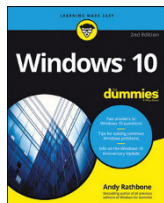


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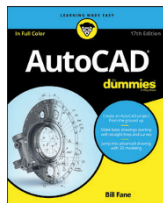


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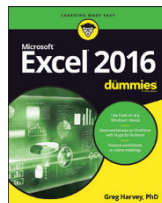
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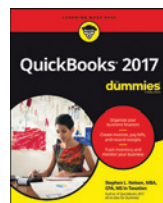
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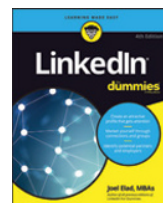
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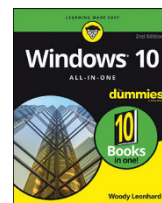
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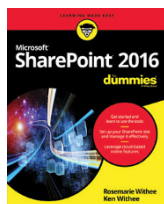
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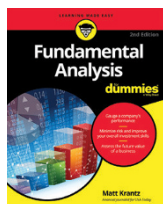
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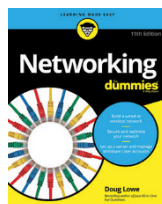
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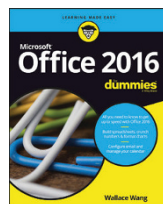
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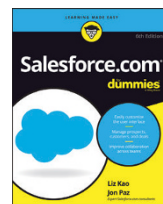
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