

Part of the tech4me2 series

PCs MADE SIMPLE

A no-jargon guide to buying, setting up, and
maintaining your desktop or laptop.



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Regarding the Scope of this Handbook

This handbook covers the basics of buying, setting up, operating, and maintaining your PC. It focuses on the Windows® operating system (through Windows 11), and on the Chrome browser (although the Edge browser is quite similar). Approximately 70% of home computers are PCs running the Windows operating system, so very likely you will find the information in this handbook relevant to your needs.

But, just to be clear, this handbook does not cover Macs, which run on a significantly different operating system, or tablets, which in many ways are more like smartphones than PCs. Neither does it cover repairs requiring the opening of your PC, which are best handled by a trained professional. If something smells like it's burning, you'll want to call in a tech pro.

I include many security tips and suggestions throughout this handbook in the relevant sections. Unfortunately, PC and internet security is a broad topic these days – and getting continually broader – so I was not able to cover internet security in depth in this book. If you are interested in staying safe online – and you should be – note that I will be releasing another book, along with a parallel video course, in the third quarter of 2025.

Before we dive in, let me assure you that these days you don't need to be a tech wizard to operate a PC effectively and efficiently. However, the more you know, the more confident you'll feel trying something new, or dealing with the occasional hiccup. My goal is to teach you what you need to know, without burdening you with things you don't need to know.

Happy computing!

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Foreword

Imagine your favorite cinema cowboy. I think of Clint Eastwood, but feel free to choose your own.

In my mind, I see Clint on top of his horse. They've traveled a lot of miles together, and they have an unspoken bond.

In fact, Clint bought this particular horse because he sensed that bond right away.

Clint then bought the proper gear for his new horse. Bridle, bit, blanket, saddle. And a curry comb, of course.

Clint and his horse have grown to become partners. Clint's horse serves him well, almost reading Clint's mind at times. He wants to serve and please his master.

In return, Clint cares for his horse, giving him ample time to rest, and never pushing him too hard. And when Clint rides into a new town, his first stop is always the livery. There he hands over the reins,

knowing that his horse will be fed, watered, and given a good brushing down.

Clint depends on his horse, and he wants to keep his four-legged friend healthy and content.

In much the same way, you probably depend on your PC. So it's important to buy the PC that's right for you, and to buy the necessary peripherals. You'll want to set it up so that it will do what you need it to do. And you'll want to take care of your PC's health.

If you take care of your PC using the simple tips and routines that follow, your PC will perform better for you, and you'll head off problems at the pass. You can extend your computer's useful life, save money, and avoid a lot of frustration.

This book is written in plain language. You don't need to be a tech whiz to follow along—even if you consider yourself a bit “remedial” when it comes to computers.

The real challenge isn't understanding—it's building good habits. That means putting things on your calendar, setting reminders, and actually **doing** the things that will keep your PC running well.

Read on with a positive mindset. Jot down notes. And start thinking of your PC like the modern equivalent of that trusty horse: something you depend on—and something worth taking good care of.

Let's saddle up and get started!

Chapter One

Introduction to PCs

In this chapter, we'll look at what a PC is, what makes it "personal", and how it's different from other computing devices like smartphones or tablets. We'll also review the major components comprising your PC.

Just What Is a PC?

A PC, or personal computer, is a general-purpose machine designed principally for individual use. For many, it's almost impossible to imagine life without one. PCs come in two main flavors, desktops and laptops. Both do essentially the same things: run programs, store files, allow you to surf the web, and help you stay connected to the world. Choosing between a desktop and a laptop often comes down to space, portability, and, of course, budget. We'll discuss selecting a PC in the next chapter.

How do smartphones differ from PCs? After all, smartphones continue to become ever more sophisticated, and these days can do much of what a PC can. However, PCs and smartphones have significant differences: they generally run on different operating platforms, device settings are therefore different, how they access the internet is different, as is the maintenance required for each, and the issues you can expect to encounter.

Then we have tablets, which lie somewhere between smartphones and PCs. While some tablets run on the Windows operating system which is covered in this handbook, more run on Android, like smartphones do, or on Apple's iOS. Ultimately, I opted to include discussion of tablets in my upcoming guide to smartphones. (For information on upcoming books, write to: contact@tech4me2.com)

What Makes a PC "Personal"?

When you hear "personal computer", think customization. Your PC isn't just **a** machine, it's **your** machine. You can adjust settings which will change the look and feel of your PC, install programs that suit your interests or profession, and generally organize your digital world just the way you like it. Later in this guide we will look at the various settings options in Windows; I think you'll be surprised to see just how customizable your PC is.

Now let's review the components of a PC. The goal isn't to prepare you to be an IT tech, but simply to give us a common vocabulary to use as we go forward.

Hardware, Firmware, and Software

At a high level, you can think of your PC as a person, consisting of:

- Hardware is the body: it includes all the physical components—keyboard, screen, processor, hard drive, memory, and ports.
- Software is the mind: the applications and programs you use every day to write, browse the web, check email, or manage your finances, among many other tasks.
- Firmware is the nervous system: it's a layer of software embedded in the hardware itself. It helps your PC boot up, and helps different parts of your computer communicate properly with each other.

The balance of this chapter will focus on your PC's hardware components. Let's pop the hood and take a closer look at what's inside.

Essential Computer Components

Your PC might look like a sleek laptop, or just a modest box under your desk. Regardless, beneath the surface, PCs are largely the same, with the same key parts. These components determine how fast your machine is, how much it can do at once, and how reliable it will be over time.

The Brain and Memory

At the heart of your PC is the CPU, or Central Processing Unit, also called the "chip". It's the brain of the machine, carrying out instructions and doing calculations. The faster the CPU, the snappier your computer will be when opening programs or juggling multiple tasks.

Right next to the CPU is RAM (Random Access Memory). This is your PC's working memory. It temporarily holds the information your computer is actively using. More RAM means your computer can handle more at once without slowing down. So RAM also contributes to – or detracts from – the speed at which your PC can operate.

Then there's storage—where your files, programs, and operating system live. These days, most PCs come with either a traditional "HDD" (hard disk drive) or a faster, sleeker "SSD" (solid-state drive). SSDs boot up your PC faster and load programs more quickly. They are also less prone to damage since they have no moving parts—which is an important consideration if you will frequently be on the go with your PC. SSDs also use slightly less energy, and don't make the scratchy sounds that HDDs sometimes do. The drawback is that SSDs tend to cost more than HDDs, but not a lot, and my recommendation would be to go with the SSD unless the price difference is great, and you plan to keep your PC in one spot.

The Supporting Cast

Motherboard: This is the central circuit board that connects all the parts of your computer. It's where everything plugs in and communicates.

Power Supply Unit: The PSU converts electricity from your wall outlet (which is alternating current at 110-120 volts) into a form your PC can use (low-voltage direct current).

Graphics Card (GPU): If the CPU is your PC's brain, the GPU is its artistic eye. It handles anything visual—which is especially important for gaming, photo and video editing, or high-res displays. Many PCs use integrated graphics (built into the CPU), but higher-end ones may have a dedicated GPU.

Cooling System: CPUs and graphics cards generate heat, so your computer needs fans or cooling systems to keep temperatures in check. A hot computer is a slow computer—and sometimes a broken one.

Sound Card: Most PCs have built-in sound these days. If you're an audiophile or doing professional audio work, you might use a separate sound card, but for most of us it's not necessary.

Input/Output Ports: These include USB ports (for flash drives, printers, keyboards), HDMI or DisplayPort (for monitors), and audio jacks. Familiarizing yourself with your PC's ports will help you plug in confidently. You should definitely identify your USB port(s), since you'll almost certainly be using it to connect various devices to your PC.

Seeing and Interacting: Monitors, Mice, Touchpads, and Touch Screens

Obviously, you'll need to interact with your computer. The primary output device will be your monitor. There are various input devices, giving you some choice.

Monitors/Screens

Most desktop computers come with a separate, standing monitor, which connects to the computer tower. These screens come in different sizes, with 21 to 27 inches being common. A larger screen can be easier on the eyes and more comfortable if you spend a lot of time in front of your computer.

Laptops have monitors built into their lids, typically between 13 and 17 inches. If you're using a laptop at home, you can connect it to a larger external monitor for more comfortable viewing.

Keyboards, Mice, Trackpads, and Trackballs

We're all familiar with keyboards. We use them to enter most data on our PCs. If you buy a laptop, you'll of course get whichever keyboard is integrated into it. (It is possible, however, to connect a different keyboard, either via a cable or Bluetooth.) If you buy a desktop, a monitor will often be bundled in with the tower, but you may be able to select the monitor you prefer.

Tip: If you will be typing in a language besides English, you can add that language to your preferences and then reconfigure the keyboard so that you can type in characters not used in English. For details, click [here](#).

Let's discuss some other input devices.

The mouse has been around for ages and is familiar to almost everyone. It lets you move a pointer around the screen to click, drag, scroll, and select. Most mice today are wireless, though wired ones can still be found.

A trackball is another external device. While similar to a mouse, a trackball is stationary. Instead of moving it about as you would a mouse, you guide the cursor and make selections by rolling the ball on top of the trackball. You might think of a trackball as an upside-down mouse.

A trackpad, also called a touchpad, is a built-in alternative to a mouse, found on nearly all laptops these days. Instead of moving an external mouse around, you simply slide your finger across the flat surface in front of the keyboard to move the cursor. You can tap to click, use two fingers to scroll, and even pinch to zoom on some models.

Trackpads are convenient, especially for portable use, since they're built right into the laptop—no external gear or flat surface is needed. They're also good for working in tight spaces, such as on an airplane or at a small desk. However, some users find them less precise than a traditional mouse, especially when doing detailed work like dragging

files or editing photos. Your PC's trackpad may seem a bit sensitive or awkward until you become accustomed to it. If you continue to wrestle with the trackpad, you can adjust its sensitivity:

In Windows 11, go to Settings > Bluetooth & devices > Touchpad. You'll see several control settings which you can adjust until the trackpad feels right to you. In Windows 10, go to Settings > Devices > Touchpad. There will be a drop-down menu in which you can change the Touchpad sensitivity.

Finally, we have touchscreens. Many laptops now come with touch screens, which allow you to scroll, tap, and zoom with your fingers — just like you would on a smartphone or tablet. A touch screen can be especially helpful when reading long documents or scrolling through websites. You can pinch to zoom, swipe to scroll, or tap to select without using a mouse. These laptops will also have a keyboard, giving you the flexibility to use whichever you choose. My current PC has both a touchscreen and trackpad, and I use both, depending on the task.

Which is better? There is no clear winner. Select whichever you prefer, to make your time at the computer more enjoyable, and less of a chore — which leads us nicely into our next chapter.

Chapter Two

Choosing the Right Computer for Your Needs

Buying a new computer can feel a bit like buying a car—there are lots of models, lots of features, and plenty of jargon. But don't worry. This chapter will help you cut through the noise and focus on what really matters: your needs.

Desktop vs. Laptop

Let's start with the big decision: desktop or laptop?

Desktops are great if you have a dedicated workspace and don't plan to move your computer around. They usually offer better perfor-

mance for the price, and have full-size keyboards and screens. They're also a little more durable since they don't get banged around.

Laptops, on the other hand, are all about convenience. They're compact, portable, and perfect if you travel, move between rooms, or like working from the couch. They're a little harder to upgrade later, and typically cost more for the same power—but they make up for it in flexibility. For many of us, the laptop is the only real choice.

If you're considering a laptop, you'll likely see models with and without touch screens. A touch screen can make it easier to scroll, tap, drag windows, and navigate, especially for users who are more comfortable with phones and tablets. On the downside, they may cost a bit more and will likely require more frequent cleaning due to smudging. Today there are many PCs which have both a touch screen and a touchpad (aka "trackpad"), so you can have the best of both worlds.

Regardless of whether a PC has a touchscreen or not, you should be able to easily connect an external device – a mouse or trackball – by plugging it into your PC's USB port.

How Important Is the Brand Name?

Even a cursory search on the internet or at your local big box store will reveal just how many brands there are available these days. Some of the major names include HP, Dell, Lenovo, Asus, Acer, Toshiba, and Microsoft (yes, they produce PCs as well as software).

Which brand is best? There's no clear answer. Through the years, I've owned a Toshiba, two or three HPs, a Samsung, and two Dells, including my current PC. All have been dependable and served me well. If you search the internet a bit, you'll likely find HP and Dell topping many "best" lists.

I would recommend staying with one of the better-known brands. Reputations are earned. Also, if you buy an off brand, you may have more difficulty getting it serviced. You might be tempted to buy a "Brand X" PC just because of its low price. However, if you do some shopping around and are a little patient, you'll almost certainly be able to find a name-brand PC on sale.

While I would suggest sticking with a major brand, beyond that, I think that your particular needs are more important than the name. So let's consider what type of user you are, and what you'll likely need.

Matching the PC to Your Needs

Not everyone needs a powerhouse PC. Let's look at some user types and what kind of system fits best.

Everyday Use

If you'll be browsing the web, emailing, attending Zoom calls, writing, or playing solitaire, you don't need top-tier specs. Here are the desired specifications (and don't worry if you don't understand some of these terms. Just ask for them):

- At least 8 GB of RAM
- A 256 GB (or more) Solid-State Drive or traditional Hard Drive
- Intel i5 or AMD Ryzen 5 processor minimum
- Video editing is a system hog.

If you plan to purchase a laptop, I strongly suggest buying one with an SSD, which will stand up to travel better.

A budget or mid-range machine will do just fine and can be purchased for \$400-\$600.

Creative Tasks

Will you be working with photos, videos, or music? You'll want to purchase a PC with a bit more horsepower. Video editing in particular is a system hog. Specifications:

- At least 16 GB of RAM
- A 512 GB (or more) Solid-State Drive
- Faster processor, such as Intel i5 or i7
- Video editing is a system hog.

Expect to pay \$600-\$900.

Gaming or High-Performance Use

Go big. Desired specifications:

- At least 16 GB of RAM minimum
- A 512 GB (or more) Solid-State Drive
- Multi-core processor
- Dedicated graphics card

These machines can be pricey, \$1,000 and up, but they're built for speed and power.

Additional Considerations:

- Do you prefer a touch screen or touchpad? I have a Dell Inspiron 2-in-1, which has both. I mainly use the touchpad, but find the touch screen handy for some activities.
- You might also look for a model with two USB ports if you might be plugging more than one device at a time into your PC.

Other Items

When you purchase your computer, consider what else you will need, such as peripherals. Sometimes you can get special prices for add-on items at the time of initial PC purchase. Some items which you might want to pick up include:

- Surge protector and smart charger

- Mouse if you prefer one
- Headset
- An external drive for backups
- A carry case or protective sleeve for a laptop

Should You Buy the Extended Warranty?

While we are discussing purchasing add-ons, let's address the question of whether you should purchase an extended warranty, which will almost certainly be offered to you.

This is a tough question because, among other factors, the answer depends on your personality. You might simply feel more comfortable purchasing an extended warranty (aka "protection plan", "service plan", or "service contract"), and they aren't generally all that expensive. However, according to PCMag, they generally aren't worth the extra money.

In general, I would agree with PCMag. PCs have become more dependable over the years. And if you are going to encounter a problem with your PC, it will likely surface early, when your PC is still under warranty. I'd qualify this by saying that if you plan to travel frequently with your computer, with all the attendant jostling, you might consider an extended warranty as worthwhile.

Migrating from Your Old PC

Switching over to a new PC involves more than just unboxing it. Programs, folders, files, and information stored by your browser need to be migrated over to your new PC.

The process of migrating to a new PC is much easier than it used to be. This is especially true if your old PC runs on Windows® and so does your new PC. I bought a new Dell laptop recently and because my old PC (a Samsung) and the Dell both run Windows with the Chrome browser, the migration was surprisingly straightforward.

That said, if you get nervous at even the suggestion of performing the migration yourself, it's worth paying a tech pro to handle it for you. This is an important job, after all. If I recall correctly, Best Buy offered me this service for \$100. While I opted to do the migration myself, you'll of course want to verify the cost and weigh whether it's worth the money to you. (Perhaps you have a tech-savvy friend or relative who can help you for free or a modest bribe.) Also be aware that even if you pay to have the migration done, you'll probably still need to reload software you've purchased onto your new PC.

If you might do the migration yourself, or are simply curious about what it entails, I've included a high-level checklist as an appendix.

What to Do with Your Old computer?

First, I'd recommend keeping your old PC around for perhaps a month after migrating to the new PC, just to be sure that you didn't

miss porting over any important programs or data during the migration.

You may wish to donate your old computer after you've completed the migration to your new PC. To me, donating it is preferable to simply trashing it. There are many people around the world who simply cannot afford to buy a PC, and who would be very happy to receive your hand-me-down.

If you instead opt to toss your old computer, please do so in a responsible way. Computers contain small amounts of harmful metals and also flame retardants, which can find their way into the environment if not disposed of properly. If you aren't sure how to properly dispose of your computer, contact a local IT professional.

Important: Whether you plan to donate your old computer or simply dispose of it, be sure to first wipe the old PC's hard drive. You don't want your sensitive data to fall into the wrong hands. Once you are ready to wipe your old computer, follow these steps (for Windows 11):

- Open Settings.
- Select "System", then "Recovery".
- Next select "Reset this PC".
- Next Select the option to "Remove everything".

You can watch this video to see the process step by step: <https://www.youtube.com/watch?v=J92-bDo2BuA>

In the next chapter, we'll walk you through setting up your new PC, step by step.

Chapter Three

Setting Up Your PC

You've got your new PC, still in the box, or maybe you're setting one up again after a move or a cleanup. Either way, this chapter walks you through what to do before you press that power button—and what to expect afterward.

Selecting a Space

Before setting up your PC – ideally, before you even buy it – give some consideration to where you'll be using it most often. Where you put your PC matters, especially for desktops, because once it's set up, you likely won't want to move it again. Choose a spot with the following in mind:

- Flat, stable surface with good ventilation (not tucked into a tight cabinet)
- Access to power outlets and, if needed, your router for a wired connection

- Comfortable seating and desk height, and sufficient elbow room
- Proper lighting and screen positioning to avoid eye strain and neck pain

For laptops, you have more flexibility, but if you're setting up a permanent or semi-permanent workspace, it's still worth thinking about posture, lighting, and comfort. If you'll be connecting to the internet via Wi-Fi, set up near the router, or try to be line-of-sight.

Unboxing and Assembling

Open the box and lay out all the components. You'll typically find:

- The computer itself (desktop tower or laptop)
- Monitor (desktop)
- Power cord or adapter
- Keyboard and mouse (for desktops, and occasionally for laptops)
- Setup instructions or quick-start guide

Right now, **before doing anything else**, record the information specific to your computer, such as model number and serial number, plus the date purchased and where. The model and serial numbers may be on the box. If not, gently turn your computer over and look

for a label or a QR code which you can scan. Once you find the information, write it down and file it in case you need it later. You might also take a picture with your cell phone and email the picture to yourself, so that this key information will always be handy if you need to call tech support, or in case of loss or theft.

This is also an excellent time to **register your PC**. Sure, you're in a hurry to begin using your new PC, but if you skip the registration step during setup, you may never get back to it. And registering your device will help tremendously should you need to contact the PC maker's Tech Support, or if you need to exercise your warranty.

While you're handling the administrative tasks, put your receipt and warranty information in an envelope and file it where it will be handy if needed. And if you will use your PC for work, check to see if you might be able to deduct all or part of its cost.

Desktop Setup

When setting up your desktop, it's best to perform the following steps in the order indicated:

1. Place the computer tower on the floor or a stand—**not** directly on carpet.
2. Connect the monitor using an HDMI, DisplayPort, or VGA cable (these will be included).
3. Plug in the keyboard (and mouse if applicable) via USB ports.
4. Connect the power cord from the tower to a surge protector (not straight into the wall socket).
5. Connect the monitor to power as well.

Note: We will discuss connecting your PC to the internet in Chapter 6.

If you are curious as to what HDMI, DisplayPort, and VGA cables look like, you can do a quick Google search on each. However, almost certainly the specific cables you will need will be packaged with your computer.

There are a number of reasons why you should not place the desktop tower directly on carpeting:

- **Heat buildup:** Carpeting can block airflow to the underside vents or fans, especially if the tower has a bottom-mounted power supply or intake. That trapped heat shortens the life of components.
- **Dust accumulation:** Carpet fibers generate dust and static. PCs sitting on carpet suck in more dust, which clogs fans and filters faster.
- **Static electricity risk:** While modern PCs are well-shielded, static electricity from carpet can, in rare cases, cause component damage.
- **Stability:** Soft or uneven carpet can cause the case to wobble or sit at an angle, especially on plush or high-pile carpeting.

Laptop Setup

Laptop setup is even easier:

1. Plug in the power adapter to a surge protector.
2. Open the lid—it may power on automatically or you may need to press the power button. (If nothing happens, don't panic. It could just be that the battery needs to be charged first.)
3. If using an external mouse or keyboard, plug those in via USB or connect via Bluetooth later.

Cables and Wiring

Get Organized from the Beginning

Keeping cables organized helps avoid tripping hazards, dust bunnies, and frustration. Use twist ties, Velcro straps, or binder clips to route cables neatly along the back of your desk. Do it while you are setting up your desktop, so you won't have to crawl around under the desk later.

Surge Protection and Safety

Always plug your computer and monitor into a surge protector. Electrical surges can happen due to lightning strikes, the return of power after an outage, or even the sudden demand for electricity when larger appliances (such as vacuums or air conditioning) are turned on. Electrical surges can fry delicate components instantly. Consider a surge protector with battery backup (an uninterruptible power supply or UPS) if you live in an area with frequent outages.

First Boot: What to Expect

When you power on your PC for the first time, you'll be guided through the Windows® setup process. We'll walk through most a bit later.

Creating a Password and Using Biometrics

But first, let's discuss creating a secure way to sign in. If you use a Microsoft account to sign in (for example, perhaps you already use OneDrive or Windows365), you can use that account's user name and password. If you choose to create a local account instead, you'll be asked to create a new password for your PC. It is important to note that changing your password for one Microsoft product changes your password for ALL of your Microsoft products.

You can always adjust your sign-in preferences later by going to Settings > Accounts > Sign-in options.

Tip: Choose a password that's easy for you to remember but difficult for others to guess. Avoid using names, birthdates, or simple words like "password" or "123456". Hackers are very skilled at pulling this information from social media.

Windows also lets you sign in using a faster or more convenient method, such as a PIN, fingerprint, or facial recognition. These options may be offered during setup, or you can enable them afterward

in your Settings. To explore these sign-in options, go to: Settings > Accounts > Sign-in options. Simply follow the onscreen instructions for each.

These biometric options are both secure and convenient. With a simple tap or a quick look, you can unlock your PC in seconds — no typing needed, and no worries about someone else getting ahold of your password.

In the next chapter, we'll finish the physical setup of your computer system by connecting peripherals.

Chapter Four

Connecting Peripherals and Drivers

Now that your PC is up and running smoothly, it's time to connect the extras that make it more functional. In this chapter, we'll talk about how to hook up your printer, external storage, webcam, and how to stay powered up and protected. We'll also discuss what "drivers" do and how to do a bit of troubleshooting should a device not work as expected.

Printers and All-in-One Devices

Nowadays, these devices are usually plug-and-play. Most connect to the computer via USB. Just plug the cable into the USB port and turn

on the device—Windows should then detect and install the required driver (this term is discussed below) automatically.

If the printer is not automatically detected, try the following first:

- Check all physical connections,
- Restart the printer and your PC.

If these steps fail, you may need to update the printer driver – the little bit of code which allows the PC and printer to communicate. Drivers and troubleshooting them are covered later in this chapter.

If you'll be using a wireless printer, you'll need to connect it to your Wi-Fi network. Be sure that you know the name of your Wi-Fi network and the network's password before beginning. (If your Wi-Fi has not yet been set up, refer to Chapter 6 and to the Home Wi-Fi Setup Checklist at the end of this book.) Most printers today have a small screen which guides you through the setup; consult the setup manual which came with your printer. This video shows how to connect a wireless printer (and also a smartphone) to your Wi-Fi network:

https://www.youtube.com/watch?v=fVhHBMGz_Ck&t=6s

External Data Devices

External data devices vary from thumb drives (also called "flash drives") to heavy gaming drives the size of a small book. Regardless, these devices all plug into any available USB port. They're great for backups, transferring files, or expanding your storage. When you plug one in, it should appear automatically in File Explorer under "This PC."

IMPORTANT: Removing an external device without safely ejecting it first can lead to data loss or corruption, especially if you were writing to the device. To safely eject the flash drive, select the caret symbol at the right of your lower task bar, click the Eject symbol, and wait a couple of seconds until a message displays saying that the device can be safely ejected.

Cameras and Sound

Most laptops now come with a built-in webcam and microphone. If yours doesn't—or if you want better quality—you can plug in an external webcam via USB. As with printers, most will install automatically. You may be instructed to go to a website to download driver software.

Cameras

If you are having a video chat or meeting and you can see others, but they can't see you:

1. First check to see if there is a physical slider next to the camera lens that is closed, covering the lens. Try moving the slider to uncover the lens. (That's the voice of experience speaking.)
2. Check Settings > Bluetooth & devices > Cameras > Camera privacy settings. Be sure that the slider next to Camera is set ON, allowing applications to access the camera.
3. If everything above seems OK so far, it might be a driver issue.

See the section on drivers below.

Sound

Plug standard headphones or speakers into the green audio jack or a USB port. Connect wireless ones via Bluetooth. You can select which sound device you want to use under Settings > System > Sound.

If you are experiencing microphone issues, first go to Settings to verify that the proper device is selected. Also check in whichever application you are using (for example, Zoom or Google Meet) to be sure that you are not muted there.

Wireless Peripherals

If your PC has Bluetooth built in (most do), you can pair wireless input devices easily:

1. First ensure that the device is charged, that it is switched on, and is in pairing mode.
2. Go to Settings > Bluetooth & devices > Add device.
3. Select the device from the list when it appears and follow any prompts.
4. Follow any additional prompts to complete pairing.

Tip: Bluetooth range is limited. For best results, keep your devices within a few feet of the computer and make sure there aren't walls or large objects in between.

Understanding Drivers

Drivers are tiny programs that help your PC's hardware and software talk to each other. Every component—your printer, graphics card, webcam, sound system—has its own driver. Drivers reside in your PC's firmware.

Without the right drivers, your PC will likely still run, but certain features won't work properly. Maybe the screen resolution will look fuzzy, or the sound won't play.

Most drivers install automatically in Windows 10 and 11. When you connect a new device or finish setting it up, Windows usually finds and installs what's needed. Also, drivers often will be downloaded automatically when you are online, and then installed the next time you reboot your computer. You can also install drivers manually by visiting the manufacturer's website and searching for the model number of your computer.

Updating and Troubleshooting Drivers

Many problems which seem mysterious—maybe your webcam or printer suddenly isn't working properly—can often be solved with a simple driver update. Here's what to do if you suspect a driver issue:

- Go to Settings > Windows Update and check for updates.
- Open Device Manager (search for it from the Start menu) to look for any devices displaying warning symbols. If you find any, right-click on that device and choose Update driver.
- Visit the manufacturer's website (Dell, HP, Lenovo, NVIDIA, etc.) and download the latest driver manually.
- If you are still experiencing issues, uninstall the driver from Device Manager, then restart your PC. Windows will usually reinstall the correct version.

Caution: Never download drivers from pop-up ads or random websites claiming to “fix your drivers.” These are often scams and may install malware on your computer.

With your peripherals connected and configured, the physical setup is done. Let's now turn our attention to the Windows ® operating system.

Chapter Five

Windows Basics

Now that your PC is physically set up, it's time to get the Windows ® operating system up and running. You can think of Windows ® as your PC's main control center. It lets you run applications, manage files, and browse the web, among many other things. Without it, your PC is just a fancy (and expensive) paperweight.

Installing the Windows ® Operating System

If Windows Is Pre-Installed:

Most new PCs come with Windows 11 already installed, so the initial setup is minimal.

Power on your PC and follow the guided setup: language, keyboard layout, Wi-Fi, Microsoft account, and privacy preferences. You'll want

to have the Wi-Fi network name and password handy before beginning. (We'll discuss connecting to your Wi-Fi in detail in Chapter 6.) Make sure you connect to the internet during setup. This allows Windows to download and activate any important updates automatically.

If Windows Is Not Pre-Installed:

But in case you're setting up from scratch or doing a fresh install, here are the steps:

- You'll need a flash drive (sometimes called a "thumb drive" or "pen drive") loaded with Windows 10 or 11.
- Plug the flash drive into your computer's USB port and boot up. Your PC will typically detect it and begin the installation process.
- Follow the on-screen prompts to install Windows, which will guide you through the process step by step.
- When prompted, enter your product key (given to you after purchasing Windows) to activate Windows.

Your Windows® operating system performs several functions, many of them behind the scenes. You'll learn more about these functions and how you can tailor them to your needs in the chapter Personalizing your PC and Setting Up Accounts. But for now, let's take a quick look at some basic functionality. Ready?

Logging in

First let's cover the first step: Turning on your PC. To do this, press the power key. It's usually located at the top right of the keyboard, but may be located on the side. If you have difficulty finding it, consult the Quick-Start Guide that came with your PC. Note that you should press the power key firmly, but not hold it down. (Holding the power key down for several seconds is actually how you can force stop a locked computer.) Now be patient. It may take several seconds for your PC to boot up.

After booting up, you'll need to log in. When you do this, you are actually signing into the Windows operating software. Use the same credentials that you used (or set up) in the last chapter.

Note that it is possible to set up multiple users on a single computer, each with their own capabilities and settings. We'll cover this in a later chapter, in case this might apply to you.

The Windows Desktop

Once logged in, there will be an open field in front of you which is called the "Desktop". (This term has nothing to do with the term "desktop computer".) Initially it should be largely empty (unless you migrated over lots of stuff from your previous computer). But you should see a few icons (those little pictures) on the left, including the **Recycle Bin, Control Panel, and your personal folder**. You'll want to click on these icons and explore, but let's discuss them briefly:

- **Recycle Bin:** when you delete a document, image, file, or folder, it's not immediately erased from your PC. Instead, it goes into the Recycle Bin. Items in the Recycle Bin can be restored until they are permanently deleted by clicking the Empty Recycle Bin icon at the top of the screen.
- **Control panel:** This icon is a handy shortcut. When you double-click it, you'll see major Windows settings, and also all programs installed on your PC. If you later want to uninstall a program, you can do that from here.
- **Your personal folder:** You can save all of your content (documents, photos, etc.) in this folder. Double-clicking this icon is one of a number of ways to Windows' File Explorer, which we will discuss shortly.



Desktop with icons to the left and Taskbar below

The Taskbar

Let's now turn our attention to the bottom of the screen. That row of icons is called the "Taskbar". You'll be using it often.

Starting at the left, you'll see a blue square, usually referred to as the "Windows button". When you click on it, a box opens. In it you'll see several icons for frequently used programs. In the bottom right of this box is a button which looks like a circle with a vertical line through it. That is the Start/Restart button. Click it and you'll see options for turning your computer off, restarting it (perhaps after downloading a software update), and putting it to sleep.

Just to the right of the Windows button is the Search field. You can enter here to search for something on your PC, which is helpful if you just can't remember where you saved something. You can also search the web from this field.

As you open applications and begin working, you'll notice that the applications' icons will be added to the middle and right of the Taskbar. If you expect to use one of these applications frequently, you can right-click on its icon and click on "Pin to taskbar" in the menu which displays. Then, whenever you wish to open that application simply by double-clicking its icon in the Taskbar.

To the far right of the Taskbar you'll see a few icons. This part of the Taskbar is called the Notification Area. The icons displayed here will vary, but might include Wi-Fi status (on or off, signal strength), sound volume, and battery status – much like the gauges and lights on your automobile dashboard. There will also be a caret symbol;

clicking it will usually display "overflow" icons which couldn't fit in the Notification Area. Finally, looking at the far right corner, you'll see the current date and time.

Navigating File Explorer

Windows also includes File Explorer, which is your digital filing cabinet. You open it by double-clicking the icon that looks like a manila folder; you should see this folder icon on your Desktop and in your Taskbar. You should see some standard folders (Desktop, Downloads, Documents, Pictures, Music) already set up for you. You can create additional folders as you need them; simply click the + sign at the upper left. When you create a new folder, you can nest it under another if you'd like.

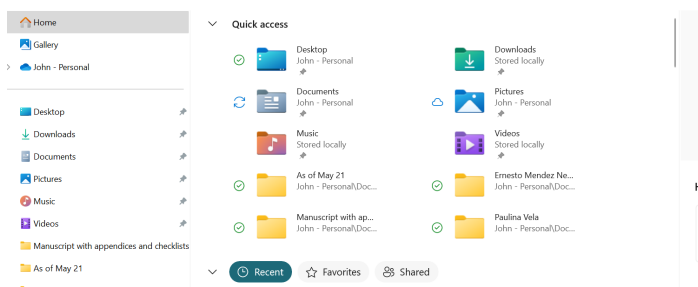
Tip: Consider what content you expect to be saving going forward and let that guide you as you create and organize your Explorer folders.

Here are a few ways to make File Explorer work harder for you:

- Use the Quick Access area to pin frequently used folders. Quick Access appears automatically as a dropdown menu when you open File Explorer. It shows frequently used folders and recently opened files. You can pin any folder by right-clicking it and selecting "Pin to Quick Access."
- Right-click a file or folder to rename, delete, or move it quickly by selecting the desired action in the drop-down menu.
- Use the Search bar at the top right to find files by name or

keyword.

- Sort files by date, type, or size by clicking the column headers. Note that clicking a column heading again will reverse the order of the data displayed, so you could, e.g., easily display data from lowest to highest, and then highest to lowest.
- Use Ctrl + A to select everything in a folder. Combine this command with Ctrl + C or Delete for quick tasks. You'll learn many more keyboard shortcuts like these in the final chapter.



File Explorer showing Quick Access at the top

Install Key Software Packages

With Windows now installed, this is a good time to take stock of software programs you may need to reload, as these often aren't migrated over from your old PC. Some common software that you may need include:

- Antivirus: Activate or install antivirus protection (Windows Defender, Norton, Malwarebytes, etc.). Windows includes

Windows Defender Antivirus software. However, you might want to consider additional protection.

- Office Suite: Install Microsoft Office (or the free alternative OpenOffice suite) for word processing, presentations, spreadsheets, etc.
- PDF Reader: Install Adobe Acrobat Reader or your preferred alternative. "PDF" stands for "portable document format", which is a type of file designed to be readable by most software packages.
- Cloud Storage: "Cloud storage" simply means storing data (files, folders, images, videos) on remote servers. Doing so provides a backup in case you lose your computer or for any reason cannot access needed data on your PC's HDD or SSD drive. Cloud data is also easily shared with others, which is particularly useful for sending large files such as photo albums or videos. There are many cloud storage providers, but the most commonly used include OneDrive, Google Drive, or Dropbox.

These days, most software can be downloaded from a webpage. Be sure that before attempting to download and activate any software package you have the activation code, which serves as proof that you purchased a software license.

OK, it's finally time to take your PC for a spin on the internet highway. Let's get you connected!

Chapter Six

Getting Online

While there are many activities that you can do offline, you'll almost certainly want to also do some online, such as sending and receiving emails, shopping, or checking your bank balance. So in this lesson we discuss getting online.

Let's begin by reviewing the major components which work together to allow you to surf the web.

To connect to the internet, you'll need an internet service provider, or ISP. Some well-known ISPs include Spectrum, AT&T, and Comcast. There are many ISPs, although there may only be one or two serving your geographic area.

There are a few ways in which you might be connected to your ISP. In the olden days, we connected using regular phone lines, via either dial-up or DSL (digital subscriber line). These days, you're more likely connected by cable or fiber-optic cable, or possibly satellite.

Once the digital signal from your ISP reaches your home, a modem converts that signal to analog. The word “modem” means “modulator-demodulator”, indicating its role in converting the inbound and outbound signals. It’s possible to set up a very simple home network with just a modem by connecting your PC directly to the modem.

However, most home networks also incorporate a router. If you plan to connect more than one device (PCs, smartphones, TVs) to the internet, or to use Wi-Fi, then you’ll need a router as well. The router acts like a traffic cop, directing signals and coordinating all of your devices. It also connects to the modem and from there to the ISP.

These days, the modem and router may be combined in a single device, usually referred to as a “gateway”.

Now that we’ve reviewed the components of a network, let’s look at the two types of internet connection: wired and wireless.

Wired (via Ethernet cable)

This is the old-school method, but it’s the most stable, and also generally the fastest. You simply plug one end of an Ethernet cable into your computer and the other into your router. It’s fast, secure, and not affected by walls or interference.

In case you are unsure what Ethernet cables look like, they are much like phone cables but thicker. An Ethernet cable will have a squarish plastic connector at each end (again, much like a phone cable) which is inserted into a port designed specifically to accept it. When

firmly inserted, you'll hear a "click". Ethernet cables can come in several different colors, but the color does not indicate any difference in capacity. (I've added an image of an Ethernet cable to appendix Home Wi-Fi Setup Checklist.)

Wireless (Wi-Fi)

This is what most people use today. Your PC connects to your home network via radio waves. It's convenient and doesn't require cords. However, the signal can be weakened – often significantly – by distance, thick walls, or interference from other devices.

Note: If you already have a Wi-Fi network set up, simply do the following:

Go to Settings > Network & internet > Wi-Fi. Then click Show available networks. Select your network from the list. You will need to enter the network password.

You can then click the box which says "Connect Automatically". Then, if the connection is broken or ended for any reason, your PC will reconnect to the network without your needing to log back in.

Initial Setup

There are a few steps involved in setting up your Wi-Fi, but the process is simple if taken set by step. To assist you, you'll find a very detailed Home Wi-Fi Setup Checklist as an appendix. Read through it all

before beginning the setup so you'll have a good idea of what you'll be doing.

I won't repeat the checklist steps here, but will highlight a few points:

- When plugging in and turning on the various devices, be sure to do so in the order indicated.
- Name your network something easy to identify. Your neighbors' networks might also display on your PC in the list of networks available, and you'll want to be able to identify yours.
- Be very sure to create a strong password using a mix of letters, numbers, and symbols. Do not use "password" or "123456". Hackers have been known to cruise slowly through neighborhoods looking to hack into home Wi-Fi networks. Don't make it easy for them.
- Write down the password and save it, perhaps in multiple places.
- When prompted to select a security mode, select WPA2 or WPA3. While WP2 is secure, WP3 has much stronger encryption, so select it when it's an option.

Once the setup has been completed, connect your PC, smartphone, and other wireless devices to the network.

Improving Your W-Fi Connection

To improve your system's stability, whenever possible position your router in a central location in your home, or in or near the room where you anticipate using your computer most often. If this is not possible, consider adding a Wi-Fi extender or a USB extender.

A Wi-Fi extender is a device that amplifies and extends the range of your existing Wi-Fi signal to areas where it's weak. Extenders are typically inexpensive and easy to install; they plug into a regular electrical outlet. Prices for extenders begin at around \$30.

A USB antenna is similar to an extender, but the signal is not relayed on. Rather, the antenna picks up the Wi-Fi signal and funnels it directly into your PC. Prices begin at less than \$10, so you might want to try this option first. It might be a very inexpensive solution.

Note that for both extenders and USB antennas, there are many brands, models, and prices. I recommend checking purchaser ratings and comments before making your choice.

Troubleshooting Common Network Issues

Even if you set everything up perfectly, problems are likely to occur from time to time. Power outages are a common source of issues. If your online connection is broken and you experience trouble getting back online, try the following before calling for help:

- If you connect to the internet via Ethernet cable, verify that the cable is securely connected at both ends. If the problem

persists, try a different port or cable.

- If nothing works, it could be that the problem lies with your ISP (internet service provider). Call them and ask if there is an outage in your area.

For Wi-Fi issues specifically:

- Doublecheck that Wi-Fi is enabled in your PC's network settings.
- Try plugging into a different port on the router. (There are generally two.) Doing this will often resolve the issue.
- Restart your router by unplugging it for a full 10 seconds, then plugging it back in. You'll need to give it time to fully power up.

Considerations When Traveling

If you chose to purchase a laptop rather than a desktop, you likely did so to give yourself the freedom to take your PC with you when you are away from home. And indeed, it's easier than ever to stay connected when you travel. However, here are a few cautions to keep in mind:

Be very cautious when using public Wi-Fi, such as in a mall, coffee shop, airport, or even your hotel room. These networks are not secure. Often a password isn't even required. Even if one is, ask yourself if you trust everyone else around you who is using the same network.

You should make a small investment to get a VPN (virtual private network). What a VPN does is to provide end-to-end encryption, making it impossible for most hackers to snatch your data. A VPN will also disguise where you are physically located.

Even if you have a VPN, avoid possibly exposing sensitive data by making online purchases, for example, or accessing bank information.

There is a lot of discussion about whether it's really necessary to put your PC (and cell phone) in Airplane mode when flying. It is best to follow the crew's instructions. The Airplane mode switch can be found under Settings > Network & internet.

If you have a portable charger which contains a lithium-ion battery, you should stay abreast of stricter requirements coming. The FAA already bans bags containing electronics using lithium-ion batteries from being checked. While you may still bring these devices aboard in your carry-on bag, you may be requested to keep them in sight at all times. The practice of charging your PC in the overhead bin will be prohibited.

The reason is simple. Lithium-ion batteries generate a lot of heat, and have caused fires aboard planes, many of them leading to crashes, at least one of them with fatalities (a UPS flight in 2010). For this reason, it is unsafe to leave electronics containing lithium-ion batteries out of view in the cargo hold. While these batteries could still cause a fire in the cabin, the fire would hopefully be noticed and put out before getting out of hand. So understand that stricter policies are for everyone's safety.

When on the go, you'll likely be unplugged much of the time. You can adjust your settings to get the most from your battery. Go to Settings > System > Power & battery.

Did you know that switching off your Wi-Fi when you don't need to be online will also conserve battery power? The reason is that whenever the Wi-Fi switch is on, your computer will be continually searching for a Wi-Fi signal, which causes an unneeded drain on your battery.

Now that your computer is connected to the internet, you're ready to go surfing! You'll do that via a "browser". In the next chapter, let's review the many things that the Chrome browser, including tabs and extensions, can do for you.

Chapter Seven

The Chrome Browser

In the last lesson, we got you ready to surf the web. But before you paddle out into the waves, you need to understand the interface you'll be using: your web browser.

In this chapter, we'll explain what a browser is, why many people use Google Chrome as their web browser, and how to manage browser windows, tabs, extensions, and important settings — all in plain language, without the jargon.

What Is a Browser?

You've almost certainly used a browser, even if you didn't know what it was called. Whenever you're connected to the internet, whether you're reading the news, checking your email, or shopping online, you'll be doing it through a browser. But just what is a “browser” anyway?

A web browser is simply an interface program that lets you access websites. When you open your browser, a screen called a "window" will display. Don't confuse this "window" with your "Windows ®" operating system; they are completely different entities.

Common browsers include Google Chrome, Microsoft Edge, Mozilla Firefox, and Apple's Safari. Windows PCs come preloaded with Microsoft Edge, but many people prefer Chrome. Either browser is fine for most users. If Edge came pre-loaded on your PC, and you'd prefer to use Chrome, you can download it simply by searching on "Download Google Chrome". It's completely free.

Note that it's easy to switch between browsers, and in fact you can have both installed on your PC at the same time. I use Chrome predominantly, but in the morning I often check the news and weather via my Edge browser.

Navigation Basics

Let's begin by reviewing how to navigate Chrome. (Note that Edge is organized in very much the same way as Chrome.) First note that whereas the Windows "taskbar" is located at the bottom of the screen, the Chrome "toolbar" is located across the top of the screen.

Begin by finding the "address bar" at the top left of the screen. When you are on a web page, its URL, or virtual location on the internet, will display here. You can also go to a particular URL by typing it in the bar.

Let's skip over to the right corner. At the very top you'll see three icons:

1. a minus sign: Clicking this symbol "minimizes" the window while still leaving it open. To display the window again, click the Chrome (or Edge) icon in your Taskbar at the bottom of the screen.
2. two squares, one atop the other: Clicking this symbol reduces the size of the windows; clicking it again returns the window to cover the entire screen
3. an X: Clicking this icon closes the window and any tabs open in it.

You can resize windows when they are not covering the entire screen. To do this, move your cursor to the edge of the window until you see a double-headed arrow. Then click to "grab" the edge and pull it in the desired direction. This function is quite handy if you'd like to have more than one window open at time, perhaps side by side.

Immediately below the maximize icon (the middle one) you'll see a circle. Clicking this opens your profile, which contains basic information about you and your account. You can edit your profile [here](#).

And below the close icon, the X, you'll see three dots stacked vertically. If you click on this icon, the Chrome menu displays as a drop-down menu. You'll see a lengthy list of functions and shortcuts, such as opening a new window, managing tabs and extensions,

managing passwords, clearing stored data, even translations. We will discuss using many of these functions and features in this lesson.

What Are Tabs?

You'll also need to know the term "tab". Within a single window, you can have several tabs open simultaneously. For example, you might have your email inbox open in one tab, your calendar in another, and three different websites open in three other tabs, all in the same window.

Browser tabs look much like tabs at the top of a manila folder in a filing cabinet. You can switch quickly between applications simply by clicking the appropriate tab. Note that the application you are leaving will still be open, and you can easily return to it.

To open a new tab, click Ctrl + T, or simply click the + sign at the top right of your screen. To close a particular tab, simply click the X at the right end of that tab. To reposition a tab, simply click on it and drag it right or left.

You can even create tab groups. First click the four-box icon at the top left of your window. Click Create a new group and name it. To add a tab to this new group, simply click on a tab, then right-click, then in the drop-down menu select Add tab to new group.

Tip: Reopen a recently closed tab: Press Ctrl + Shift + T, or Menu (:) > History > recently closed pages. This is very helpful if you close a tab in error.

Bookmarks

One useful feature for organizing projects and tasks is bookmarking. If you'd like to return to a webpage at a later time, you can bookmark it. To do this, while on the page, simply click the star icon in the address bar. You'll be prompted to give the page a name and indicate which virtual folder to save it in.

You can access a bookmark later from the Bookmarks Bar (at the extreme right of the top toolbar), or from the main three dots drop-down menu. To delete a bookmark, simply right-click on it and choose Delete. If you'd like your bookmarks to display across the top of the screen for quick access, click Ctrl + Shift + B or go to Settings > Appearance > Show bookmarks bar.

How would you use bookmarking to organize your work? Let's say you are planning a trip abroad, and there are many things to do, such as finding accommodation. You've found the website of a great resort and would like to be able to easily retrieve the website later. Simply save that site in a new folder called "Vacation". You can add other sites to this folder as you find them, making side-by-side comparisons easier.

Caution: While windows and tabs are extremely handy, having too many open at the same time can slow down your PC. This is because application processes may be running on each webpage in the background on each page. Closing windows and tabs should help speed up your PC, but you may also need to restart the browser, by simply closing and reopening it, or restart your PC.

Now that you understand browser windows and tabs, you can level up your game by adding some browser extensions.

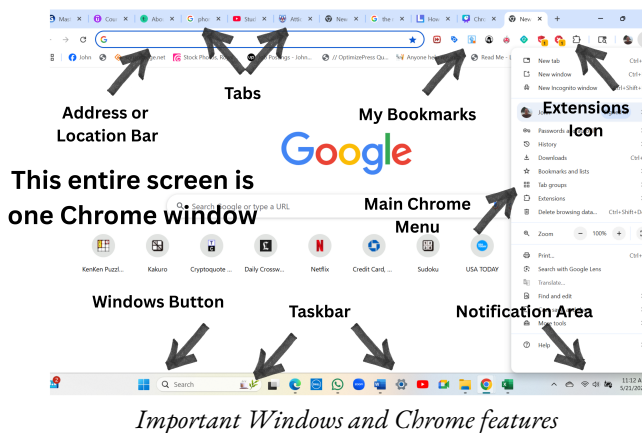
Extensions: Handy Add-Ons

Chrome can assist you with many tasks. Over time, you'll discover more and more ways to use its features. But you can expand Chrome's capabilities further by using extensions. Extensions are "applets" which add specific features or functionality, such as grammar checking, password storage, translations, and ad blocking. A favorite of mine is Honey, which finds discount codes and cash-back deals when I shop online.

You can download extensions from the . Be extremely cautious, however, of downloading extensions from other sites, as extensions can carry malware. It's a good idea to check reviews of an extension before downloading it. Also, during installation, note what permissions you'll be granting the extension. Some virus protection software will verify an extension's safety prior to downloading it, and will block the download of suspect extensions. I use Guardio for this.

Over time, you may acquire a sizeable collection of extensions. To manage extensions, click the puzzle piece icon (top right) and select Manage extensions. Delete extensions that you no longer use. You can pin to the top taskbar extensions which you use frequently.

Here is a screen capture which should help orient you. It indicates the terms we just discussed (at the top and right), as well as those which we learned in the chapter about Windows basics (at the bottom).



Understanding Cookies and Cache

First, what do these terms mean? Cookies and cache are somewhat similar but serve different purposes.

Cookies are small bits of user-specific text code which are downloaded to your PC by websites that you visit. The ostensible reason is to personalize your user experience. Cookies can store information such as your login details and shopping cart contents, and any information which you've entered into an online form, such as shipping information. This is convenient if you plan to return to the website, especially if you were in the middle of a task when you left the site. Cookies allow you to simply pick up where you left off.

While cookies can be a convenience, they could potentially pose privacy issues. Cookies track your behavior, for example, which web

pages you've visited and interacted with. This information can also be used to determine which ads are presented to you, which can become annoying.

Because of privacy concerns, when you visit a new website, you will often be asked to accept or reject cookies. interested in learning more about the regulations around cookies, visit .

Note that when you open an incognito window (discussed below), none of your browsing history, cookies, or information which you may have entered on a screen will be saved.

While we are discussing cookies, let's address the matter of whether you should log out of websites before closing the browser, or if simply closing the browser is sufficient.

Recall that cookies are user-specific. If you are the only person using your PC, then it really doesn't matter if you log out or not.

However, if others might use your computer after you, you should log out of any open website before closing the browser. This signals to the website that you have indeed closed your session. Otherwise, if you simply close the browser without signing out, cookies may indicate that your session is still open. Someone else could come along and see which sites you've visited. Worse, if they then visit a site that you failed to log out of, the cookies might automatically sign them back in, thinking that person is you, returning. You certainly don't want anyone else accessing your email or banking information!

So it is better to log out of sensitive sites before closing the browser. And if you are using a public computer, perhaps at the library, be very sure that you log out of all the sessions, including your email. To be doubly secure, when using a public PC, first open a window in incognito mode, which is discussed below.

And what is cache? Cache also contains information about sites that you've visited, but for different reasons. Cache stores images which have been downloaded to your PC, as well as some code. Storing this information helps webpages load faster when you return to them, because some of the information has been pre-loaded.

Although cached information reduces screen loading times, it can eventually slow down your computer as images and other data which are no longer needed begin to accumulate, clogging the system. Therefore, it's a good idea to purge your cache periodically to reduce clutter.

To purge cache, and also cookies, click the three vertical dots at the upper right of your browser screen, and then select Delete browsing data from the dropdown menu. You can choose which type(s) of data to purge, and for which time period.

Incognito Mode: Private Browsing

A handy feature in Chrome is "Incognito mode". (Other browsers have similar features which go by other names.) Incognito mode provides a degree of anonymity, as an Incognito window doesn't save browsing history or cookies, and to a degree masks who you are.

How might you use Incognito mode?

First, as your browsing history isn't stored, any subsequent users can't see where you've been.

Websites also won't know if you've visited them before. This can allow you to bypass paywalls. For example, many online magazines allow you to read only a few articles for free each month, after which you must subscribe. By using Incognito mode, you can continue to read articles for free. (I use this trick so that I can do the USA Today crossword every morning without subscribing. Shhh.)

Incognito mode can also help you secure better pricing when shopping online. I travel a great deal and use Incognito mode when shopping for the best airfare. Why? Because travel websites and airlines sometimes use tracking cookies to detect when you've searched a route multiple times. I've demonstrated a desire to buy, and the airline's system will price seats accordingly.

As an example, let's say you searched a carrier's website for a ticket from New York to Paris in a certain date range. You find a decent fare but would like to shop around a bit more. Later, you see a better fare for the same route and write down the flight details. But when you go back to the carrier's site, you can't find the cheaper deal. What's going on?

The carrier's website has downloaded cookies to your computer. When you returned to the carrier's website, the cookies told the program that you'd searched this route before. It surmised that you were

serious about buying, and didn't show the cheaper fare. When using Incognito, your searches aren't saved, and cookies are cleared after each session. This gives you a clean slate and may help you get lower prices.

To open an incognito window, type Ctrl + Shift + N, or click the three-dot menu (⋮) at the top-right of Chrome, then select New Incognito Window.

Be aware that Incognito mode has limitations. No one who has access to your PC will be able to see which sites you visited while in incognito mode. However, your employer, internet service provider, or school may be able to access this information. To gain greater anonymity and to encrypt your information, consider using a VPN (virtual private network).

If you haven't been using Incognito mode, you can still clear your browsing data manually by clicking the Chrome menu > History > Clear browsing data. Choose what data to remove and how far back.

Chrome's Security Features

As your browser is your connection to the web – the good, the bad, and the ugly – you need to exercise some caution. Fortunately, Chrome comes with a number of built-in security features, including:

- Safe Browsing warns you if you are trying to navigate to a website which looks suspicious.
- Chrome can suggest strong passwords and save them securely so that you don't have to remember or record them all.

I use this feature and suggest that you consider doing so, too. Visit **chrome://settings/passwords** to manage saved logins.

- You can easily run a quick safety check in Chrome: Menu (:) > Settings > Privacy and security > Safety Check. You'll usually be alerted automatically at the moment, but it doesn't hurt to run a safety check now and then.

Take a few minutes to explore your Chrome browser. You might just discover something new.

In the next chapter we'll look at personalizing your PC further by adjusting your Windows settings and setting up additional users.

Chapter Eight

Personalizing Your PC Settings & Setting Up Users

Your computer is fully operational now, but there's still a bit of tweaking to do. Although we covered some of the basics of Windows earlier, there is much more to explore. In this chapter, you'll learn how to personalize the way your computer looks and sounds.

Essential Settings to Review and Adjust

Windows 11 ® gives you a great deal of control over how your PC looks, feels, and performs. Let's walk through these, focusing on settings that most users will want to review and possibly adjust. These settings affect everything from screen appearance to battery life, start-up behavior, privacy, and more.

To access the Windows settings, press the Windows key (usually sitting in the lower taskbar, to the left) + I. Alternatively, you can type “Settings” in the search field, then click on Settings when the search results display.

Yes, there are many settings, and a lot of decisions to make, but we’ll only cover here some that you might want to change at the outset. And don’t overthink this step. You can always return and make changes.

Display Settings (Settings > System > Display)

These settings can greatly affect how easy your PC screen is on your eyes. If you use your PC often, be sure to review the Display settings. Specific settings include:

- Set the brightness until its comfortable for you to read. Note that in different lighting conditions, you may want to adjust this setting.
- The Scale and layout setting allows you to adjust text size and screen elements as needed for comfortable reading. Note that this setting in Windows affects display globally and is independent of the “Zoom in” function in the Chrome browser which you might use on a particular webpage.
- Display resolution should be set to the recommended setting for the clearest text and images.
- Night light reduces blue light in the evening to make the screen easier on your eyes.

Sound Settings (Settings > System > Sound)

If you plan to use your PC's built-in speakers and microphone, you can skip on down. If you plan to set up new speakers (which would include a headset or earbuds), add them as indicated. And if you would like to use an external microphone, you can add it here. These devices may be connected via Bluetooth or by a USB cable.

Notifications (Settings > System > Notifications)

Here you can choose which apps can send you notifications. I hate being interrupted and sometimes not even knowing why, so I turn off most notifications.

Power and Battery Settings (Settings > System > Power & Battery)

We discussed these settings briefly earlier. If you are going to be traveling with your PC, you will likely be relying on your battery at least some of the time. You might wish to review and adjust these settings prior to leaving:

- **Screen Timeout** – Set how long the screen stays on when the PC is idle. Setting a lower value saves power.

- Sleep Settings – Choose when the PC should go into “sleep mode” when inactive. (To wake up a sleeping computer, press any key and wait a moment for the screen to display.)
- Battery Saver – Turn this on when the battery is low to extend usage time. This is a handy setting for laptops on the go.

Tip: Recently Windows 11 on my Dell laptop was crashing frequently. I was always able to restart my PC and boot up, but the problem was irritating and a bit concerning. Eventually I reinstalled Windows, but that failed to fix the problem. On a whim, I began putting my computer into Sleep mode before closing the lid, and that seems to have resolved the issue. You might try this if you have a similar problem.

Storage & Cleanup (Settings > System > Storage)

As you use your PC, programs and data will naturally accumulate. It's a good idea to periodically check how much space is available on your hard drive. Maintain a good “buffer” of free space to keep your PC humming along.

When you enter the Storage settings, you'll immediately see how much free space you have, and what's using space on your hard drive. Photos and videos are frequent culprits, as are apps. You may opt to move some photos and videos to the cloud or an external hard drive.

You can also check under Cleanup suggestions. Note that while it's typically OK to purge the Recycle Bin (as its contents have already been discarded), you may want to look through Downloads to see if there is anything you want to save before purging.

Turn on Storage Sense, which will automatically delete temporary files and recycle bin content for you.

There are many other settings under System, but for now you probably don't need to adjust any others. You may, however, want to review each subcategory of settings for future reference.

Network & Internet Settings (Settings > Network & Internet)

These settings should look familiar, since you came here to set up your Wi-Fi. But let's review some of the key ones.

Wi-Fi: Generally, you'll want the toggle switch turned On. When it is, you can see the various networks in the immediate area. There are often many, which is why you should name your network something easy to recognize. If it's not already selected, select the one that you'll be using, and enter the password when prompted.

VPN: We discussed VPNs briefly earlier. A VPN will help you greatly in staying secure online. Windows does not provide you with a VPN; however, many virus-protection packages include a VPN, and you'll want one. Once it's switched on, you shouldn't need to worry about it anymore.

Mobile hotspot: You may never use this feature, but it can come in handy at times. It allows you to share your internet connection with another device nearby. In effect, your PC will act as a Wi-Fi router.

Airplane mode: We've discussed this feature. It's best to follow your flight crew's directives about whether you can or cannot use Wi-Fi. Once you've landed, be sure to turn it back on!

Personalization (Settings > Personalization > Background, Colors, Themes)

What's one of the first things you do when you move into a new place? Most likely, you'd decorate it to suit your taste.

In a similar way, there are many personalization options in Windows. Frankly, many are bells and whistles rather than critical settings. However, you may want to choose light or dark mode based on your preference for eye comfort. Many folks like to upload a photo of a pet or tropical beach to serve as their desktop background. You can also play around with color schemes. This is the fun stuff, so feel free to poke around.

Startup Apps (Settings > Apps > Startup)

I encourage you to take a look here. It might be a little surprising. There are three categories of apps:

Installed apps: You might want to click here and see just how many apps are already loaded on your computer. (Many were preloaded at the factory.) Over time, you'll want to uninstall those which you don't choose, but at this point I discourage you from doing that, as a program that you don't recognize may be important behind the scenes.

Default apps: Sometimes you have a choice of which apps you'd like to perform a particular function. For example, you might want to use the Chrome browser rather than the default Edge browser, or you might want to change your email service to Gmail. Here's where you can make those changes.

Startup apps: Skip down to Startup apps, which is the most important setting in this category. These settings control which programs start automatically when you turn on your PC. Disable apps you don't need right away to speed up boot time. This does not uninstall these apps; it just means that they aren't automatically launched when you first boot up. Most apps aren't in fact necessary when you first boot up. Deselecting apps from the startup sequence can make quite a difference, so if your boot time seems slow, this is the first place to check.

Accounts and Sign-in Options (Settings > Accounts)

There is a lot of information in this block of settings, covering a wide range of content. You may want to adjust your Sign-in options right from the get-go and circle back to the rest later.

General account information: As Windows is a Microsoft product, your Microsoft account information displays at the top. You'll see, for example, what you've purchased from Microsoft, such as Microsoft 365 or cloud storage.

Sign-in options: Scrolling down, you'll find a number of options for how you'd like to sign in (via PIN, fingerprint, or facial recognition (if available) for faster, more secure login. Note that if you'd like to activate facial recognition or fingerprint sign-in, you'll need to scroll down to Additional settings and toggle on the first switch,

Time & Language (Settings > Time & language)

These settings are largely self-explanatory, but I'll make a couple of suggestions.

If you travel much with your computer, be sure the Set time zone automatically setting is switched on. This setting will update your PC's clock and display time if you cross time zones, and also for Daylight Saving Time.

If you plan on writing a great deal, you might also want to review the options under Typing. Perhaps you'd like to try out the Voice typing function.

If you plan to type in a language other than English, click on Language & region, then next to Preferred languages, click the Add a language button. You can set this language as your preferred language or leave it as English.

Accessibility (Settings > Accessibility)

The many settings here are grouped into Vision, Hearing, and Interaction. Each is self-explanatory. Adjust settings to suit your personal needs and preferences.

Privacy Settings (Settings > Privacy & Security > Security)

You'll find a lengthy list of settings in this category. However, in most cases you will want to use the default settings. Here are just a couple of suggestions:

Windows Security: Windows 11 provides solid out-of-the-box security which includes virus protection, account protection, a firewall, browser control, and device security. I recommend using what is provided, but if you plan to be online very much, you might want to look at additional protection. I'd get a VPN at a minimum, for reasons already mentioned. There are many reputable companies. Many packages include other services such as automatic driver updating and suggestions for freeing up space on your PC.

Under Windows permissions > General, I suggest that you turn off Let apps show me personalized ads.

Review and adjust which apps can access your location, microphone, or camera unless truly needed. Note that the default settings

are typically “off”. You may find that you need to specifically grant some apps, such as Zoom or Google Meet, permission to access your microphone and camera.

Windows Update (Settings > Windows Update)

Complex software like Windows needs to be updated regularly. Updates may consist of bug fixes or additional functionality. It’s important to install updates regularly to stay protected and running smoothly.

When you click Windows Update under Settings (it’s the last option if you scroll down), you can immediately see if your system is up-to-date or if there are updates pending. If there are updates pending, you’ll want to download them soon. This is a two-step process:

1. You’ll download the code to your computer. How long this takes will vary. After downloading the new code is on your computer but not yet activated.
2. You’ll need to restart your computer for the new code to be incorporated and active. This process can take several minutes; usually Windows will give you an estimated time for the update process. It’s best to launch the restart manually when you won’t need your computer for a time. Also be sure that your computer is plugged in before launching the restart, as you don’t want to run the risk of an update being interrupted partway through.

Setting Up Additional Users

If you're the only person using your PC, you'll likely just need your main account. But if others (spouse, grandkids, housemate) share the same machine, you may want separate profiles. Why? Because each user can have their own settings, documents, and applications. When a user logs in, Windows calls up their individual profile. Therefore, each user should review the settings discussed above.

There are basically just two types of accounts:

1. **Administrator:** Admins have full access. They can install programs, change system settings, and manage other accounts.
2. **Standard User:** This user type is great for guests or kids. A standard user can use applications and update settings but can't install programs or make major changes.

To add a new account, go to Settings > Accounts. Scroll down, and down some more, to the Accounts settings section, then select Other users > Add account. Note that you should have available the phone number or email address of the individual you want to add.

Whew! Are you still with me? Yes, there are a lot of settings to review. However, you don't need to customize everything right away. The out-of-the-box presets are generally OK, and I've noted above where you likely will want to modify these.

Taking the time to go through the Settings when you do have time will give you a much more intimate understanding of your PC and what it can do for you. And making your PC feel familiar and comfortable can make a big difference. The better it suits your preferences, the more likely you are to enjoy using it.

Next up, we'll discuss three of the applications from Google which you'll likely want to be familiar with.

Chapter Nine

Using Gmail, Google Calendar, and Google Meet

So far in this handbook we've focused on getting your computer set up. Let's shift our focus now to actually using your computer.

In this chapter, we'll walk you through how to use Gmail — Google's widely used email service — along with two other handy tools from the Google suite: Google Calendar and Google Meet. These tools are free, powerful, and integrated.

Getting Started with Gmail

One of the first things you'll likely want to do is send and receive email. Email is still one of the most common ways people stay in

touch, whether it's sharing photos, setting appointments, or receiving newsletters.

Gmail is a free email service provided by Google. If you have a Google account, you already have a Gmail address — it usually looks something like `yourname@gmail.com`. Gmail can be accessed from any device with an internet connection, whether you're on your PC at home or using your smartphone while traveling.

Gmail Basics

If you don't yet have a Gmail account, it's easy to create one. Simply go to www.google.com, click Gmail in the upper right, and on the next screen click "Create account." You'll be guided through a few simple steps. Once done, you can log in anytime at Gmail.com.

When you open Gmail, you'll land in your Inbox. Down the left-hand side, you'll see several online folders — which Gmail terms "labels" — already created for you. These labels include Important, Sent, Drafts, Trash, and Spam, among others. You can also create new labels simply by clicking on the "+" sign to the right of "Labels".

You can move the labels you use most frequently to the top of the list. To reorder a label, simply click on it and drag it up or down to a new position.

To read an email, just click on it. You'll see the message body, any attachments, and buttons to Reply, Forward, or Delete. To open an attachment, simply click on it.

Caution: Malware can be delivered through email attachments. The malware is generally “released” when the attachment is opened. Be very wary of opening an attachment to any odd or unexpected email. Although most virus protection software will scan attachments before opening them, it’s best to play it safe, set curiosity aside, and simply delete any suspicious emails.

Red flags include:

- an email from an unknown sender, or one with a subject line or email content which does not seem to pertain to you
- an email address which contains transposed letters, other misspellings, or which substitutes numbers for letters, or doesn’t relate to the company which supposedly sent the email
- an email which says that there is an urgent matter which needs to be handled right away – typically either a request for money or asking you to verify some sensitive information, such as your login credentials

To send an email, click the Compose button in the upper left. Enter the recipient’s email address, enter a subject, type your message, and click Send. Note that if the recipient is already in your list of Contacts, their email address should pull up after you key just the first few characters.

To attach a photo or file, click the paperclip icon in the Compose window, then navigate through your folders to find what you are looking for.

If you'd like to review an email that you sent – or simply want to verify that you did send it – you can click on the Sent label at left. Alternatively, you can search for it from your Inbox by entering the recipient or subject in the Search email field at the top.

Organizing and Managing Your Gmail

Spam

No discussion of email would be complete without a discussion of spam. Spam is the bane of the email universe.

Gmail tries to reduce the number of spam emails which land in your Inbox by automatically routing suspect emails to the Spam label. You can actually train Gmail over time to do a better job of this. If you open an email in your Inbox and determine it to be spam, click the Report Spam icon – which looks like a stop sign – at the top of the email.

Unfortunately, sometimes legitimate emails mistakenly end up in Spam. This is particularly true if you are receiving the first email from someone, so they are not recognized by Gmail. If you are anticipating an email which doesn't arrive, check Spam. You can avert future delivery issues emails by clicking on the email and then clicking Not Spam at the top.

Contacts

If you'll be corresponding with someone often in the future, you can add that person to Gmail's "address book" as a contact. To do this, go to <https://contacts.google.com/> and click the "+ Create contact" button in the upper left corner. If you've already exchanged emails with a person, Gmail has probably already added them to your Contacts.

If you'll be emailing a group of people regularly, you can easily create a distribution list. To create a distribution list, go to <https://contacts.google.com/>. Next create a label by looking for the labels on the left and clicking "+". You might, for example, create a label called "Monthly newsletter".

Next search to find a contact you'd like to add to the d-list. In the contact's profile, click either the + Label button or the pencil icon to pull up a list of labels and click the one you want to add the contact to. Note that a contact can be added to more than one list.

Using Google Calendar to Stay Organized

Google Calendar helps me stay on top of things by keeping track of important dates and recurring events. I could not manage without it. While Calendar is pretty intuitive, let's review a few useful features.

To access Calendar from Gmail, click the 9-dot grid in the upper right and select Calendar. Or simply do as I do and always keep Calendar open in its own tab.

Click on a date or use the Create button on the left to add “events”. Note that events are assumed to be one-offs, but you can click Does not repeat under the date and time of the event to set it up as recurring.

Sometimes you’ll receive an email inviting you to an event, such as a meeting or webinar. Often there will be a notice in the email to the effect of “Add to calendar”. If so, there should be a Google Calendar icon. Click this and Google Calendar will open and the familiar “Create an event” box will display. Review the information – especially the time zone – and if it looks OK, click to add it to your calendar.

In addition to events, you can also create “tasks” in Google Calendar. Unlike events, tasks are not scheduled activities with a specific time and date. Tasks are instead reminders to complete something before a certain date. Once set up, a task will reappear on your calendar each day until you mark it complete or delete it.

If you often interact with people in another time zone, Google Calendar has a handy feature you’ll like. Click the gear icon at the upper right to open Settings. There you’ll see that you can set not only your own time zone, which you’ll typically set as the primary, but also a secondary time zone. Unfortunately, you are limited to setting up two time zones.

Once you exit settings and return to the calendar, you'll see both your primary and secondary time zones displayed. Note that times should automatically adjust with Daylight Saving Time – in your time zone or theirs.

Tip: If you use the secondary time zone feature because you often communicate with someone in another country, it's best to set up any recurring meetings in the secondary time zone (i.e., their time zone) rather than your own. Otherwise, shifts due to Daylight Saving Time can throw you out of sync with your contact. (Again, that's the voice of experience.)

Hosting Video Calls with Google Meet

Finally, let discuss Google Meet, which is a free videoconferencing tool. While there are a number of similar platforms available, I prefer Google Meet. Why? Let's compare it to other teleconferencing platforms:

- Skype, which was for a long time the only real videoconferencing option for the general public, has been phased out by Microsoft.
- There is Facetime, but it requires that both parties use Apple products, so that excludes us! And that leaves Zoom.
- Zoom, perhaps the best-known teleconferencing platform, is not a bad product by any means. However, although Zoom still offers a free version, calls are limited to 40 minutes. To make calls longer than that, you need to subscribe to a paid version. Also, recurring meetings are a bit clunky to set up

and to cancel or reschedule.

- Another commonly used teleconferencing platform is Microsoft Teams. Although it was developed for business use, Microsoft now offers a free version for personal use. It's very similar to Google Meet, and it's certainly an option if you prefer it.

Let's look briefly at some of what Google Meet offers:

- Meetings don't need to be set up in advance, and are very easy to launch, as we'll see in a moment.
- Participants can easily send texts, documents, and images via Chat.
- Screensharing lets attendees see what you see in your browser.
- You can easily add or change a virtual background.
- Meetings can be recorded.
- Up to 100 attendees can attend a meeting!
- Google Meet is very intuitive.
- And Google Meet is 100% FREE

It is exceedingly simple to create a meeting and to invite attendees. There are a couple of ways to launch a Google Meet meeting, but here's how I do it:

- From Gmail, I click the Meeting icon at the left. (It looks like

a video camera and is just below the Mail icon.)

- On the next screen I click “New meeting”.
- In the dialog box, I click to copy the link to the meeting.
- I then send the link to the attendee(s) by email or WhatsApp.
- I click the Start now button in the dialog box, and Google Meet launches the meeting on my end.
- Once inside of the Google Meet window, I admit attendees as they request entry.

The whole process is even simpler than it might appear above. I can literally complete the process in less than 25 seconds. (I timed myself.)

You can download the Google Meet app to your computer, but it’s not even necessary; the meeting can be conducted completely on the web.

There is really only one caveat: To launch a meeting, you must have a Google account of some kind; this can be a Gmail account. Note that meetings attendees do not need to have a Google account to attend, just the host.

Google Meet is extremely intuitive. If you spend 5 minutes poking around in it, you’ll know just about everything you need.

These are the basics you'll need to use Gmail, Google Calendar, and Google Meet. There are other apps within Google Workspace, but these are the three that most people use frequently, so I suggest you start with them.

In the next chapter we'll look at how to keep your PC clean, happy, and humming along.

Chapter Ten

Maintaining Your PC's Health

You may remember the cowboy trope I used in the Foreword. Well, you will likely come to rely on your PC as our cowboy does on his horse. Attend to it regularly, and it will serve you well for a long time to come.

In this chapter we'll discuss the maintenance of your PC, principally cleaning its exterior as well as "digital cleaning". We'll present a few other miscellaneous tips as well.

Keeping Your PC's Exterior Clean

Exterior cleaning consists mainly of two things:

1. cleaning the screen
2. cleaning the keyboard.

Cleaning your PC's screen

First, it's a good idea to turn off your computer first. This minimizes the risk of damage or shock. And if you also plan to clean the keyboard, you will definitely need to turn off your PC, so you may as well to so now.

Ideally you should use a microfiber cloth specifically intended for cleaning computer screens or lens. You can find them online at Amazon.com or in computer or photography stores. Avoid using paper towels.

First use the cloth dry, wiping in a gentle, circular motion. If a dry cloth does not clean your screen sufficiently well, *lightly* dampen the cloth with water and try again. If this still does not clean the screen sufficiently, try Windex ® Electronics Wipes (NOT regular Windex ® spray) or wipes made to clean eyeglasses. These cleaners consist principally of diluted isopropyl alcohol, are safe, and evaporate, leaving the screen dry and free of residue.

Although some sources say that you can use gentle soap or detergent if diluted, I avoid doing so. The reason is that you'll need to make a second pass with a clean, damp cloth to remove any residue. For this reason, also avoid using baby wipes, which contain soaps. Dryer sheets can also leave residue on your screen and should be avoided.

Keyboard cleaning

Keyboards can become extremely dirty over time. Have you ever sat down to work on a computer, only to face a really disgusting keyboard? So, clean your computer regularly. I generally clean mine every Friday afternoon.

Begin by turning off your computer completely. You don't want to inadvertently press a combination of keys which locks your computer or initiates some unfamiliar function. (That's the voice of experience.)

Now blow away any loose grit or bagel crumbs by using a can of compressed air, preferably with a nozzle straw to concentrate the force of the air stream. Be careful not to invert the can, as it may contain liquid propellant which could leak.

Next use a *lightly* dampened cloth or eyeglass wipes to clean the tops of the keys and the nooks and crannies between them. For a more thorough cleaning, you might also use an old toothbrush.

You can also gently pop off keys. (Some computer shops sell a special tool for this.) You may need to do this if crumbs or grit have worked their way under the keys. Remove only a couple of keys at a time so that you are sure which key goes where when replacing them!

Finish up the job by cleaning other surfaces, such as where your hands routinely rest. And don't forget to clean out USB and other ports using your can of compressed air.

Finally, make future cleaning easier by always keep food – and especially drinks – far away from your laptop or keyboard.

Digital Cleaning and Backups

Now that your PC is nice and sparkly on the outside, it's time to give some thought to tidying up the interior as well. Initially this may not be a big issue, but with time, just like in your garage, junk accumulates.

We've already discussed places where junk data might hide, including:

- Downloads folder
- Browser cache
- Recycle bin
- Photo/Video folders

Note: Clearing your browser purges the junk that has accumulated. It should not, however, delete your bookmarks.

You should purge your email inbox frequently. If you don't important emails might become buried. Set yourself some regular time, at least weekly, to go through your inbox. Purge what you can. Move others that don't require immediate action to the appropriate label (folder).

Tip: We all subscribe to newsletters, product trials, etc., and end up receiving tons of unwanted emails. When deleting unwanted emails, you should also click "Unsubscribe" to stop receiving future emails from this source.

And don't forget to periodically purge unneeded applications as well. Keeping clutter down can boost your PC's performance.

Windows Storage Sense ®, which comes free with Windows, can help you see in a general way what is taking up space. CCleaner ® is an inexpensive and simple-to-use tool which you might also consider. And if you subscribe to a VPN service – as you should – the company will almost certainly offer other services similar to CClean and Storage Sense.

Backups and Data Safety

Two key tools for securing your PC and data are regular backups and antivirus protection.

Backups

You can initiate backups at the same time you tidy up your hard drive. If you tidy up and purge first, then there will be less to back up.

You can also use Windows Backup or File History to create regular automatic backups. Cloud services like OneDrive or Google Drive are great for automatic syncing. Keep a copy of your most important files

in a second location (external drive, secure cloud folder, etc.). Better safe than sorry.

Antivirus Software and Firewalls

Windows Defender® is built-in and provides strong basic protection. Firewalls help block unauthorized access to your device. Windows has one enabled by default.

You can also install additional software like Bitdefender or Malwarebytes. There are many reputable brands. Their specific offerings overlap but will differ somewhat, so look for what you really need. Note that these service providers frequently offer discounts and specials, so take a few minutes to shop around.

Keep Windows updated. Your PC may alert you automatically when an update is available. And make a habit of restarting your PC regularly to clear temporary memory (RAM) and apply system updates.

Adhere to Best Security Practices

VPNs, firewalls, and antivirus software will go a long way toward keeping malware out of your computer and keeping your data safe. However, you can greatly increase your online security by following a few commonsense practices:

- Use strong passwords (not your pet's name or your birthday) and never share them. Change passwords periodically. You

can rely on Chrome's Password Manager to remember your current passwords if you can't keep up.

- Always sign out after using a shared or public computer. If you don't, the next user may be able to access your account. (Remember cookies?)
- Consider using two-step authentication (2FA). If you bank or shop online, you're no doubt familiar with two-step authentication. At login the website will ask to send a one-time code to your phone or email address. You enter this code on the login screen to verify that you are in fact trying to log in. You can turn on 2FA at myaccount.google.com/security.

While adhering to security best practices can perhaps be a bit of an annoyance at times, it's nothing compared to having your account hacked. And hackers today are quite savvy. Don't make yourself an easy target.

Power and Charging Tips

It's important to understand a bit about keeping your PC charged and safe – particularly if you have a laptop, which is likely to run on battery power a good deal of the time. Let's begin with a quick look at equipment.

Equipment

Constantly recharging your PC's battery to 100% may reduce the life of the battery. Therefore, ideally you should buy a "smart charging strip," which stops charging your PC (or cell phone) battery before it reaches 100%. Also, using a smart charging strip will save you a bit by reducing the amount of electricity you use.

When charging your laptop, be sure to use the correct power cable. While some smartphone charging cables might fit your laptop's port, they aren't made to deliver the proper amount of power. This can lead to very slow charging—or, in some cases, no charging at all.

Power modes

As noted earlier in this handbook, leaving your PC plugged in continuously is generally safe, if you use a good surge protector. However, doing so may reduce the life of your battery by overcharging it.

For laptops, it's important to understand what happens when you close the lid. Depending on the settings, your PC might:

- Do Nothing – your PC continues to process whatever is in progress.
- Sleep – is not a complete shutdown, but puts your computer in a reduced-power state, while preserving whatever is in memory, which allows you to quickly return to work when the lid is opened. Your PC uses less power when in Sleep Mode.
- Hibernate – is similar to Sleep Mode, but "deeper"; current work is saved to your HDD/SSD and then the computer shuts down, so your PC uses even less power than when in

Sleep Mode.

- Shutdown – is what it sounds like. All work is first saved, and then your PC shuts down in a systematic way. This is preferable to turning your PC off by pressing and holding the power button.

You can choose what you would like your laptop to do when you close the lid. Simply go to Settings > System > Power & battery.

Avoid Overheating

We discussed overheating way back in Chapter 3, but it bears repeating.

Overheating is often overlooked but can cause serious damage to your hardware. Blocked vents and dusty fans are the usual suspects. Make sure your computer has room to breathe—don't place it on carpet or soft surfaces. Ideal operating temperatures for most PCs are between 50°F–95°F (10°C–35°C). Avoid direct sunlight, hot cars, or poorly ventilated spaces.

Staying organized

It's not a myth—leaving too many browser tabs or program windows open really can slow down your PC. The same is true of a Desktop cluttered with files, shortcuts, and folders.

Chrome and other browsers can use a surprising amount of memory, especially if tabs are running videos, ads, or scripts in the background. Booting up will also take longer, as Windows has to load and render them every time you boot up.

So keep your desktop clean and your tabs under control. If you're not using something, close it or file it away. Your PC—and your brain—will thank you.

By now, you should be feeling much more knowledgeable and confident. But we aren't finished yet! In the next chapter, you'll learn more tips and shortcuts. Read on!

Chapter Eleven

Useful PC Tips, Shortcuts, and Troubleshooting

You’ve made it to the final chapter—nicely done! Now that your PC is set up, personalized, protected, and well cared for, let’s talk about getting more done with less effort. This chapter contains many time-saving tips, handy shortcuts, and quick solutions for when things go a little sideways.

Screenshots and Sticky Notes

To take a screenshot of the entire screen – which can be very useful – press the PrtScn (Print Screen) key. On some laptops, you may need to press Fn + F10 instead, depending on your keyboard layout. Where do those screenshots go? In File Explorer, click Pictures on the left and

then look for the Screenshots folder. If you don't find them there, check in Gallery.

Do you want to capture just a part of your screen? Press Windows + Shift + S (yes, it's a little tricky) to bring up the Snipping Tool. Select the area to capture, and it will be saved to your clipboard for pasting. The clip can be pasted into documents or emails.

We all get busy. To help ensure that you don't forget something important, you can use Sticky Notes for to-do tasks, reminders, or even shopping lists. Open the app by searching for Sticky Notes in the Start menu (that blue window at the left of your taskbar). You can create multiple notes and stick them anywhere on your screen.

Reminders and Alarms

Windows has a built-in Clock app where you can set timers, alarms, and reminders. It's great for remembering meetings, breaks, or when to take the cookies out of the oven.

A Little Help from AI

AI is here, and Windows 11 includes AI-powered help, like voice typing (Windows Key + H) and integration with cloud services like Microsoft 365. Tools like Microsoft Edge or Microsoft 365 can not only alert you to misspellings, but suggest better phrasing, or even summarize articles for you. You don't have to dive right in, but it's worth knowing they're there when you're ready.

Function Keys

Across the top row of your keyboard, you'll find several Function Keys, labelled F1 through F12. These may perform different actions depending on the program you're using. Also note that if you press and hold down the Function (fn) key at the lower left of the keyboard while pressing one of the Function keys, it will perform a different function. Some useful function keys and key combinations include:

- F1: Opens help in most programs. Handy to know!
- F5: Refreshes a window (to make sure that it is displaying updated information)
- fn + F1: Toggles to mute/unmute the sound
- fn + F2: Reduces sound volume
- fn + F3: Increases sound volume
- fn + F5: Turns backlighting of keyboard on and off
- fn + F6: Reduces screen brightness
- fn + F7: Increases screen brightness
- fn + F10: Captures an image of the screen.

I find the screen capture function to be very useful in many situations. For example, I might use it during a presentation to quickly grab an image of a slide, rather than madly scribbling a bunch of

notes before the presenter advances to the next slide. Also, if I need to contact a support desk for any reason, it's often handy to have a screenshot to attach to the ticket I submit.

Keyboard Shortcuts You'll Actually Use

In addition to the function keys, there are several other key combinations which you'll find extremely useful. Keyboard shortcuts aren't just for techies—they're for anyone who wants to work faster and avoid all that clicking around.

- **Copy/Paste:** Pressing Ctrl + C together copies highlighted text. Ctrl + V then pastes it wherever the cursor is repositioned.
- **Undo/Redo:** Did you just goof up? Press Ctrl + Z together to undo what you just entered; press them again to back up another step. I find that I use Ctrl + Z frequently. And if you change your mind again, press Ctrl + Y together to redo what you just reversed.
- **Show or hide the desktop** by pressing the Windows Key + D. This is a handy way to toggle between whatever you are working on at the moment, and the Desktop.
- **To open File Explorer**, press Windows Key + E. This is handy for quickly locating a needed file.
- **Throughout this document** we discuss various Settings. To quickly review or change Settings, press Windows Key + I.
- **Open Task Manager** by pressing Ctrl + Shift + Esc all to-

gether. You can also press Alt + Ctrl + Del and then select Task Manager. The Task Manager allows you to force stop a program which is frozen or processing very slowly.

- If you'll be away from your PC for a time and would like to lock it, press Windows Key + L. When you return, just enter your PIN as usual to unlock it and return to work.

This list is by no means exhaustive, but these little tricks can save you significant time. You might want to play around with them to become more familiar with all that you can do. And don't worry. You won't break anything!

What to Do When Things Go Wrong

Even the best PCs hit a bump now and then, but often the solution is simple. Here are some common scenarios, and DIY fixes you might try— and what to do if you need assistance.

Do-It-Yourself Issue Resolution

The computer won't turn on

- Double-check that the power cable is securely plugged in to the power strip or outlet and also the computer.

- Try a different outlet or power strip.
- If using a laptop, it might simply be that the battery may be dead. Give it a few minutes to charge.
- If the monitor stays black, the PC might be on, but the display may not be working. Are there indications that the PC is in fact on, such as any lights, or fan sounds?

You can't connect to the internet

- Verify that the Wi-Fi is turned on (click the Wi-Fi icon near the clock).
- If the Wi-Fi signal is weak, try moving closer to the router if possible. You might connect your PC directly to the internet via Ethernet cable, thereby bypassing the Wi-Fi.
- If your Wi-Fi signal is chronically weak, consider purchasing an extender or a USB antenna.
- Make sure Airplane Mode is off.
- Turn off all equipment and turn devices back on in order: modem, then router, then PC. Allow sufficient time at each step for the device to fully power back up.
- See if other devices are connected — that helps narrow down the issue. If your phone or tablet can connect, then the problem is probably the PC itself rather than the internet connection.

- If problems persist, the issue might not be in your setup. Contact your Internet Service Provider to see if there is a general outage in your area.

Your computer is running slowly

- Make sure you have enough free hard drive space. Go to Settings, then System, then Storage.
- If there is little free space, close unused programs and browser windows and tabs.
- A particular program may be hogging resources. Press ALT+CTRL+DEL and then select Task Manager. If a program is using excessive CPU or memory, select it and then press End Task.
- Restart your computer to clear temporary memory.
- Check for Windows updates — they may be running in the background. You can halt updates until you aren't actively using the PC.
- Scan for malware or viruses.

Mouse or keyboard isn't working

- Replace batteries if they're wireless.

- Unplug and reconnect the USB cable. Blow any dust or lint from the port.
- Try another USB port or test the device on a different computer.
- For Bluetooth devices, confirm they're charged up, paired, and turned on.

No sound from the speakers

- Make sure the sound isn't muted (check the speaker icon in the notifications area of the taskbar).
- Confirm the correct audio output is selected (especially with headphones or external speakers).
- Check the volume both on the PC and the speakers.
- Restart the computer if needed.

Your webcam or microphone isn't working

- Make sure another app isn't using the camera or mic already.
- Go to Settings > Privacy > Camera or Microphone and confirm that access is allowed. (The default will probably be that access is NOT allowed.)

- Check the app in use (Zoom, Meet, etc.) to be sure that you aren't muted. If you don't appear to be muted, restart the app to re-establish connection.

You can't install a program or app

- Check that you're connected to the internet.
- Make sure there's enough free space on your drive.
- Only download software from a trusted source. Virus protection software will block the downloading of apps suspected of containing malware.
- Some installs require admin approval. Make sure that your profile grants you admin rights.

The computer freezes or crashes

- Wait 30 seconds — sometimes it resolves itself, often by rebooting itself.
- Press Ctrl + Alt + Delete to open Task Manager. Look for any frozen apps and end them.
- Restart the computer by clicking the blue Windows icon, then the start button in the lower right of the popup window.

- If your cursor is locked and you can't click on the blue Windows icon, press the power button for several seconds until the PC turns off. Unsaved work will probably be lost, but sometimes this is unavoidable.
- If the PC freezes often, something may need deeper attention. There might, for example, be a conflict between software apps, or the PC may be overheating.
- If the PC is a laptop and frequently becomes very hot, purchase a PC cooling pad.

Your printer won't print

- Make sure the printer is turned on and properly connected.
- Check for paper, ink, and error messages.
- Ensure you've selected the correct printer before printing.
- Restart both the printer and the PC to re-establish the connection.

You're seeing pop-ups or odd browser behavior

- Run a full antivirus or malware scan.
- Clear your browser's cache and cookies.

- Disable any unfamiliar or recently added browser extensions.
- Reset your homepage and search engine if they've been changed.

When in doubt, restart!

- Simply rebooting fixes many issues. This is typically one of the first things an IT tech will try.

Warning: Frequent overheating can cause your PC to freeze or crash, resulting in possible data loss or permanent damage to hardware and batteries. Turn off your computer and let it cool down. For PCs, consider purchasing a cooling pad, available online for less than \$30.

Calling Tech Support

If you're truly stuck, don't suffer in silence. Ask a tech-savvy friend for help, or call a professional. In fact, it's a good idea to find a tech pro before you really need one. You might try Best Buy, which seems to have well-trained staff. Be sure to write down the phone number for Tech Support, and also for your ISP. Keep them handy.

Tech Support is there to help you, but you want to be sure that you do your part to help resolve the issue as well. I suggest the following steps:

1. Take a moment to compose yourself. Agitation does not

help us think clearly. Take a couple of deep breaths before proceeding.

2. Next, get clear on exactly what the issue is. If there was a sequence of actions that preceded the problem, write these down. Also record any actions that you have already tried, such as restarting your PC. You may forget details later, and you want to be as clear as you can and not omit any important details. Also, you may have to recount what happened to more than one person, and that will be easier if you have notes to refer to.
3. Is there any supporting information which might help explain the issue? Screenshots in particular can be very helpful. You can use `fn + F10` to capture your full screen. If for any reason you can't use your keyboard, you can take a screenshot with your cell phone.
4. Retrieve the phone number for Tech Support, plus the model number and serial number for your PC. (Hopefully you did as I recommended in Chapter 3 and filed this information away for such an occurrence; if not, see below.) Also get a pen and paper to record details from the call.
5. Make the call. When you get connected to someone, communicate your issue as clearly as possible. And always remember that the person you are speaking to did not create the issue, and wants to resolve it, too. Be calm, polite, and provide as many details as you can. Be sure to get a case number in case follow-up is necessary.
6. Before closing the call, be very clear about what the next

steps are. When will Tech Support contact you, and by what means (phone, email)?

7. Now sit back and take another breath. You've done what you can do for the moment.

If you can't find the details for your PC, the easiest way to access all of the information – including processor, RAM, product ID, and device ID – is to click that Windows icon in the Taskbar, and type "About your PC" at the top of the box which pops up. All of the relevant information will display, and there is even a "Copy" button to make it easy for you to send the information to Tech Support.

Now, print and save the information!

Final Thoughts

Congratulations! You've come a long way. Take a moment to look back and consider all that you've learned. From choosing and setting up your PC, to keeping it running smoothly and using it with confidence, you now have the tools and knowledge to get the most from your digital companion.

No, you don't know everything, but you should also have a much better idea of where to look for the answer when you have a question. And if something changes (as tech always does), you've got the foundation to keep learning.

Now saddle up and enjoy that new PC!

Afterword

Although you've reached the end of this handbook, your computer education should not end here. Tech continues to evolve, mostly in a good way, and you'll want to try to stay on top of major advancements.

Before leaving you, I would like to say, "Thank you!" for purchasing this handbook. I sincerely hope that you found it helpful and will refer back to it. My goal was to provide readers with the knowledge they would need day to day, without including a lot of unnecessary details and clutter.

If you believe that I've succeeded, please let me know. If you purchased this book through Amazon Kindle, you can leave a review and comments easily by returning to the book's information and order page on Amazon. I would greatly appreciate your comments. Your reviews can help turn browsers into buyers!

If you would like to contact me directly, you can send your comments and suggestions to: john@tech4me2.com.

On www.tech4me2.com, I'll include information and updates which I believe will be of interest to many of my readers. I also have plans for future books, and will post updates about these on the website.

If you would like to receive the appendices and checklists as printable PDF documents, you can simply [click here](#) to request them. There will of course be no additional charge.

As a final note, I know that some folks, myself included, are visual learners. If you are as well, you might wish to check out my video-based course, which parallels this handbook but includes screen captures and videos which I could not include in a book.

Thanks again, and Happy Computing!

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Glossary of Common Terms

This glossary defines key computer-related terms introduced throughout this book. Terms are listed alphabetically for easy reference.

Antivirus Software: A program package designed to detect, block, and remove malicious software like viruses and spyware.

App: Short for "application". A program that performs a specific task on your PC, such as a web browser, word processor, or calendar.

Backup: A saved copy of your files that can be restored in case your computer crashes or data is lost.

Bluetooth: A wireless technology for connecting devices over short distances, such as headphones or keyboards.

Browser: A program used to access the internet. Popular browsers include Google Chrome, Microsoft Edge, and Mozilla Firefox.

Cache: Images and data from a website you've visited which is saved on your computer to make loading of the site faster on your next visit.

Cloud Storage: Online space for saving files, accessible from any device connected to the internet. Examples: Google Drive, OneDrive

Cookie: A small bit of text code which provides a website with information about you, such as your login information and browsing history on the site.

CPU: Central Processing Unit. Often called the 'brain' of your computer—it processes instructions and runs programs.

Driver: A small piece of software that helps your PC communicate with hardware devices like printers, monitors, and webcams.

File Explorer: A tool built into Windows that helps you browse and manage your files and folders.

Firewall: A security system that controls what data can enter or leave your computer, helping to block hackers and viruses.

Firmware: Software stored inside hardware devices (like your PC's motherboard) that helps them operate correctly.

Gigabyte (abbreviated GB): The usual unit of measure of storage; the higher the number, the more files, photos, etc., you can save on your PC.

Hard Drive (HDD/SSD): Your computer's main storage device. HDDs are mechanical and slower, SSDs are faster and more durable.

Icon: A thumbnail-sized small graphic symbol that represents a file, folder, or application on a computer screen.

Internet Service Provider (ISP): The company which connects you to the internet (e.g. Spectrum, T-Mobile, Cox, AT&T).

IP address: Internet Protocol address. Is a unique character string which tells where a computer is located and its Internet Service Provider. This address will change when the user's physical location changes.

Motherboard: This is the central circuit board that connects all the parts of your computer. It's where everything plugs in and communicates.

Operating System: The core software that manages your computer's resources and allows you to interact with it. (e.g., Windows 10 or 11)

PDF: Portable Document Format is a universal document format which can be opened and read by different programs, and therefore frequently used for sharing documents.

Port: A physical connection point on your PC for cables or accessories—like USB ports, HDMI, or headphone jacks.

Power Supply Unit: The PSU converts electricity from your wall outlet (which is alternating current) into a form your PC can use (low-voltage direct current).

RAM: Random Access Memory. Short-term memory used by your PC to run apps and processes while the computer is on.

Router: A device that connects your home network to the internet and allows multiple devices to go online.

Snipping Tool: A tool in Windows that lets you take screenshots of all or part of your screen.

Tab: The presentation of a single webpage within a browser window. A window may contain several open tabs at once.

Task Manager: A utility that shows what's running on your PC and lets you close unresponsive apps.

Taskbar: The bar (usually at the bottom of the screen) where you can see open programs and access settings.

URL: Uniform Resource Locator. The unique "address" on the World Wide Web for a resource, for example, a company's website.

USB: Universal Serial Bus. A common port used to connect peripherals like flash drives, keyboards, and printers.

VPN: Virtual Private Network. A VPN hides your IP address and also encrypts your data, even when you are using a public Wi-Fi.

Wi-Fi: Wireless networking that allows you to connect to the internet without physical cables.

Window: The image of a webpage as displayed on your screen. A window may contain several open Tabs. A window should not be confused with the Microsoft Windows ® operating system.

New PC Shopping Considerations

Desktop or Laptop? Consider your portability needs.

Limit your search to known brands with solid reputations.

Windows version (preferably Windows 11, or the most current).

At least 8 GB RAM (16 GB for heavier use).

SSD storage (256 GB or more recommended).

CPU: Intel i5/Ryzen 5 or better.

Sufficient screen size and resolution.

(For laptops) A touch screen may be desired.

Number of USB ports and other connections.

Webcam and microphone (if not included, budget for external ones.

Warranty or support plan, if desired

Accessories: keyboard, mouse, printer/scanner, external storage, surge protector/smart charger.

Home Wi-Fi Setup Checklist

Overview: What You'll Be Doing

Setting up a home Wi-Fi network involves:

- Connecting your modem and router.
- Accessing the router's settings via a web browser.
- Configuring your network name and password.
- Connecting your devices to the new network.

Equipment Needed (Verify you have all before beginning)

- **Modem:** Provided by your Internet Service Provider (ISP).
- **Router:** May be a separate device or combined with the modem.
- **Ethernet Cable:** Usually included with your router.
- **Computer or Smartphone:** To access router settings.

- **Router Manual:** For specific instructions and default login details.

Basic Wi-Fi setup with separate modem and router

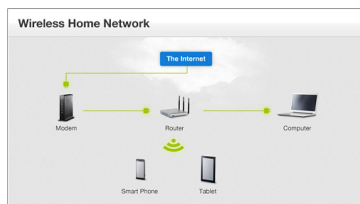


Image credit: <https://www.xfinity.com/>

Step-by-Step Setup

1. **Position Your Router:** Place the router in a central location, elevated, and away from obstructions like walls or large metal objects to ensure optimal signal distribution.
2. **Power Off the Modem:** Unplug the modem to reset it before connecting new devices.
3. **Connect the Router to the Modem:** Use an Ethernet cable to connect the modem to the router's WAN or Internet port. This cable should come packaged with the router.
4. **Power On Devices:** Plug in and turn on the modem. Wait for it to fully initialize. Then, plug in and turn on the router. Wait for it to boot up completely.
5. **Connect a Computer to the Router:** Use another Ethernet cable to connect your computer to one of the router's LAN ports. This ensures a stable connection during setup.

6. **Access Router Settings:** Open a web browser on the connected computer. Enter the router's IP address into the address bar (commonly 192.168.0.1 or 192.168.1.1). This information is usually found in the router's manual or on a sticker on the device.
7. **Log In to the Router:** Enter the default username and password (often "admin" for both). Refer to the router's manual for exact credentials.
8. **Change Default Credentials:** Navigate to the administration settings and change the default username and password to secure your router.
9. **Set Up Wi-Fi Network: Network Name (SSID):** Choose a unique name for your network. Create a strong password using a mix of letters, numbers, and symbols. Select security mode (WPA2, or WPA3 for enhanced security).
10. **Save Settings and Reboot:** Save the new settings. The router may reboot to apply changes.
11. **Connect Devices to Wi-Fi:** On your devices, search for the new network name (SSID). Enter the password you set to connect.
12. **Test the Connection:** Ensure all devices can connect to the internet. If issues arise, consult the router's manual or ISP support.

Additional Tips

- **Firmware Updates:** Regularly check for and install router

firmware updates to maintain security and performance.

- **Guest Network:** If you frequently have guests (for example, you operate an Airbnb), you might want to set up a guest network separate from your main network.
- **Device Placement:** For larger homes, Wi-Fi extenders or mesh systems can help eliminate dead zones.

Migration checklist

Switching to a new PC is much easier than it used to be. If you currently use Chrome as your browser and will also use it on your PC, you'll find that bookmarks, passwords, and other information will port over automatically. And if you currently store data (files, folders, photos, videos) on the Cloud, you won't need to port that data over; you can simply access the Cloud data from your new PC.

You probably will, however, need to reinstall some applications that you use frequently. Windows is likely already pre-installed, but other programs will need to be reloaded. Note, however, that if a program runs "on the web" – meaning that no software has to be loaded on your PC's drive to use the software – then that program won't need to be ported over. (Google Meet and Zoom are examples of this type of software.)

Here are the general steps involved in migrating to your new PC:

1. Make a full backup of your important files, on an external drive, on the cloud, or both.
2. List your frequently used programs and download the in-

stallers and record product keys in case they need to be re-entered.

3. Sync your browser with the cloud if possible (for bookmarks and passwords).
4. Transfer files using an external hard drive or cloud storage as the intermediary.
5. Reinstall your essential apps and tools on the new PC.
6. Check your password manager or export your saved passwords. (Note: If you use Chrome's Password Manager – discussed later – your passwords port over automatically.)
7. Update and personalize your settings on the new PC.

This is not as complicated as it might seem, but you may opt to enlist assistance.