New Hope Community Development Group

UNDERSTANDING COMPUTER BASICS

If you're new to computers or just want to update your skills, you've come to the right place.

TABLE OF CONTENTS

Getting started with your first computer

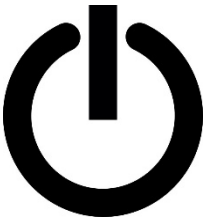
A computer is more than just another household appliance. The vast amount of information and possibilities can be overwhelming. But you can accomplish a lot with a computer, and using one can be a good experience. Let's walk through getting started with your first computer.

Turning on a computer for the first time can be different from one computer to the next. Your experience could be different from this lesson. It's OK to ask someone for help.

If you're using a desktop computer, you'll need to make sure that the keyboard, mouse, and monitor are plugged into the computer case before you continue.

Turning on a computer

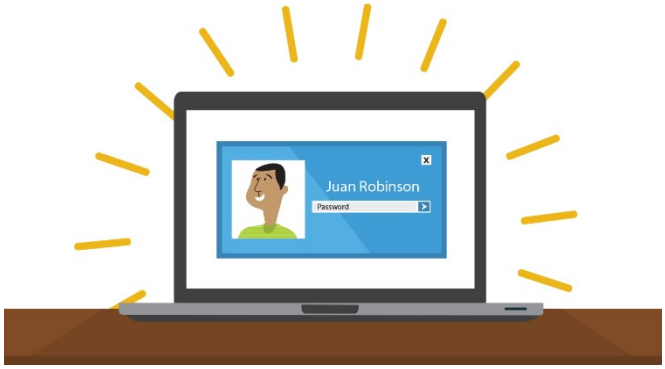
The very first step is to **turn on** the computer. To do this, locate and press the **power** button. It's in a different place on every computer, but it will have the universal power button symbol (shown below).



Once turned on, your computer takes time before it's ready to use. You may see a few different displays flash on the screen. This process is called **booting up**, and it can take anywhere from 15 seconds to several minutes.

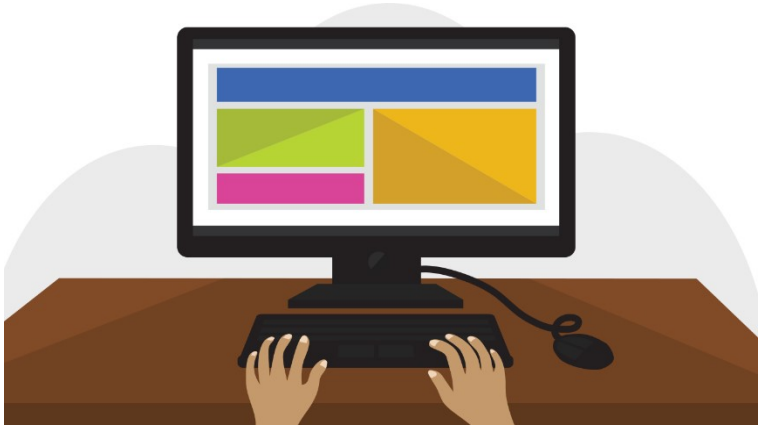
Once the computer has **booted up**, it may be ready to use, or it may require you to **log in**. This means identifying yourself by typing your user name or selecting your profile,

then typing your password. If you've never logged in to your computer before, you may need to **create an account**.

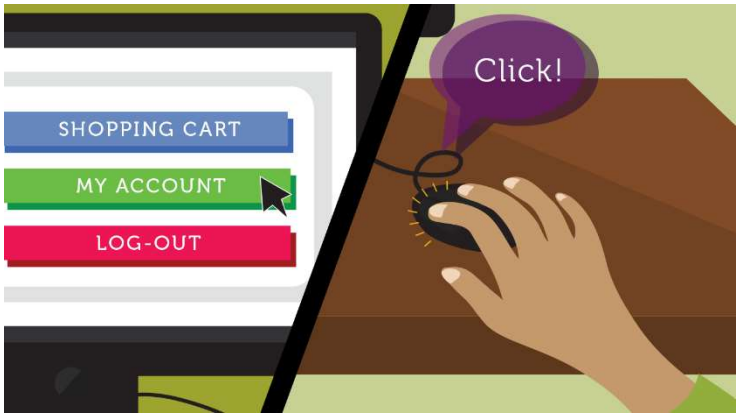


The keyboard and mouse

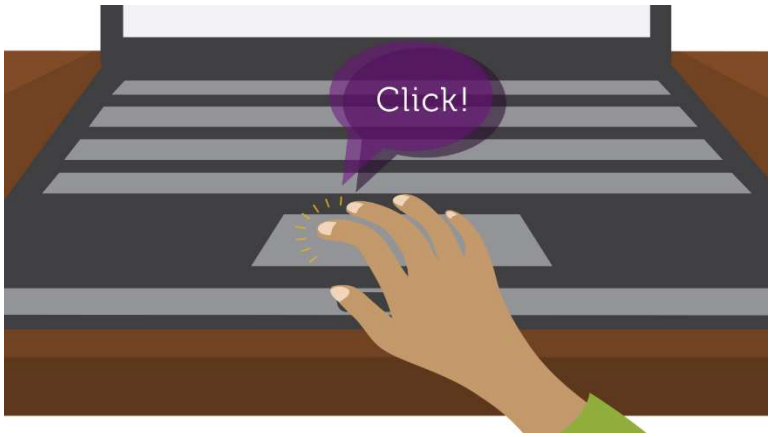
You interact with a computer mainly by using the **keyboard** and **mouse,** or a **trackpad** on laptops. Learning to use these devices is essential to learning to use a computer. Most people find it comfortable to place the keyboard on the desk directly in front of them and the mouse to one side of the keyboard.



The mouse controls the **pointer** on the screen. Whenever you move the mouse across the desk, the pointer will move in a similar manner. A mouse usually has two buttons, which are referred to as the left button and the right button. You will often interact with the computer by moving the mouse pointer over something on the computer screen, then clicking one of the buttons.



On laptops, you can use the **trackpad**, located below the keyboard, instead of a mouse. Simply drag your finger across the trackpad to move the **pointer** on the screen. Some trackpads do not have buttons, so you'll either press or tap the trackpad to click.



The keyboard allows you to type letters, numbers, and words into the computer. Whenever you see a flashing vertical line—called the **cursor**—you can start typing.

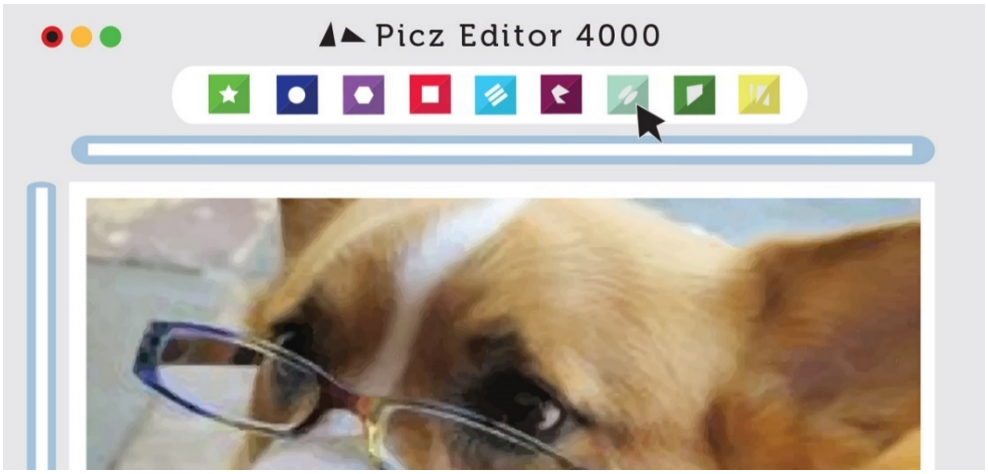
Note that the **mouse pointer** is also called a **cursor**, but it is shaped differently. The **keyboard cursor** is also called the **insertion point**.

Using a computer

The main screen you'll start from is the **desktop**. This is sort of like a main menu or a table of contents. From here, you can access the programs and features you need to use your computer.

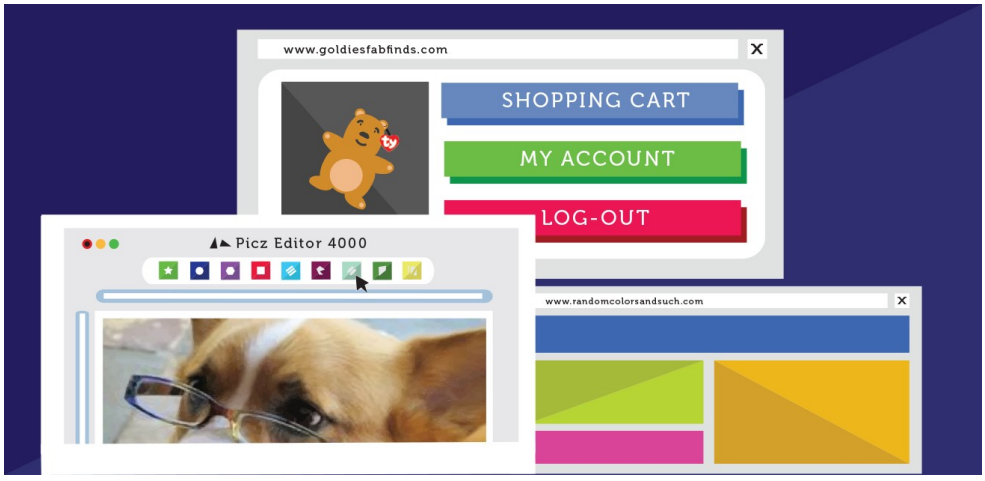
Icons are used to represent the different files, applications, and commands on your computer. An icon is a small image that's intended to give you an idea at a glance of what it represents, like a logo. Double-clicking an icon on the desktop will open that application or file.

A **button** is a command that performs a specific function within an application. The most commonly used commands in a program will be represented by buttons.



Menus are organized collections of commands and shortcuts. Click a **menu** to open it and display the commands and shortcuts within. Then click an item in the **menu** to execute it.

When you open an application or folder, it is displayed in its own **window**.
A **window** is a contained area—like a picture within a picture—with its own menus and buttons specific to that program. You can rearrange multiple **windows** on the desktop and switch between them.



What's next?

OK, so these are just the basics of using a computer. In the next lesson, we'll talk about how to use your computer's specific **operating system**.

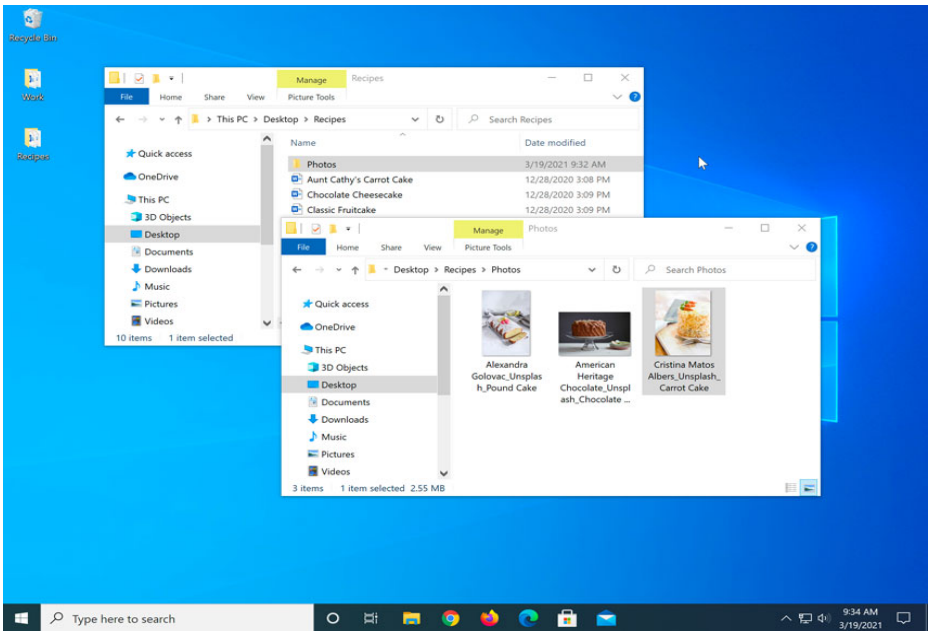
Lesson 2: Getting to Know the OS

Getting to know your computer's OS

Now that you know the **absolute basics of using a computer**, it's time to learn more about your computer's **operating system**. We'll be talking about the two most common operating systems in this lesson: **Microsoft Windows** and **macOS**.

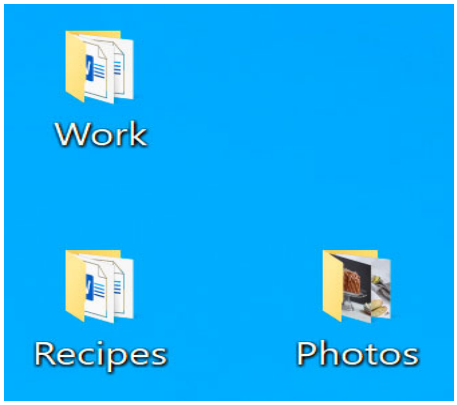
Getting to know the interface

Both PCs and Macs use a **graphical user interface** (GUI), and they each have their own look and feel.



All about your computer's file system

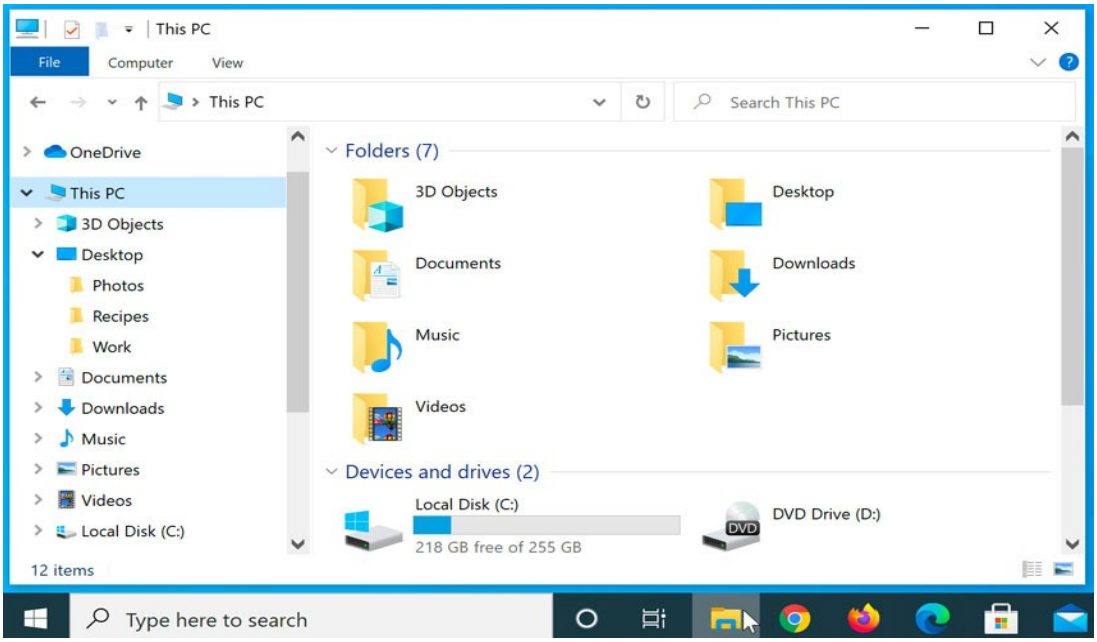
No matter which operating system you use, your computer uses **folders** to organize all of the different files and applications it contains. **Folder icons** on your computer are designed to look like file folders full of documents or pictures.



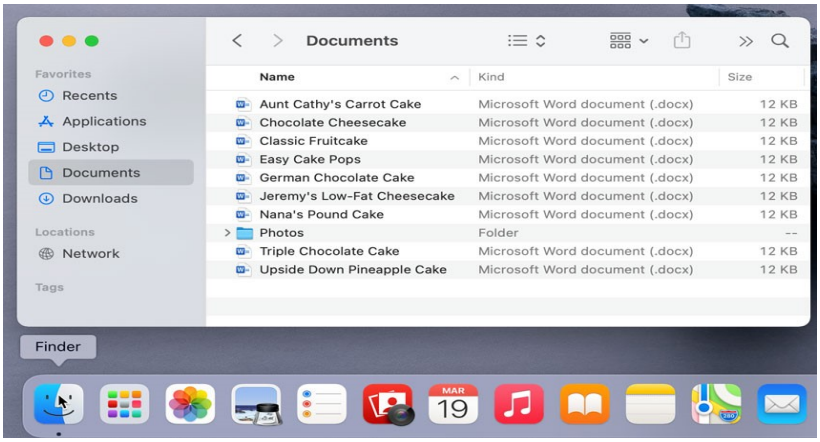
Each operating system has its own file system, which helps you find your folders and files. If you have a Windows PC, you'll use the **File Explorer** (also known as **Windows Explorer**). If you have a Mac, you'll use **Finder**. Here, we'll talk about the basic functions that are common to all computer file systems.

Opening your computer's file system

Whether you're using a PC or a Mac, the file system icon will be on the toolbar. On a PC, the **File Explorer icon** looks like a folder, as in the image below.



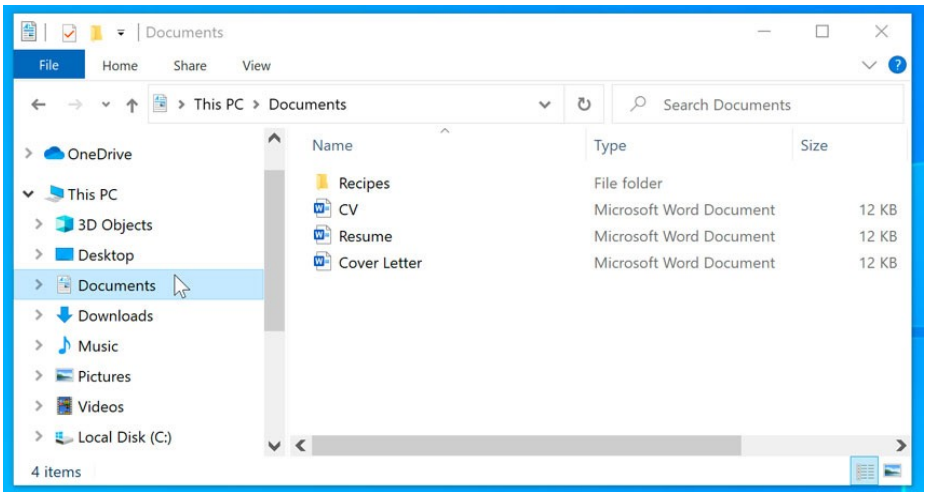
On a Mac, the **Finder icon** looks like a face on the Dock, as in the image below.



In both operating systems, you can also open the file system by **clicking a folder** from your **desktop**.

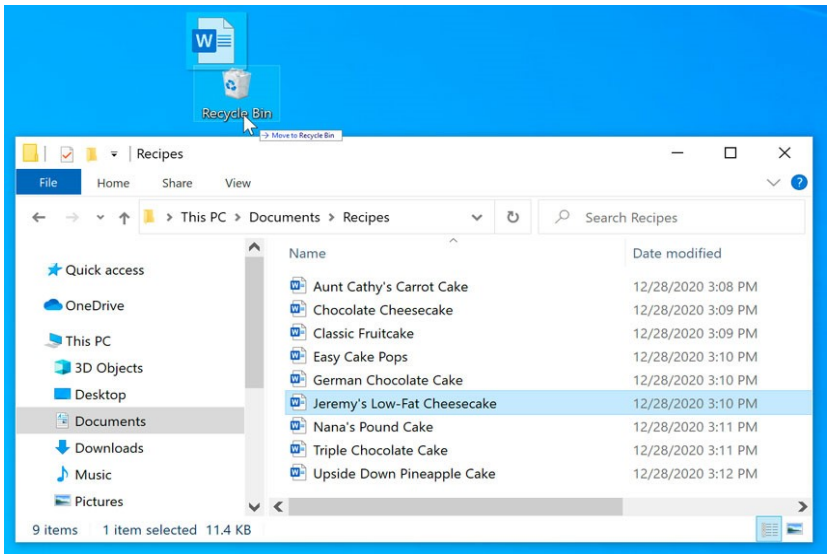
Basic navigation

Whether you're using File Explorer or Finder, basic navigation will work the same way. If you see the file you want, you can double-click it with your mouse. Otherwise, you can use the **Navigation pane** on the left side of the window to select a different location.

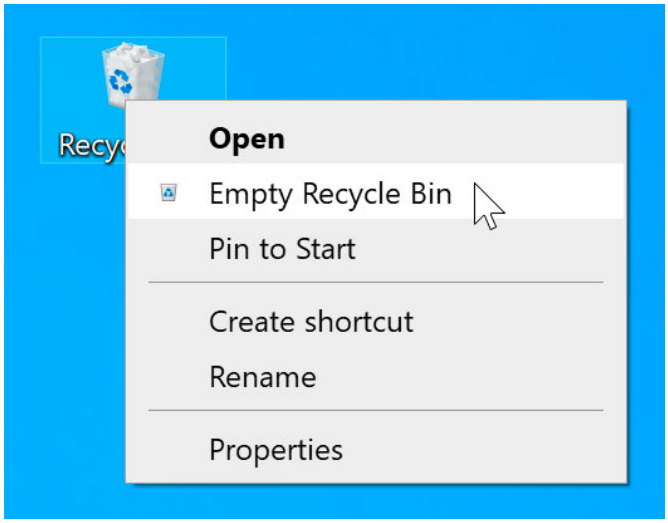


Deleting files

macOS and Windows use a **Trash can**—or **Recycle Bin**—to prevent you from accidentally deleting files. When you delete a file, it is moved to the Trash can. If you change your mind, you can move the file back to its original location.

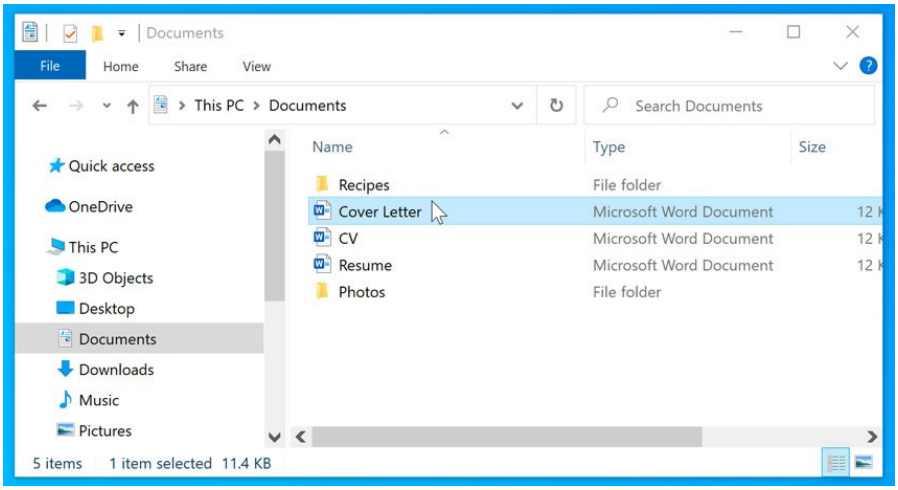


If you want to permanently delete the file, you will need to **empty the Trash or Recycle Bin**. To do this, right-click the icon and select **Empty**.



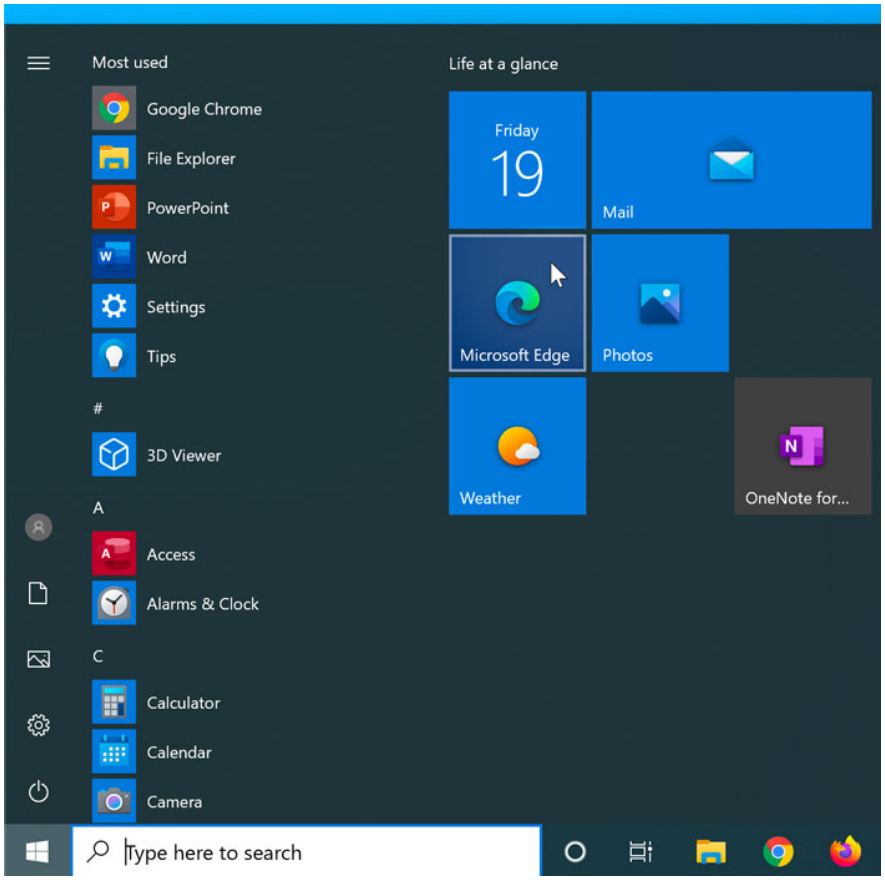
Opening files and applications

Each application on your computer has a group of **file types**—or **formats**—it is able to open. When you **double-click** a file, your computer will automatically use the correct application to open it. In our example, we're opening a Microsoft Word document (**Cover Letter**), which will open in **Microsoft Word**.

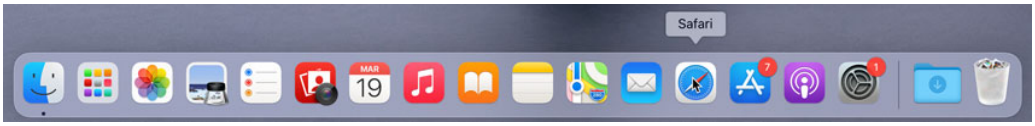


However, there may be times you may want to open an application directly, instead of just opening a file.

- To open an application in **Windows**, click the **Start** button, then select the desired application. If you don't see the one you want, you can click **All Programs**/**All Apps** to see a full list, scroll through the application list in Windows 10, or simply **type the name of the application** on your keyboard to search for it. In the example below, we're opening **Microsoft Edge** from the tiles.



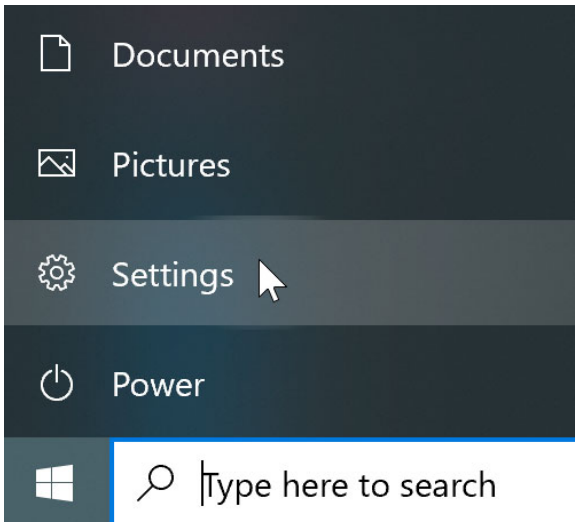
- To open an application on a **Mac**, click the application's icon on the **Dock**. If you don't see the one you want, click the **Spotlight** icon in the top-right corner of the screen, then **type the name of the application** on your keyboard to search for it. In the example below, we're opening **Safari**.



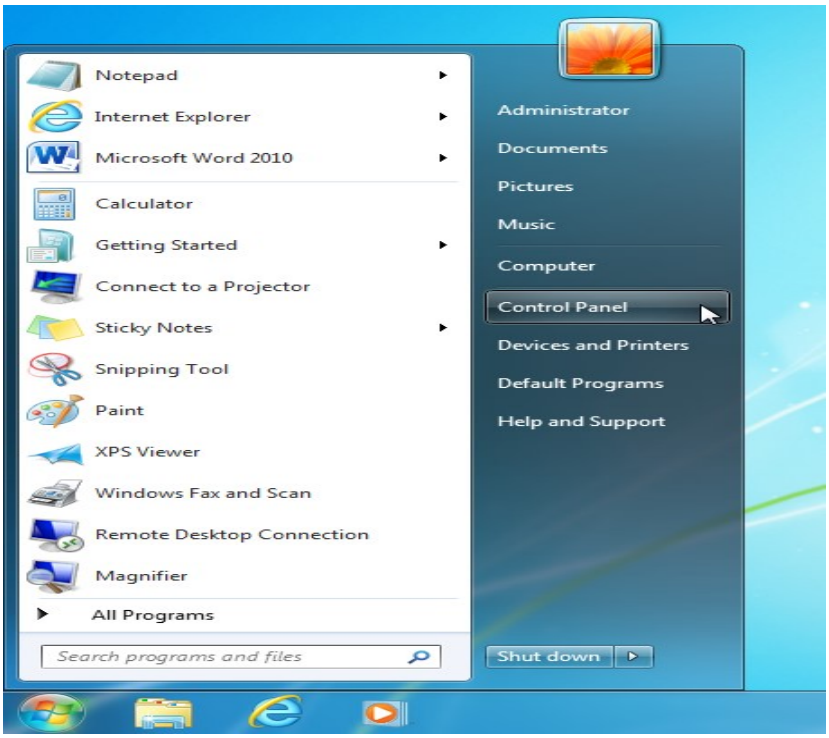
Adjusting your computer's settings

When you start using a new computer, you may want to begin by adjusting the computer's settings. Adjusting your settings can range from simple tasks such as changing your **desktop background** to more advanced tasks like adjusting your **security** or **keyboard settings**.

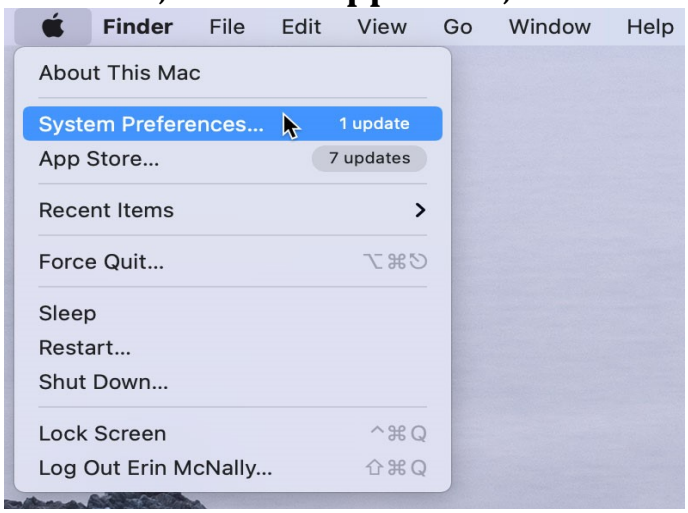
- In **Windows 10**, click the **Start** button, then select **Settings**.



- In **Windows 8.1** and earlier, click the **Start** button, then locate and select the **Control Panel**.



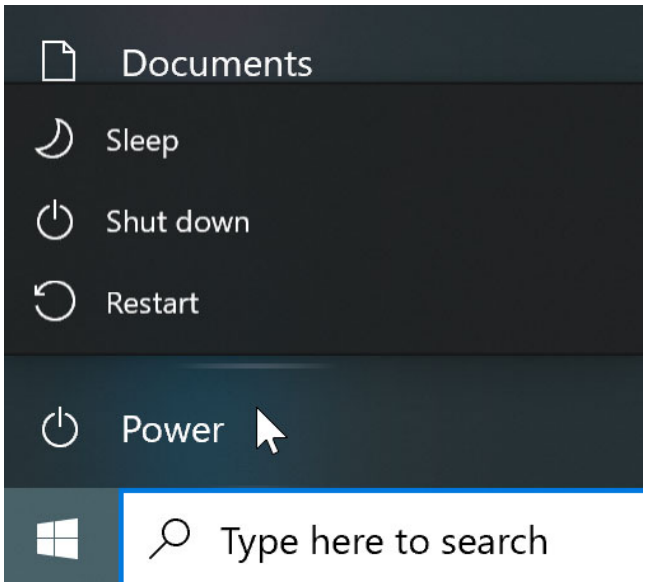
- On a **Mac**, click the **Apple** icon, then select **System Preferences**.



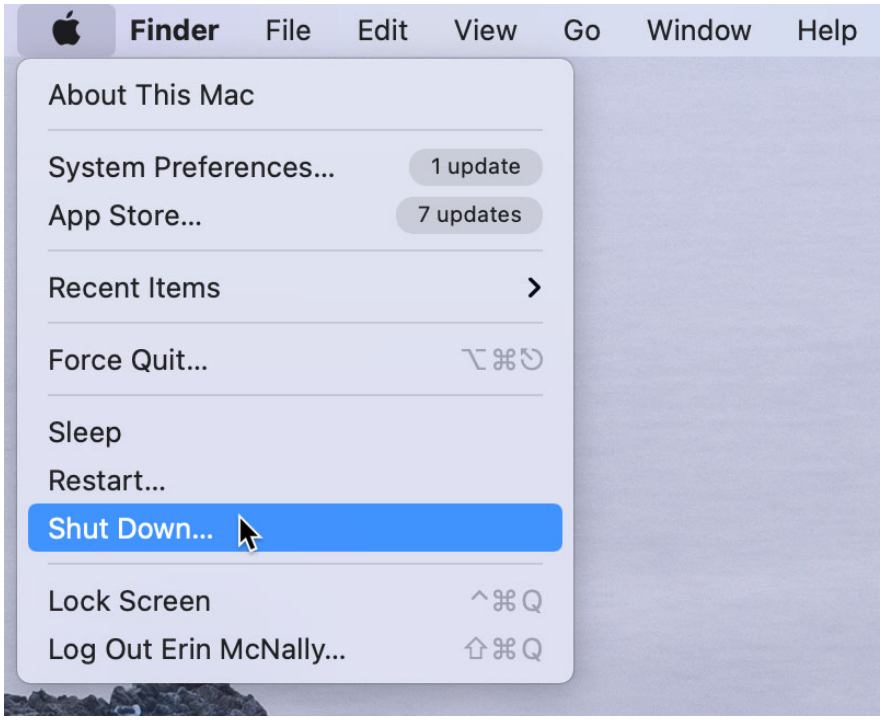
Shutting down your computer

When you're done using your computer, it's important to **shut it down properly**.

- To shut down **Windows**, click the **Start** button, then select **Shut down** from the menu (in some versions, this may say **Turn Off Computer** or look like the power symbol).



- To shut down a **Mac**, click the **Apple icon**, then select **Shut Down**.



Lesson 3: Connecting to the Internet

How do I connect to the Internet?

Once you've set up your computer, you may want to purchase **home Internet access** so you can send and receive email, browse the Web, stream videos, and more. You may even want to set up a **home wireless network**, commonly known as **Wi-Fi**, so you can connect multiple devices to the Internet at the same time.

Lesson 4: Getting Started with the Internet

Getting started with the Internet

The Internet is a global network of billions of computers and other electronic devices. With the Internet, it's possible to access almost any information, communicate with anyone else in the world, and much more. You can do all of this on your computer.

Connecting to the Internet

A device has to be connected to the Internet before you can access it. If you plan to use the Internet at home, you'll usually need to purchase an Internet connection from an **Internet service provider**, which will likely be a phone company, cable company, or the government. Other devices usually connect through **Wi-Fi** or **cellular Internet** connections. Sometimes libraries, cafes, and schools offer free Wi-Fi for their patrons, customers, and students.

Browsing the web

Most information on the Internet is on **websites**. Once you are connected to the Internet, you can access websites using a kind of application called a **web browser**.

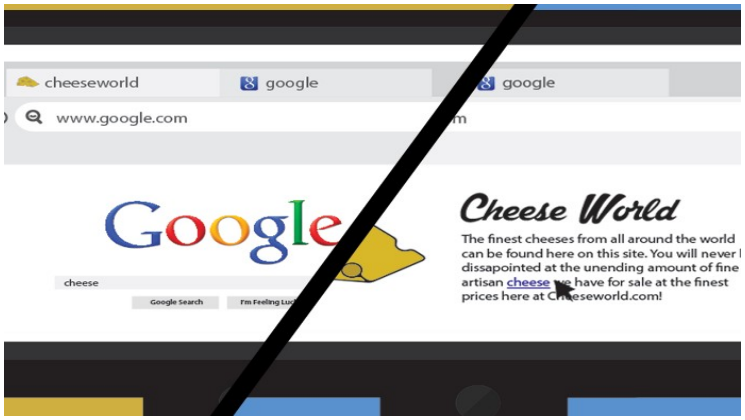
A **website** is a collection of related text, images, and other resources. Websites can resemble other forms of media—like newspaper articles or television programs—or they can be interactive in a way that's unique to computers. The purpose of a website can be almost anything: a news platform, an advertisement, an online library, a forum for sharing images, or an educational site like us!

A **web browser** allows you to connect to and view websites. The web browser itself is not the Internet, but it displays pages on the Internet. Each website has a unique address. By typing this address into your web browser, you can connect to that website and your web browser will display it.

Navigating websites

Websites often have **links** to other sites, also called **hyperlinks**. These are often parts of the text on the website. They are usually colored blue, and sometimes they are underlined or bold. If you click the text, your browser will load a different page. Web authors use hyperlinks to connect relevant pages. This web of links is one of the most unique features of the Internet, lending to the old name World Wide Web.

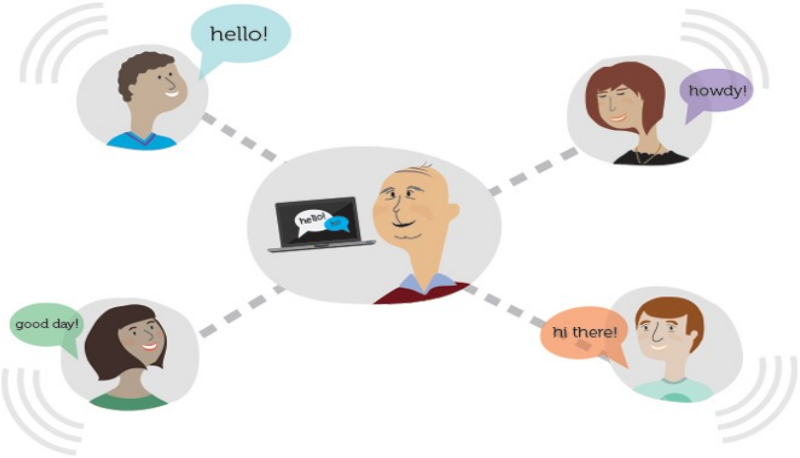
Each website has a unique address, called a **URL**. You'll notice that when you click a link, the URL changes as your browser loads a new page. If you type a URL in the address bar in your browser, your browser will load the page associated with that URL. It's like a street address, telling your browser where to go on the Internet.



When you're looking for specific information on the Internet, a **search engine** can help. A search engine is a specialized website that's designed to help you find other websites. If you type keywords or a phrase into a search engine, it will display a list of websites relevant to your search terms.

Other things you can do on the Internet

One of the best features of the Internet is the ability to communicate almost instantly with anyone in the world. **Email** is one of the oldest and most universal ways to communicate and share information on the Internet, and billions of people use it. **Social media** allows people to connect in a variety of ways and build communities online.



There are many other things you can do on the Internet too. There are thousands of ways to keep up with news or **shop for anything** online. You can pay your bills, **manage your bank accounts**, meet new people, **watch TV**, or learn new skills. You can learn or do almost anything online.

Lesson 5: Understanding the Cloud

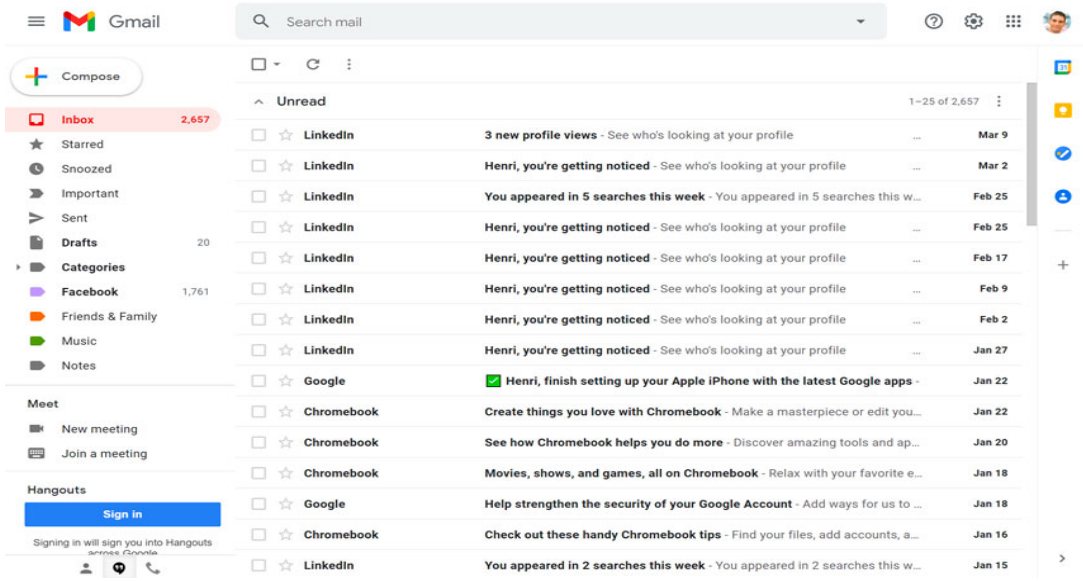
What is the cloud?

You may have heard people using terms like **the cloud**, **cloud computing**, or **cloud storage**. But what exactly is the cloud?

Simply put, the cloud is **the Internet**—more specifically, it's all of the things you can **access remotely** over the Internet. When something is **in the cloud**, it means it's stored on **Internet servers** instead of your computer's hard drive.

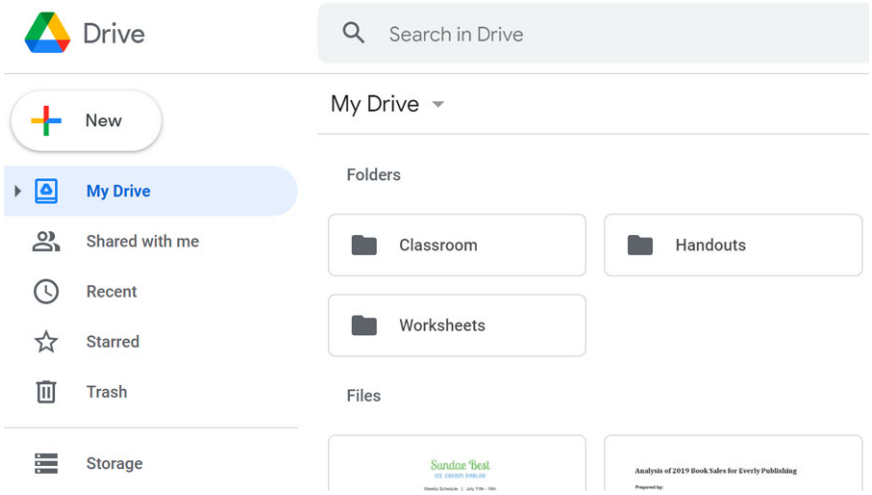
Why use the cloud?

Some of the main reasons to use the cloud are **convenience** and **reliability**. For example, if you've ever used a **web-based email service**, such as **Gmail** or **Yahoo! Mail**, you've already used the cloud. All of the emails in a web-based service are stored on servers rather than on your computer's hard drive. This means you can access your email from any computer with an Internet connection. It also means you'll be able to recover your emails if something happens to your computer.

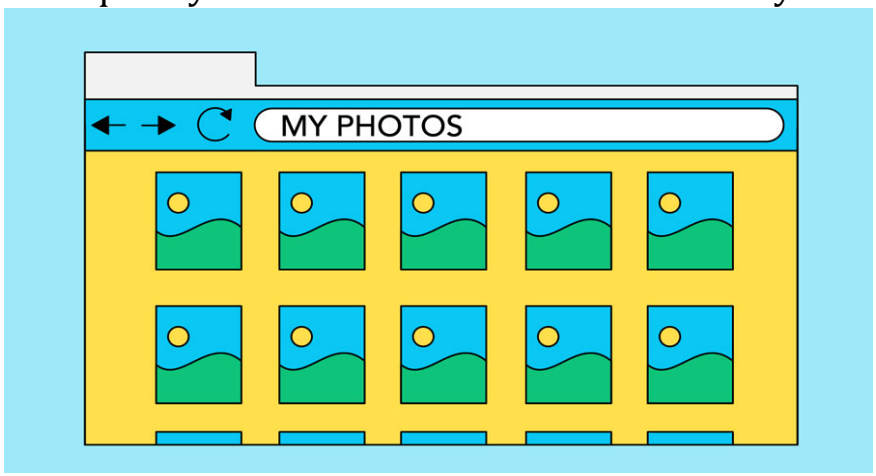


Let's look at some of the most common reasons to use the cloud.

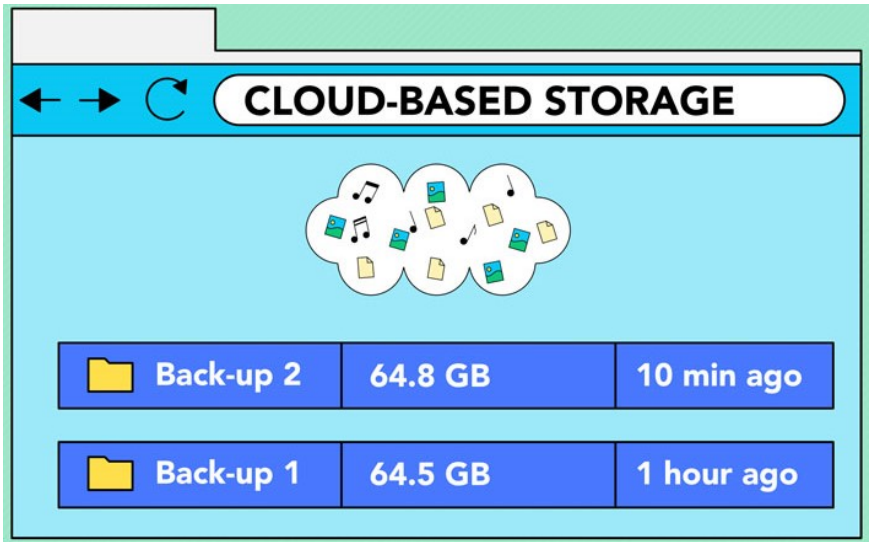
- **File storage**: You can store all types of information in the cloud, including files and email. This means you can access these things from **any computer** or **mobile device** with an Internet connection, not just your home computer. **Dropbox** and **Google Drive** are some of the most popular cloud-based storage services.
-



- **File sharing**: The cloud makes it easy to **share files** with several people at the same time. For example, you could upload several photos to a cloud-based photo service like **Flickr** or **iCloud Photos**, then quickly share them with friends and family.



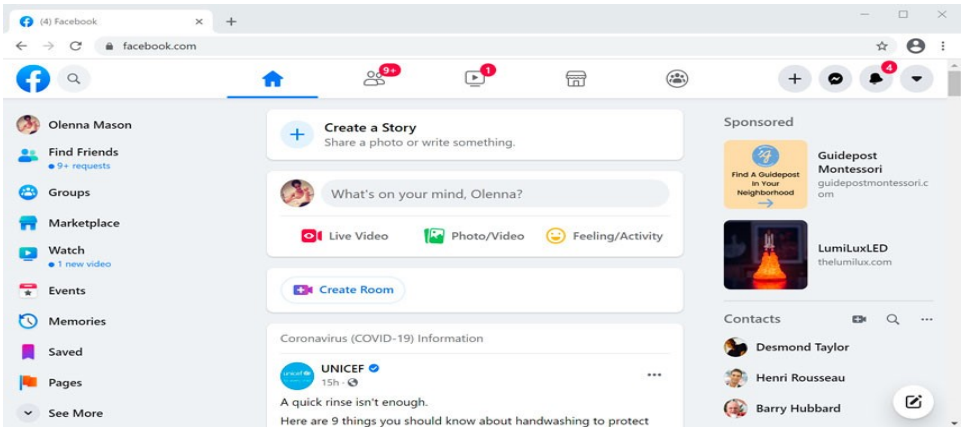
- **Backing up data**: You can also use the cloud to protect your files. There are apps such as **Carbonite** that **automatically back up your data** to the cloud. This way, if your computer ever is lost, stolen, or damaged, you'll still be able to recover these files from the cloud.



What is a web app?

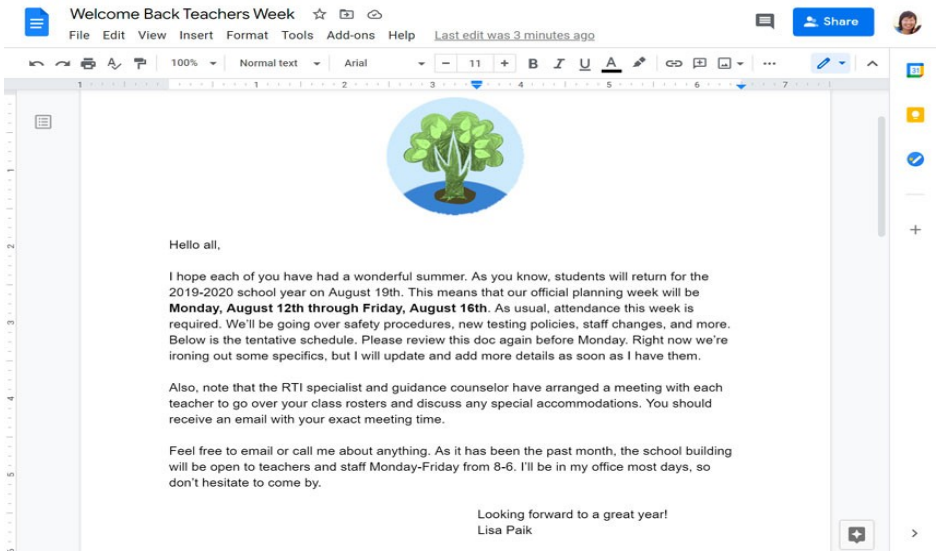
Previously, we talked about how **desktop applications** allow you to perform tasks on your computer. But there are also **web applications**—or **web apps**—that run **in the cloud** and do not need to be installed on your computer. Many of the most popular sites on the Internet are actually web apps. You may have even used a web app without realizing it! Let's take a look at some popular web apps.

- **Facebook:** Facebook lets you create an online **profile** and interact with your **friends**. Profiles and conversations can be updated at any time, so Facebook uses web app technologies to **keep the information up to date**.
-



- **<u>Pixlr</u>**: Pixlr is an **image editing application** that runs in your web browser. Much like **Adobe Photoshop**, it includes many advanced features, like color correction and sharpening tools.
-

- **<u>Google Docs</u>:** Google Docs is an **office suite** that runs in your browser. Much like **Microsoft Office**, you can use it to create **documents**, **spreadsheets**, **presentations**, and more. And because the files are stored **in the cloud**, it's easy to **share** them with others.



Keeping your computer physically clean

Dust isn't just unattractive—it can potentially damage or even destroy parts of your computer. Cleaning your computer regularly will help you **keep it working properly** and **avoid expensive repairs**.

Cleaning the keyboard

Dust, food, liquid, and other particles can get stuck underneath the keys on your keyboard, which can prevent it from working properly. The **basic cleaning tips** below can help keep your keyboard clean.

1. **Unplug** the keyboard from the USB or PS/2 port. If the keyboard is plugged into the PS/2 port, you will need to shut down the computer before unplugging it.
2. Turn the keyboard **upside down** and gently shake it to remove dirt and dust.
3. Use a can of **compressed air** to clean between the keys.

4. Moisten a **cotton cloth** or **paper towel** with rubbing alcohol and use it to clean the tops of the keys. Do not pour alcohol or any other liquid directly onto the keys.

5. **Reconnect** the keyboard to the computer once it is dry. If you are connecting it to a PS/2 port, you will need to connect it **before** turning on the computer.

Dealing with liquids

If you **spill liquid** on the keyboard, quickly shut down the computer and disconnect the keyboard. Then **turn the keyboard upside down** and allow the liquid to drain.

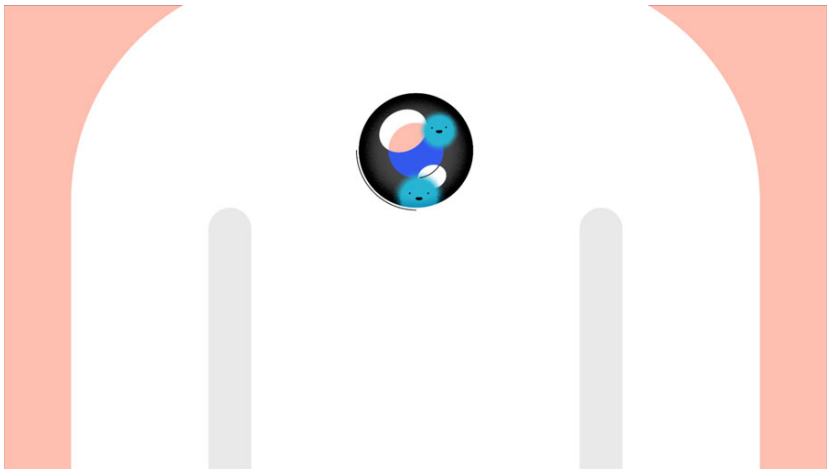
If the liquid is sticky, you will need to hold the keyboard on its side under running water to **rinse** away the sticky liquid. Then turn the keyboard upside down to drain for two days before reconnecting it. Please note that the keyboard may not be fixable at this point, but the method above is probably the best option.

To prevent this situation altogether, we recommend keeping drinks away from the computer area.

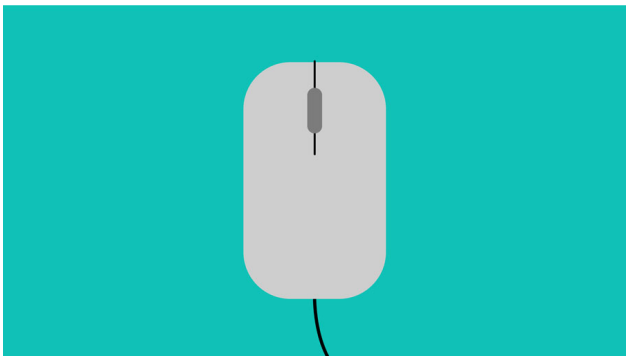
Cleaning the mouse

There are two main mouse types: **optical** and **mechanical**. Each is cleaned in basically the same way, although the mechanical mouse requires a bit more work.

- **Optical mice** require **no internal cleaning** because they do not contain any rotating parts; however, they can get **sticky** over time as dust collects near the light emitter. This can cause erratic cursor movement or prevent the mouse from working properly.



- **Mechanical mice** are especially susceptible to **dust** and **particles** that can accumulate inside the mouse, which can make it difficult to track—or move—properly. If the mouse pointer does not move smoothly, the mouse may need to be cleaned.



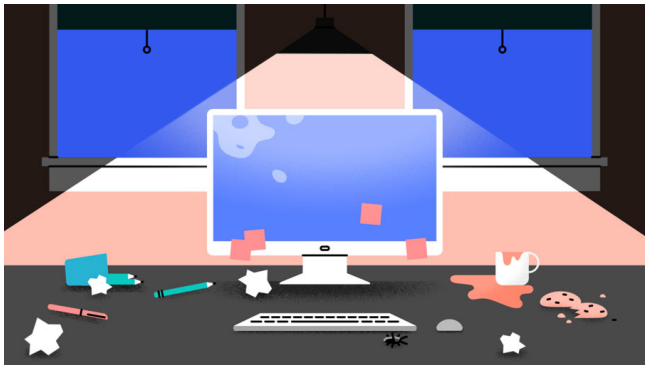
The **basic cleaning tips** below will help keep your mouse clean:

1. **Unplug** the mouse from the USB or PS/2 port. If the mouse is plugged into the PS/2 port, you will need to shut down the computer before unplugging it.
2. Moisten a **cotton cloth** with rubbing alcohol, and use it to clean the top and bottom of the mouse.
3. If you have a **mechanical mouse**, remove the **tracking ball** by turning the **ball-cover ring** counter-clockwise. Then clean the tracking ball and the inside of the mouse with a **cotton cloth** moistened with rubbing alcohol.
4. **Allow all of the parts to dry** before reassembling and reconnecting the mouse. If you are connecting it to a PS/2 port, you will need to connect it **before** turning on the computer.

If you just want to give the mouse a quick cleaning, place it on a **clean sheet of paper** and **move the mouse back and forth**. Some of the dust and particles should rub off onto the paper.

Cleaning the monitor

Dirt, fingerprints, and dust can make your computer screen difficult to read; however, it's easy to **clean your screen** when needed. There are monitor-cleaning kits you can buy, but they may damage your monitor if they're designed for a different type of monitor. For example, a monitor cleaner that is designed for **glass screens** may not work with some **non-glass LCD screens**. The safest method is simply to use a **soft clean cloth** moistened with **water**.



Do not use glass cleaner to clean a monitor. Many screens have anti-glare coatings that can be damaged by glass cleaner.

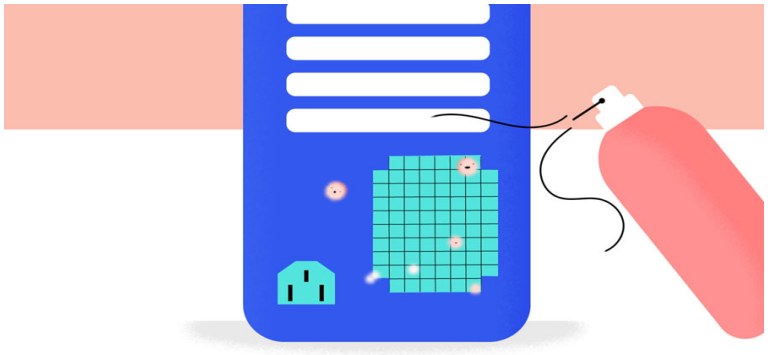
1. **Turn off** the computer.
2. **Unplug** the monitor from the power. If you are using a laptop, unplug the laptop.
3. Use a **soft clean cloth** moistened with **water** to wipe the screen clean.

Do not spray any liquids directly onto the screen. The liquid could leak into the monitor and damage the internal components.

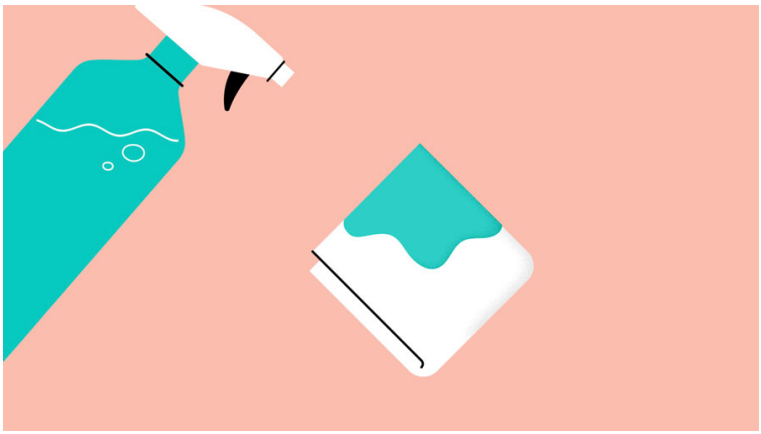
Tips for cleaning other computer surfaces

From time to time, you should clean your computer case and the sides and back of the monitor to avoid a buildup of dust and dirt. Here are a few tips you can use when cleaning these surfaces.

- Dust is your computer's main enemy. Use an **anti-static** cloth to lightly dust your computer casing. **Do not** use furniture cleaners or strong solvents.
- Use a can of **compressed air** to blow out debris from the air intake slots.

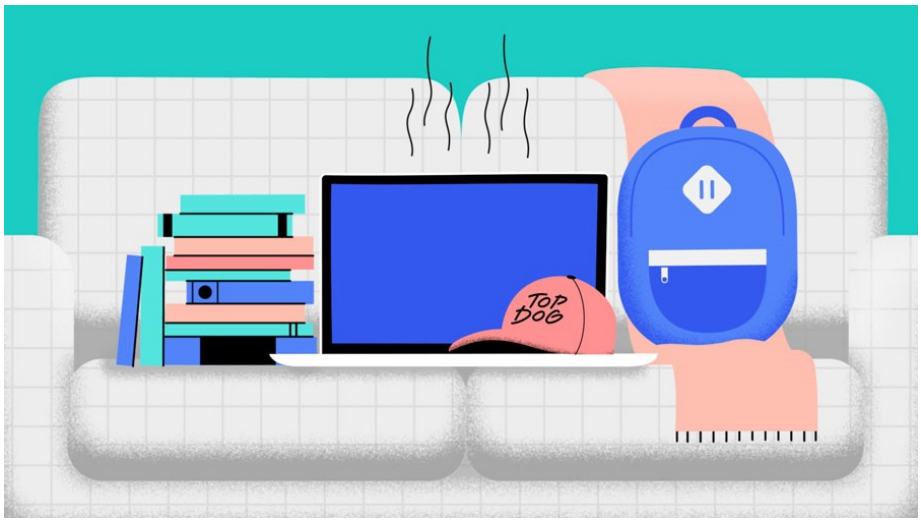


- **Ammonia** diluted with water—or **glass cleaner** comprised mostly of ammonia and water—is a safe cleaning solution for **computer surfaces**. The milder the solution, the better.
- Clean the **monitor housing** and **case** (but **not** the monitor screen) by spraying a safe cleaning solution onto a paper towel or anti-static cloth and wiping in a downward motion.



Keep it cool

Don't restrict airflow around your computer. A computer can generate a lot of heat, so the casing has **fans** that keep it from overheating. Avoid stacking papers, books, and other items around your computer.



Many computer desks have an **enclosed compartment** for the computer case. If you have this type of desk, you may want to position the case so it is not against the back side of the desk. If the compartment has a door, you may want to leave it open to improve airflow.

Protecting your computer

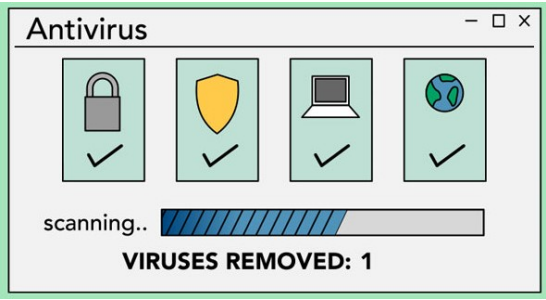
Your computer faces many potential threats, including **viruses**, **malware**, and **hard drive failure**. This is why it's important to do everything you can to protect your computer and your files.

Watch the video below to learn how to protect your computer from viruses, as well as how to back up your files.

Safeguarding against malware

Malware is any type of software that is designed to **damage your computer** or gain **unauthorized access** to your personal information. It includes **viruses**, **worms**, **Trojan horses**, and **spyware**. Most malware is distributed over the **Internet** and is often bundled with other software.

The best way to guard against malware is to install **antivirus software**, such as **Bitdefender**, **Norton**, or **Kaspersky**. Antivirus software helps to **prevent** malware from being installed, and it can also **remove** malware from your computer.

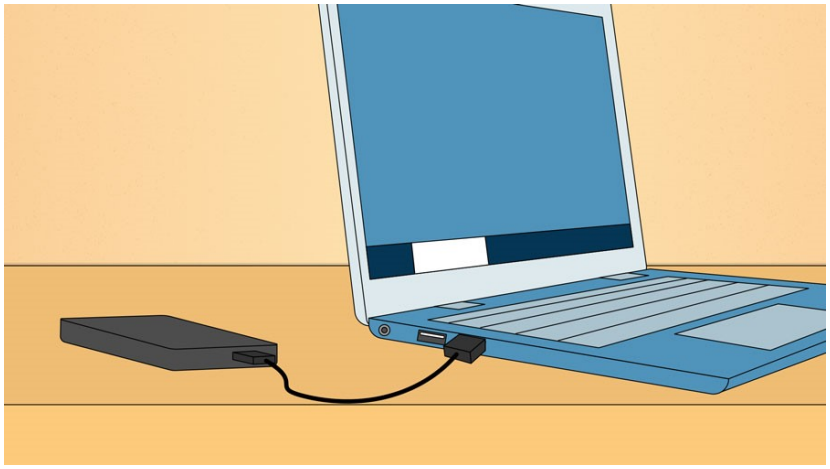


It's also important to **stay smart** when you're browsing the Web or using email. If a website or email attachment looks suspicious, trust your instincts. Keep in mind that your antivirus program **may not catch everything**, so it's best to avoid downloading anything that might contain malware.

Backing up your computer

Imagine what would happen if your computer suddenly stopped working. Would you lose any important documents, photos, or other files? It may be possible to repair your computer, but your files may be **lost forever**. Luckily, you can prevent this by creating **backup** copies of all of your files (or just the important ones) on an **external hard drive** or an **online backup service**.

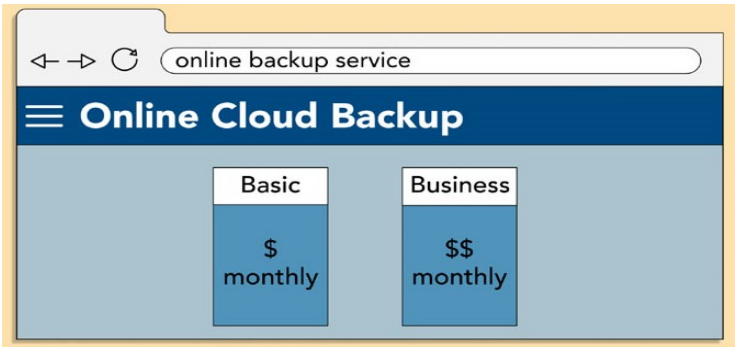
External hard drives



You can purchase an **external hard drive** and copy the contents of your computer to it. The **initial backup could take several hours**, so you will need to select a period of time when you do not need access to your computer. Running the backup overnight usually works best. Follow-up backups should be conducted on a regular basis, but they should not take as long.

One drawback is that an external hard drive can be lost, damaged, or stolen—just as your computer might be. This is why it's important to keep your drive in a **secure location** when not in use.

Online backup services



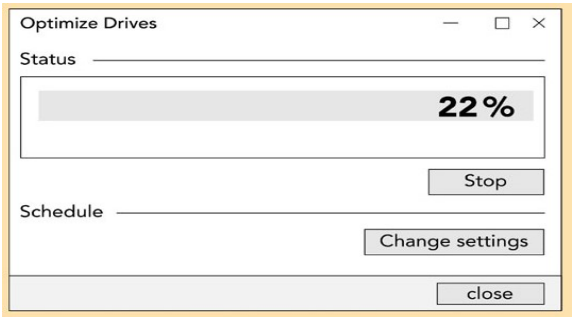
You can also back up your files to an **online backup service** like **Mozy**, **Carbonite**, or **Box**. These services will back up your your files **in the cloud**, which means you'll be able to recover them from any computer with an Internet connection. The amount of storage provided by these sites varies, and you will probably need to pay a fee for adequate storage space.

One drawback to online backup services is that the **initial backup can be slow** and may even take days to upload if you have a lot of files. However, subsequent backups should not take as long.

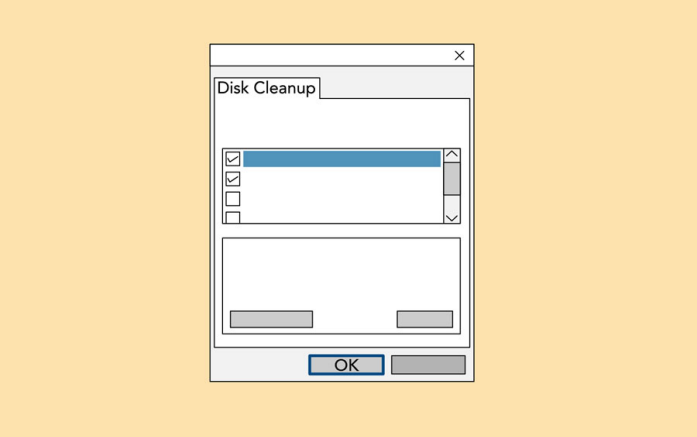
Other maintenance techniques

To keep your computer running smoothly, it's important to keep files and folders **uncluttered**. Cluttered or unorganized folders make it more difficult to find the files you need. Additionally, unwanted files can eventually fill up your **hard drive**, which will make your computer slower and more difficult to use. Here are a few things you can do to delete unwanted files and improve your computer's performance.

- **Delete files:** If you have any unwanted files, you can delete them manually. To do this, drag them to the **Recycle Bin** or **Trash**, then empty it to permanently delete the files.
- **Run the Disk Defragmenter:** Windows includes a **Disk Defragmenter** program in the Control Panel. If your computer is running slowly, running Disk Defragmenter can help to speed it up.



- **Run a Disk Cleanup:** Windows also includes a **Disk Cleanup** program in the Control Panel. It scans your computer for **temporary files** and other files that can be deleted. You can then delete the files to free up space on your hard drive.



Lesson 8: Creating a Safe Workspace

Creating a safe workspace

In addition to keeping your computer healthy, it's important to think about **your own health**. Using a computer involves a lot of repetitive motions such as **typing** and using the **mouse**. Over time, these motions can begin to negatively impact your body, especially your **wrists**, **neck**, and **back**. Staring at a monitor for long periods of time can also cause **eye strain**. To minimize these risks, you should take a few moments to make sure your workspace is arranged in a comfortable and healthy way.

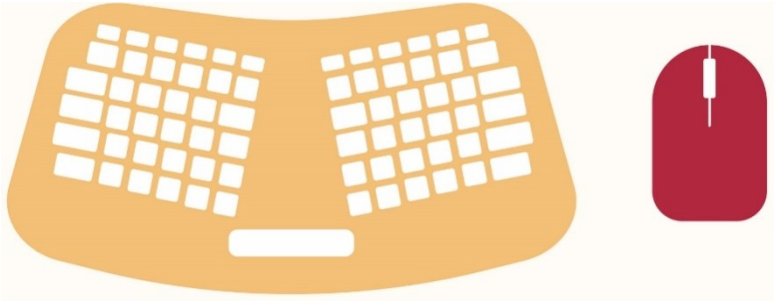
Avoiding strain and injury

Computer ergonomics is the science of equipment design and how specific equipment usage and placement can reduce a user's discomfort and increase productivity. Some equipment is designed with special attention to ergonomics, like **ergonomic keyboards** and **ergonomic chairs**.

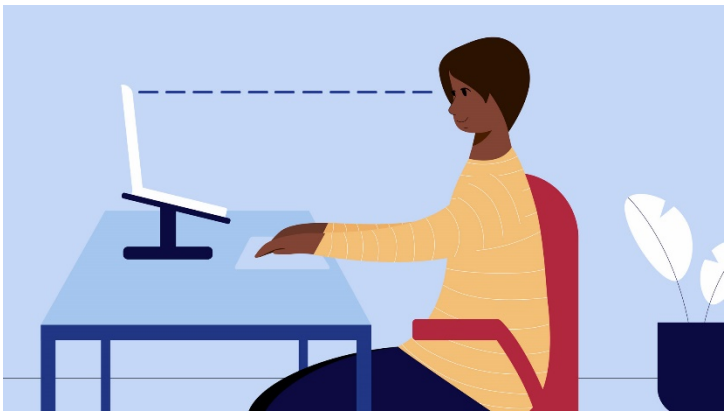
Here are a few tips to help you avoid injury in your workspace.

- **Adjust your chair**: Make sure your chair is adjusted to allow you to sit in a natural, comfortable position. Many office chairs are specially designed to **support the lower back** and promote good posture.

- **Keep the keyboard at a comfortable height**: Try to place the keyboard in a position that allows you to keep your wrists straight and relaxed to avoid wrist strain. Many desks have a keyboard tray that can keep the keyboard at a better height. You can also buy an **ergonomic keyboard** that is designed to minimize wrist strain.



- **Keep the mouse close to the keyboard**: If possible, place the mouse right next to the keyboard. If the mouse is **too far away**, it may be uncomfortable or awkward to reach for it.
- **Place the monitor at a comfortable distance**: The ideal position for a monitor is **20 to 40 inches** away from your eyes. It should also be **at eye level** or **slightly lower**.



- **Avoid clutter**: The computer area can quickly become **cluttered** with paper, computer accessories, and other items. By keeping this area as uncluttered as possible, you can improve your productivity and prevent strain and injury.

Lesson 9: Basic Troubleshooting Techniques

Troubleshooting

Do you know what to do if your screen goes blank? What if you can't seem to close an application, or can't hear any sound from your speakers? Whenever you have a problem with your computer, **don't panic!** There are many **basic troubleshooting techniques** you can use to fix issues like this. In this lesson, we'll show you some simple things to try when troubleshooting, as well as how to solve common problems you may encounter.

General tips to keep in mind

There are many different things that could cause a problem with your computer. No matter what's causing the issue, troubleshooting will always be a process of **trial and error**—in some cases, you may need to use several different approaches before you can find a solution; other problems may be easy to fix. We recommend starting by using the following tips.

- **Write down your steps**: Once you start troubleshooting, you may want to **write down** each step you take. This way, you'll be able to remember exactly what you've done and can avoid repeating the same mistakes. If you end up asking other people for help, it will be much easier if they know exactly what you've tried already.
- **Take notes about error messages**: If your computer gives you an **error message**, be sure to write down as much information as possible. You may be able to use this information later to find out if other people are having the same error.
- **Always check the cables**: If you're having trouble with a specific piece of computer **hardware**, such as your monitor or keyboard, an easy first step is to check all related cables to make sure they're properly connected.

- **Restart the computer**: When all else fails, **restarting the computer** is a good thing to try. This can solve a lot of basic issues you may experience with your computer.

Simple solutions to common problems

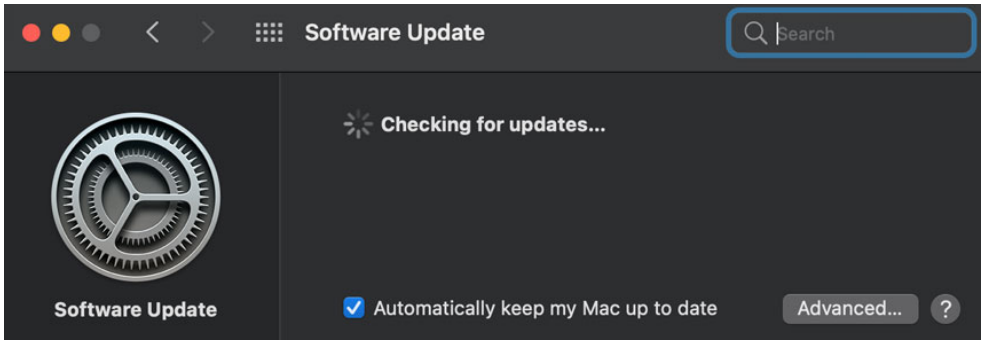
Most of the time, problems can be fixed using simple troubleshooting techniques, like **closing** and **reopening** the program. It's important to try these simple solutions before resorting to more extreme measures. If the problem still isn't fixed, you can try other troubleshooting techniques.

Problem: Power button will not start computer

- **Solution 1**: If your computer **does not start**, begin by checking the power cord to confirm that it is plugged securely into the back of the computer case and the power outlet.
- **Solution 2**: If it is plugged into an outlet, make sure it is a **working outlet**. To check your outlet, you can plug in another **electrical device**, such as a lamp**.**
- **Solution 3**: If the computer is plugged in to a **surge protector**, verify that it is turned on. You may have to **reset** the surge protector by turning it off and then back on. You can also plug a lamp or other device into the surge protector to verify that it's working correctly.
- **Solution 4**: If you are using a **laptop**, the **battery** may not be charged. Plug the **AC adapter** into the wall, then try to turn on the laptop. If it still doesn't start up, you may need to wait a few minutes and try again.

Problem: An application is running slowly

- **Solution 1**: Close and reopen the application.
- **Solution 2**: Update the application. To do this, click the **Help** menu and look for an option to check for **Updates**. If you don't find this option, another idea is to run an online search for application updates.



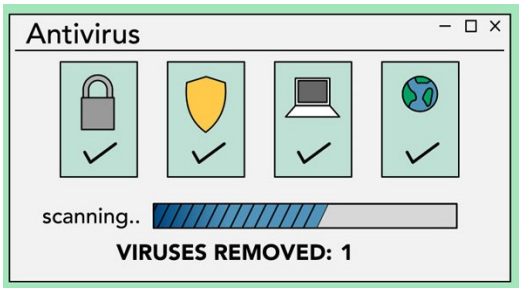
Problem: An application is frozen

Sometimes an application may become stuck, or **frozen**. When this happens, you won't be able to close the window or click any buttons within the application.

- **Solution 1**: Force quit the application. On a PC, you can press (and hold) **Ctrl+Alt+Delete** (the Control, Alt, and Delete keys) on your keyboard to open the **Task Manager**. On a Mac, press and hold **Command+Option+Esc**. You can then select the unresponsive application and click **End task** (or **Force Quit** on a Mac) to close it.
- **Solution 2**: Restart the computer. If you are unable to force quit an application, **restarting** your computer will close all open apps.

Problem: All programs on the computer run slowly

- **Solution 1**: Run a **virus scanner**. You may have **malware** running in the background that is slowing things down.



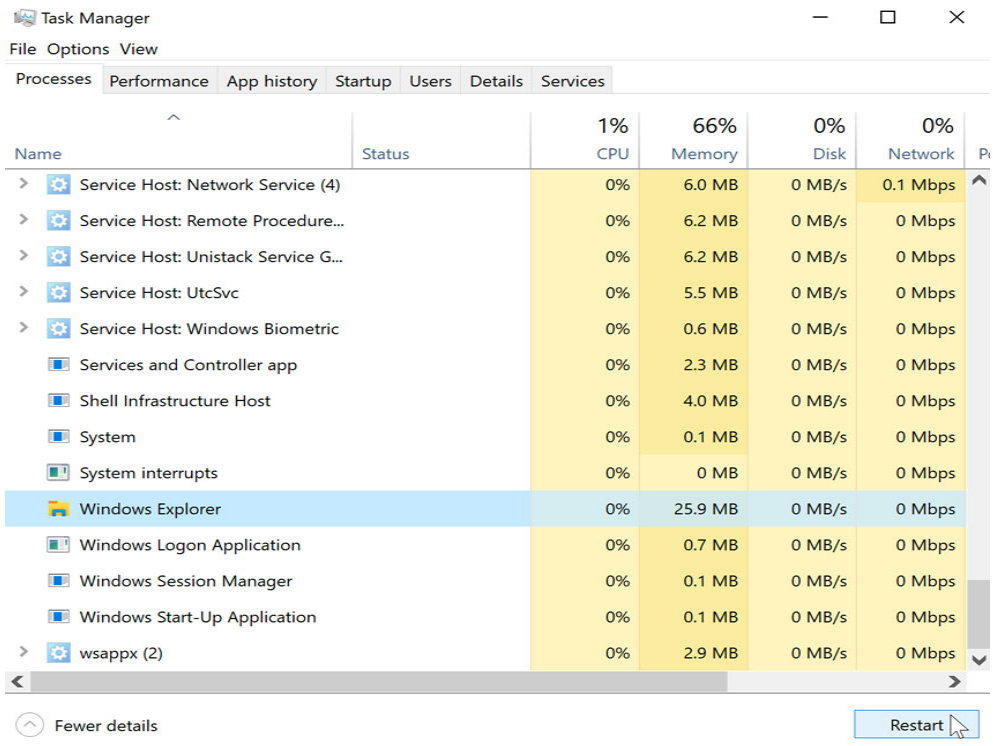
- **Solution 2**: Your computer may be running out of hard drive space. Try **deleting** any files or programs you don't need.

- **Solution 3**: If you're using a **PC**, you can run **Disk Defragmenter**.

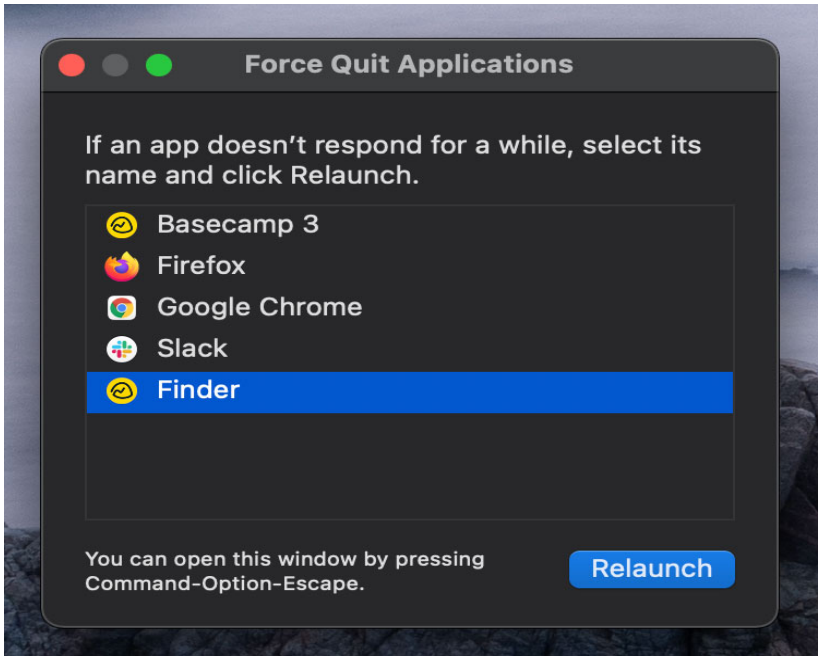
Problem: The computer is frozen

Sometimes your computer may become completely unresponsive, or **frozen**. When this happens, you won't be able to click anywhere on the screen, open or close applications, or access shut-down options.

- **Solution 1 (Windows only)**: Restart Windows Explorer. To do this, press and hold **Ctrl+Alt+Delete** on your keyboard to open the **Task Manager**. Next, locate and select **Windows Explorer** from the **Processes** tab and click **Restart**. You may need to click **More Details** at the bottom of the window to see the Processes tab.



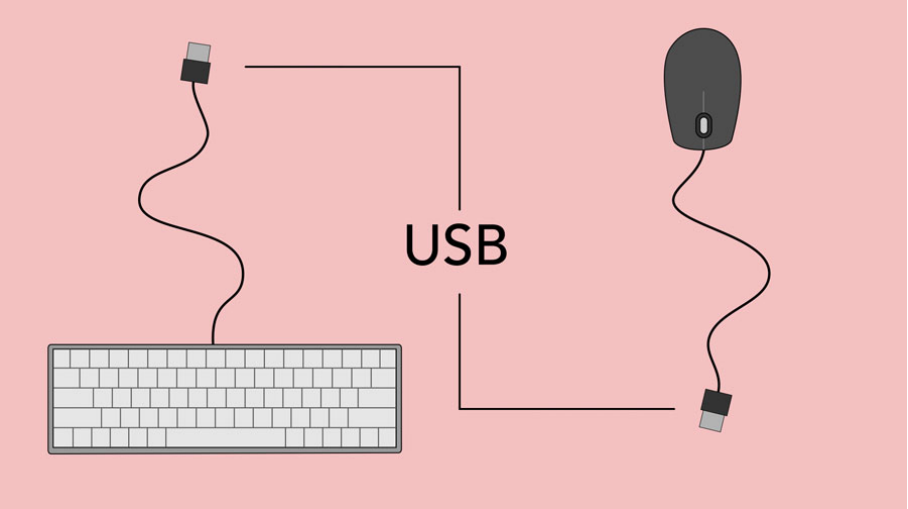
- **Solution 2 (Mac only):** Restart Finder. To do this, press and hold **Command+Option+Esc** on your keyboard to open the **Force Quit Applications** dialog box. Next, locate and select **Finder**, then click **Relaunch**.



- **Solution 3**: Press and hold the Power button. The Power button is usually located on the front or side of the computer, typically indicated by the **power symbol**. Press and hold the Power button for **5 to 10 seconds** to force the computer to shut down.
- **Solution 4**: If the computer still won't shut down, you can **unplug the power cable** from the electrical outlet. If you're using a laptop, you may be able to remove the battery to force the computer to turn off. **Note**: This solution should be your **last resort** after trying the other suggestions above.

Problem: The mouse or keyboard has stopped working

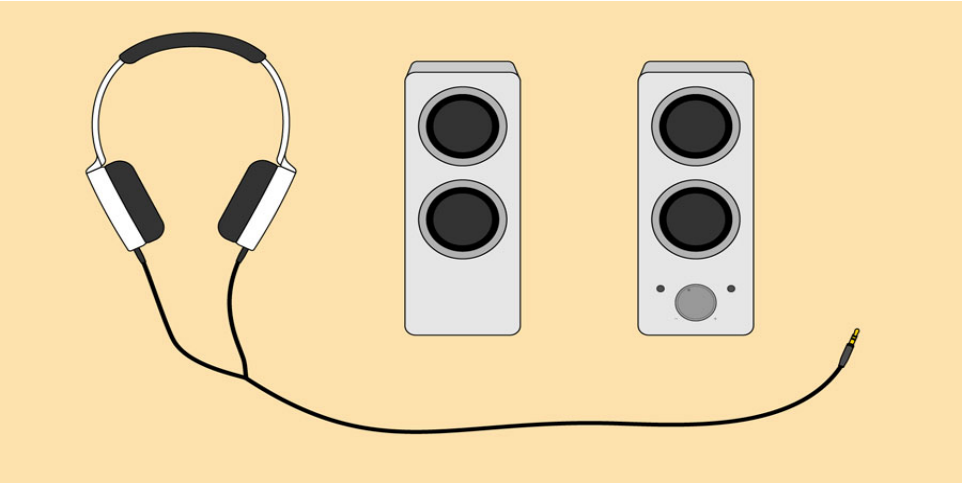
- **Solution 1**: If you're using a **wired** mouse or keyboard, make sure it's correctly plugged into the computer.



- **Solution 2**: If you're using a **wireless** mouse or keyboard, make sure it's turned on and that its batteries are charged.

Problem: The sound isn't working

- **Solution 1**: Check the volume level. Click the audio button in the top-right or bottom-right corner of the screen to make sure the sound is turned on and that the volume is up.
- **Solution 2**: Check the audio player controls. Many audio and video players will have their own separate audio controls. Make sure the sound is turned on and that the volume is turned up in the player.
- **Solution 3**: Check the cables. Make sure external speakers are plugged in, turned on, and connected to the correct audio port or a USB port. If your computer has **color-coded** ports, the audio output port will usually be **green**.
- **Solution 4**: Connect headphones to the computer to find out if you can hear sound through the headphones.

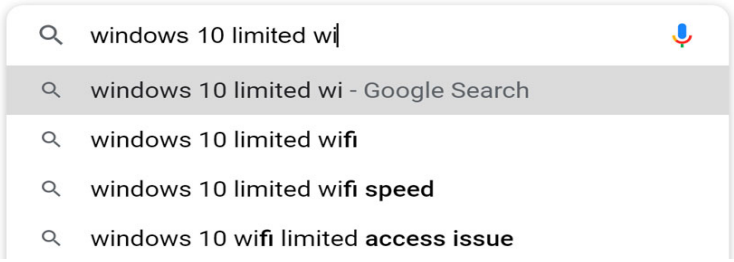


Problem: The screen is blank

- **Solution 1**: The computer may be in **Sleep** mode. Click the mouse or press any key on the keyboard to wake it.
- **Solution 2**: Make sure the monitor is **plugged in** and **turned on**.
- **Solution 3**: Make sure the computer is **plugged in** and **turned on**.
- **Solution 4**: If you're using a desktop, make sure the monitor cable is properly connected to the computer tower and the monitor.

Solving more difficult problems

If you still haven't found a solution to your problem, you may need to ask someone else for help. As an easy starting point, we'd recommend **searching the Web**. It's possible that other users have had similar problems, and solutions to these problems are often posted online. Also, if you have a friend or family member who knows a lot about computers, they may be able to help you.



Keep in mind that most computer problems have simple solutions, although it may take some time to find them.

Lesson 10: How to Use Your Computer's Built-in Help

How to use your computer's built-in help

Everyone needs to look for help sometimes. Luckily, when you want help with a computer program, it's usually easy to find. Most programs have a help feature somewhere, and learning how to use it can make a big difference. You may not find everything you need, but your computer's built-in help is a great place to start.

Different programs integrate help features in different ways. Some are like interactive manuals included with the program that you can open with a menu, while others are just links to the developer's support website. But they're always designed with the same thing in mind: to help you learn the features of the program and to solve problems yourself.

How to access built-in help

Programs have a help button. For example, Microsoft Office 2016 has the Help tab with a Help button to open a search.

Features of a help file

Help files can be organized in a variety of ways, including as a table of contents, FAQ, or searchable database.

When you open the help panel in Office 2016, you'll see a search box. Much like a search engine, you type keywords in the search bar, and it will display topics relevant to the keywords you entered.

If you can't find what you're looking for or don't understand what you've found, you can usually do a Google search, It can take a little extra time and effort, but learning how to find solutions on your own is a valuable skill—and you'll get better at it with practice.

Lesson 11: Learning a New Program

Learning a new program

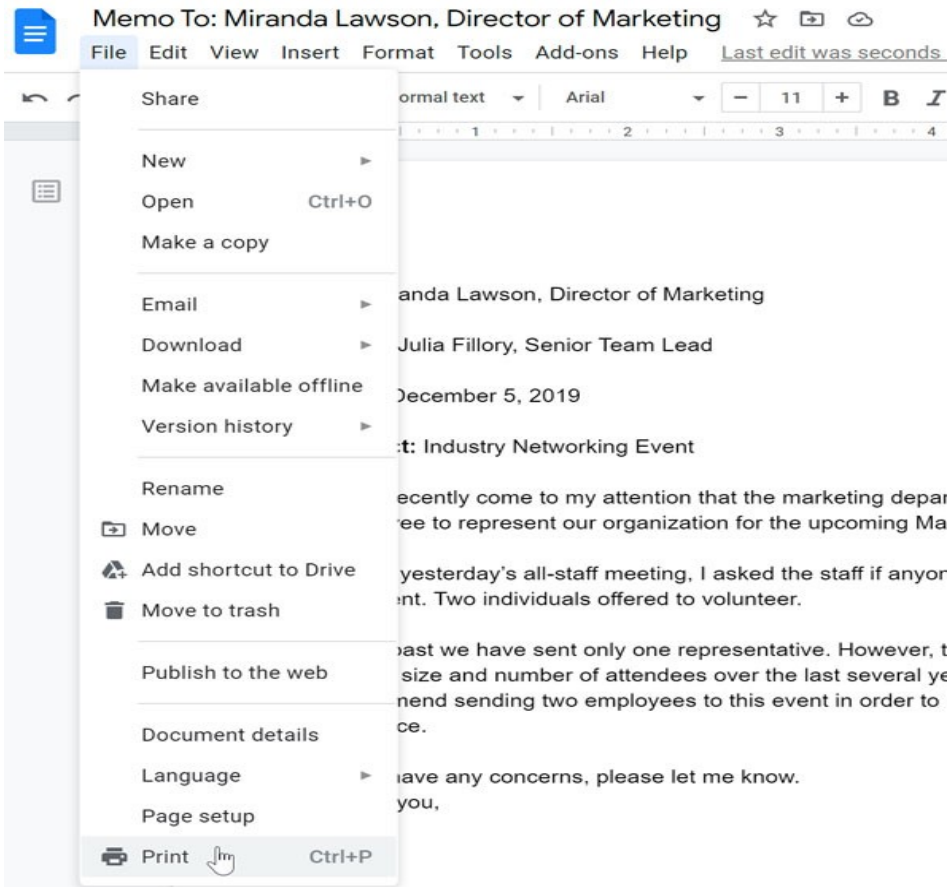
You know more than you think you do!

Starting to use a new computer **program** can seem overwhelming, but keep in mind that you already know more than you think you know. Even if the screen in front of you looks totally unfamiliar, everything you've learned so far about your computer and other programs will help you figure out what to do next. As you spend more time using the new program, it will start to feel more familiar.

Look for similarities with programs you've used

The first thing you'll want to do when opening a new program is look for **familiar features**. You may not realize it, but most computer programs have certain basic features in common—so once you've learned to use one program, you'll already know something about any other ones you try to use. For example, many **keyboard shortcuts** remain the same from program to program.

Most programs also have **File** and **Edit** menus, and they'll usually be in the same place: at the top of your screen, either as a **drop-down menu** or in a **ribbon**. The File and Edit menus tend to contain similar functions in any program. So if you know the **Print** function appears in the File menu in **Microsoft Word**, you'll have a good idea of where to look for it in **Google Docs**, as in the image below.

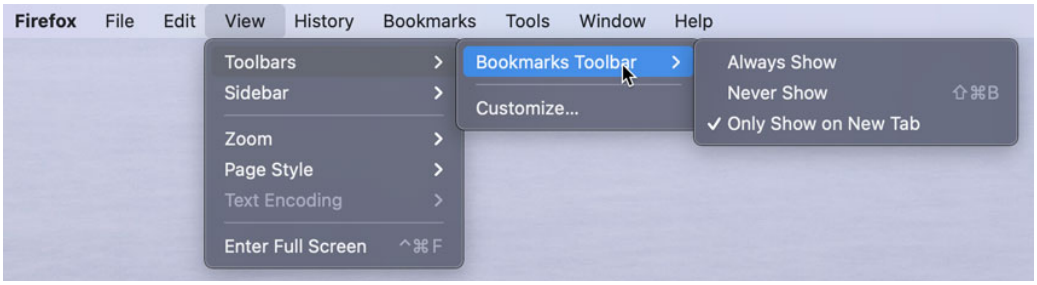


Even if you're switching from a **PC** to a **Mac** or vice versa, **keyboard shortcuts** will remain mostly the same. Just substitute the **Command** key on a Mac for the **Ctrl** key on a PC. For example, the shortcut for the **Cut** function is **Ctrl+X** on a PC; on a Mac, it's **Command+X**.

Check for hidden toolbars or panels

Let's say you've checked your new program for familiar functions, but there are a few you just can't find. Don't give up! If you believe a particular function should be there, you're probably right—you may just need to open it. Many programs have **toolbars**, **sidebars**, or **panels** you can **hide** or **make visible**, and they are often hidden by default when you start the program. If you can't find a function you need,

try clicking the **View** or **Window** menu to check for hidden toolbars, as shown in the image of the Firefox web browser below.

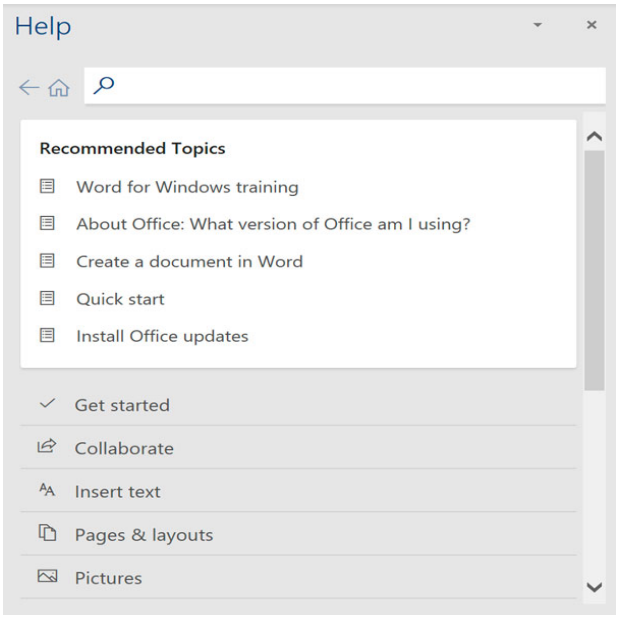


If you're having trouble

If the program you're trying to use has a lot of unfamiliar elements—or if there's a feature you simply don't know how to use—don't despair. There are still some simple things you can do to find your way around a program.

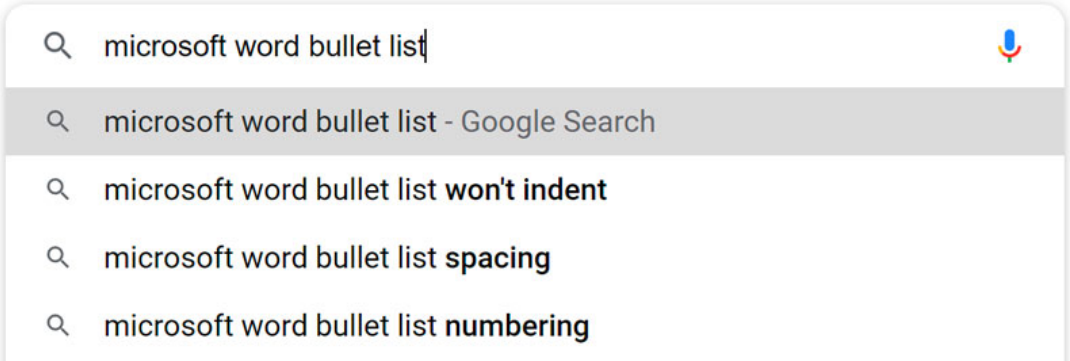
Use the help feature

Software companies know that most users will have questions about how to use their programs, which is why they include **built-in help features**. You can usually access a program's help feature by clicking a **Help** menu (sometimes represented by a **question mark icon**) at the top of your screen. There, you'll find **instructions** on how to do things, **troubleshooting tips**, and answers to **frequently asked questions**. Some help features will even include links to **online help forums**, where users can post answers to each other's questions. Remember, if something isn't obvious to you, it probably isn't obvious to other users either, so the help section should have some information on it.



Google it!

If you haven't found the answer in the program's help feature, try searching for a solution on **Google**. You will probably find tutorials or posts from other users explaining how to use the program. You may also want to search **YouTube** for video tutorials on the program you're using.



Bringing your files with you

When you're working on a document or other computer file, you can always save it to your computer's **hard drive**. Sometimes, you may want to **bring your file with you** and open it on a different computer. In this lesson, we'll talk about two ways to save your files so you can access them from almost anywhere.

- **Flash drive**: Flash drives are **small**, **removable hard drives** that plug into the **USB ports** on your computer. They are relatively inexpensive (usually less than $20) and can be purchased at any store with an electronics section.
- **Cloud storage**: Cloud storage means you save your files on **servers** on the Internet using an account with a cloud service. With cloud storage, you can access your files from any computer with Internet access without having to keep track of a **physical device**.

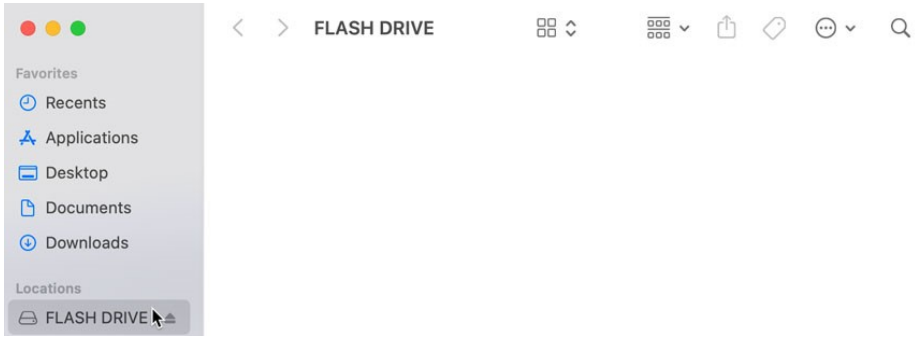
Flash drives and the cloud can also be used to **back up** your files.

Using a flash drive

Flash drives make it easy to carry your important files and documents with you in a portable form. You should always back up the files on your flash drive elsewhere just in case it gets lost or breaks.

To connect a flash drive:

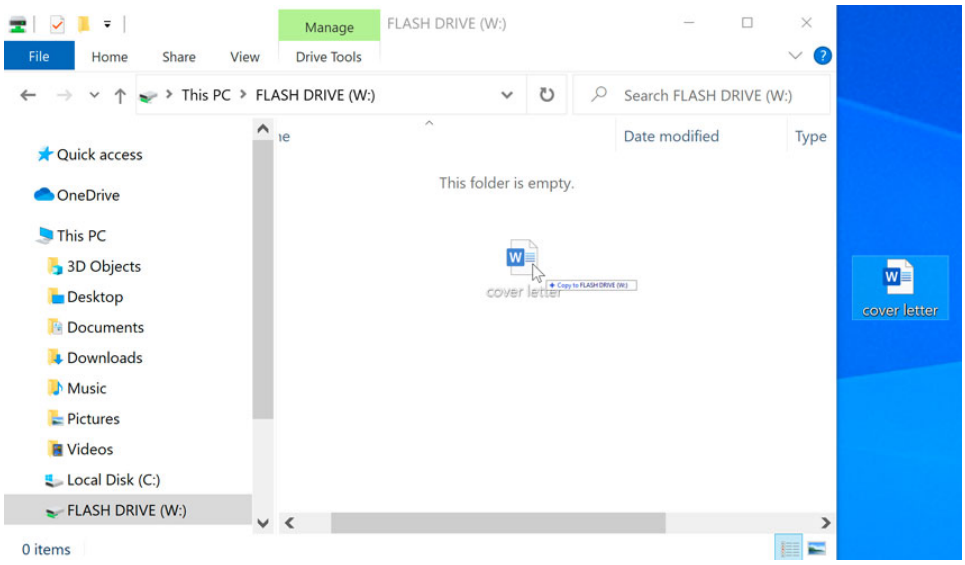
1. **Insert the flash drive** into a **USB port** on your computer. You should find a USB port on the front, back, or side of your computer (the location may vary depending on whether you have a desktop or laptop).
2. If you're using **Windows**, a dialog box may appear. If it does, select **Open folder to view files**. On a **Mac**, a **flash drive icon** will usually appear on the desktop.
3. If a dialog box does not appear, open **Windows Explorer**—or **Finder** if you're using a **Mac**—and select the flash drive on the left side of the window. Note that the **name** of the flash drive may vary.



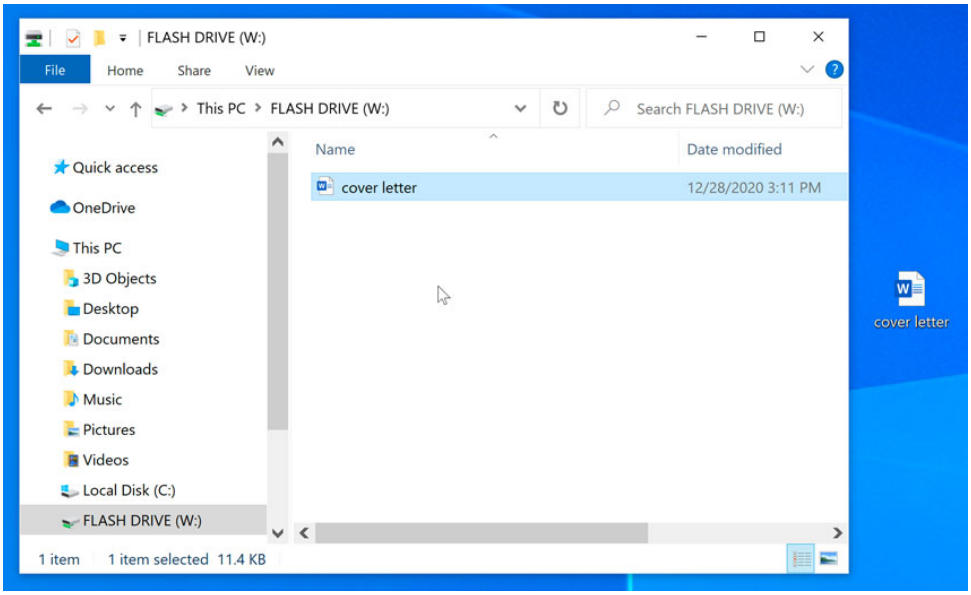
To work with a flash drive:

Once you've connected a flash drive, you can work with it just like any other folder on your computer, including moving and deleting files.

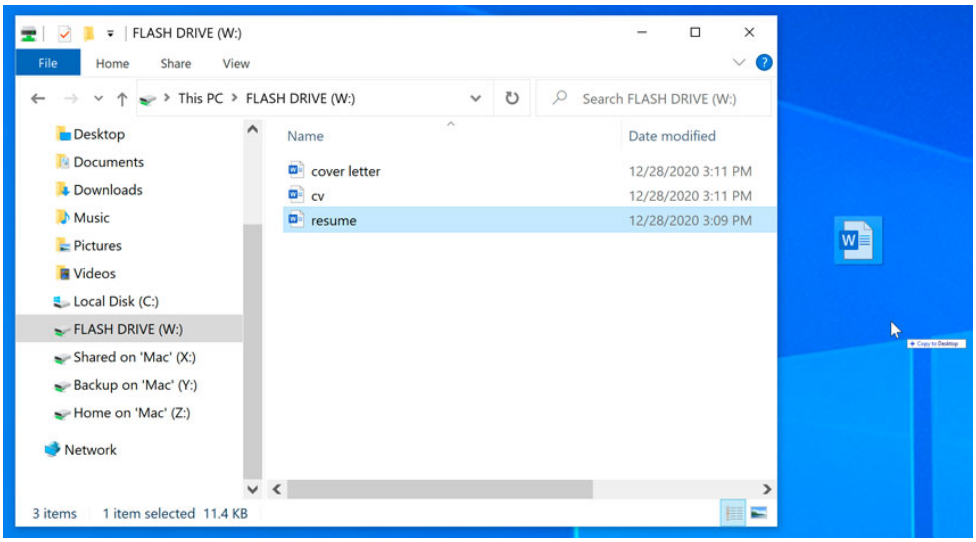
1. If you want to copy a file **from your computer to the flash drive**, click and drag the file from your computer to this window.



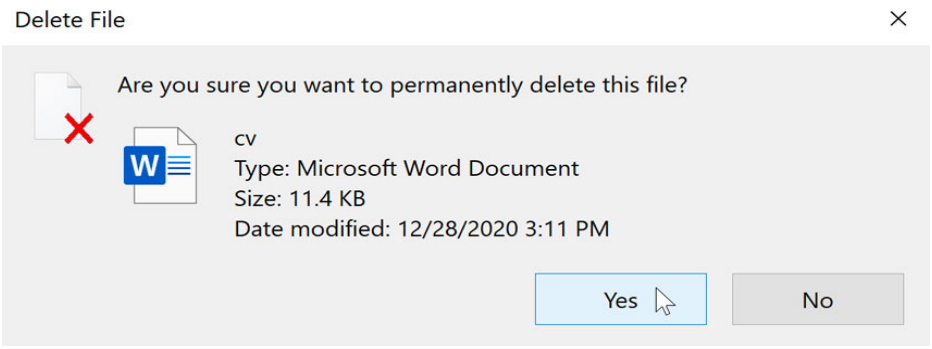
2. The file will be **duplicated**, and this new version will be saved to the flash drive. The original version of the file will still be saved to your computer.



3. If you want to copy a file **from your flash drive to your computer**, click and drag the file from this window to your computer.



4. If you want to **remove a file from your flash drive**, click and drag the file to the **Recycle Bin** on a PC or the **Trash can** on a Mac. A dialog box may appear appear. If it does, click **Yes** to confirm that you want to permanently delete the file.

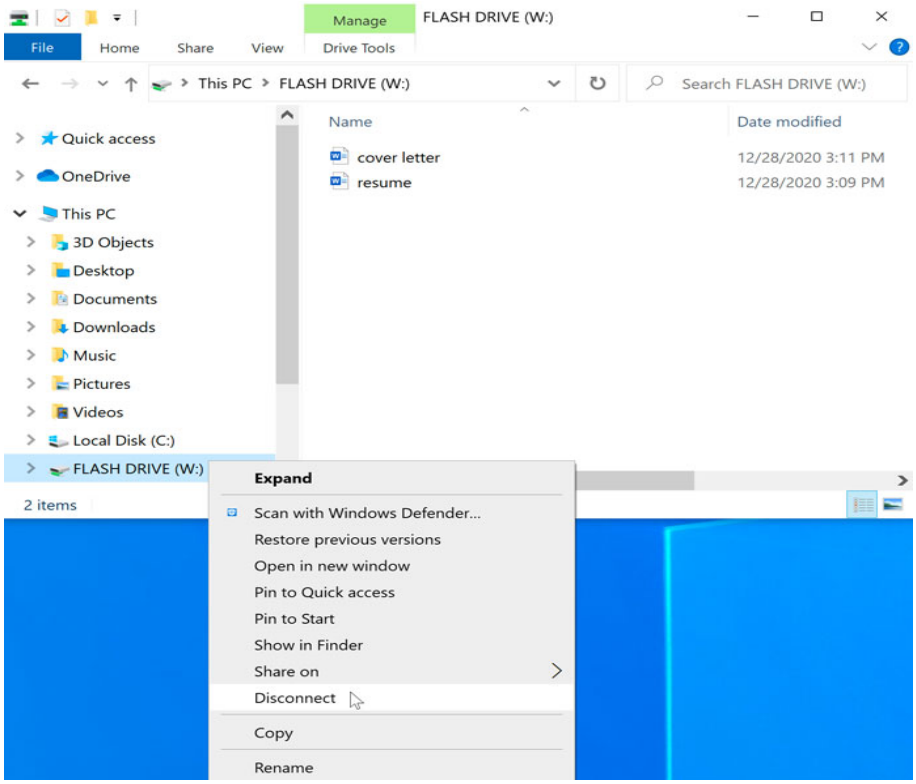


If a dialog box does not appear, you may need to **empty the Trash can** to permanently delete the file.

To safely remove a flash drive:

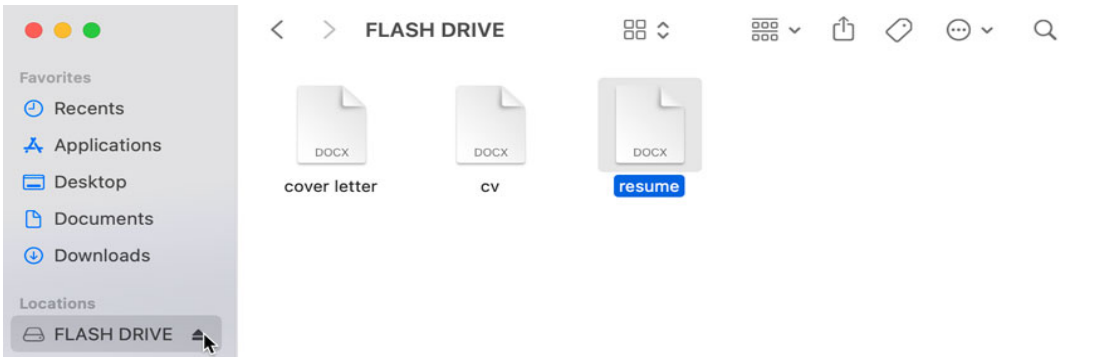
When you're done using a flash drive, don't remove it from the USB port just yet. You'll need to make sure to disconnect it properly to avoid damaging files on the drive.

1. Right-click the flash drive and select **Disconnect** (or **Eject**).



2. You can now safely remove the flash drive from the USB port.

If you're using a **Mac**, you can also click the **Eject** button next to the flash drive in **Finder** to eject it.

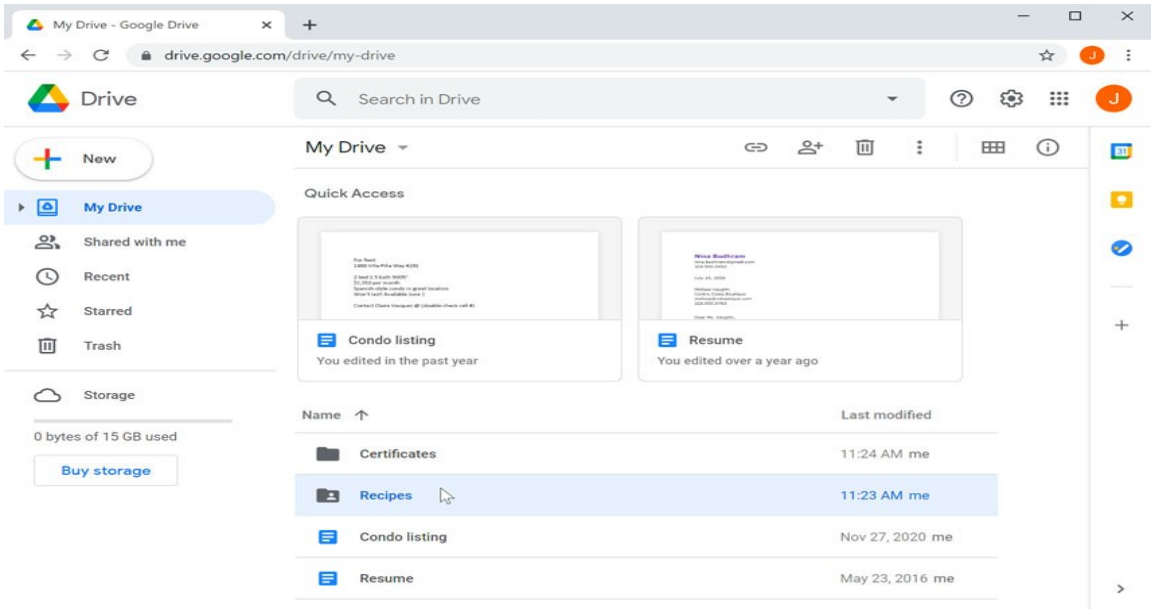


Saving files to the cloud

There are many services that allow you to create **a free account** and save documents, images, and other files **to the cloud**. Some of the most popular are **Google Drive**, **OneDrive**, and **Dropbox**. The **free storage space** that comes with these accounts (usually around **15GB**) should be plenty if you're using your account for regular personal, work, or school purposes. If you own a business and want to keep all

of your documents in the cloud, you may want to pay your cloud service for more storage.

Unlike **physical media**, the cloud can't break or get lost, so you don't necessarily need to back up the files you keep on it. Files in the cloud are also easier to **share** so you can **collaborate** with friends and coworkers. However, when you save something online, there's always a risk that **unauthorized** users will try to gain access to your **personal information**. To protect your files, create a **strong password** and pay attention to the **privacy settings and policies** of the cloud service you're using.



Lesson 13: Using Accessibility Features

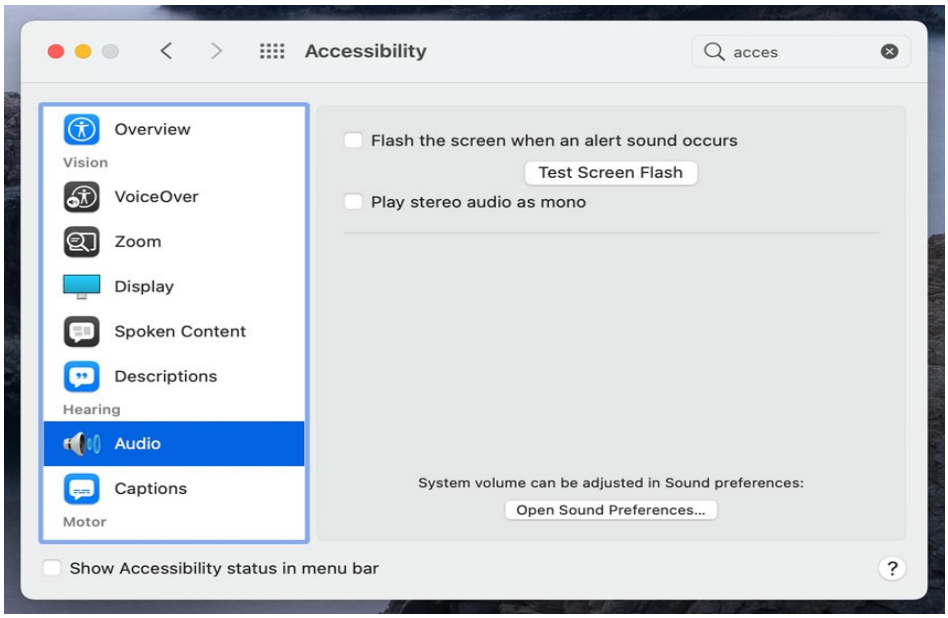
What are accessibility features?

Accessibility features are designed to help people with disabilities use technology more easily. For example, a **text-to-speech** feature may read text out loud for people with limited vision, while a **speech-recognition** feature allows users with limited mobility to control the computer with their voice. In this lesson, we'll introduce you to some **common accessibility features**. We'll also discuss **assistive technology** that you can attach to your computer for greater accessibility.

Common accessibility features

Although some accessibility features require special software **downloads**, many are built into the operating system of your computer or mobile device. Here are just a few types of accessibility features you may already have on your device.

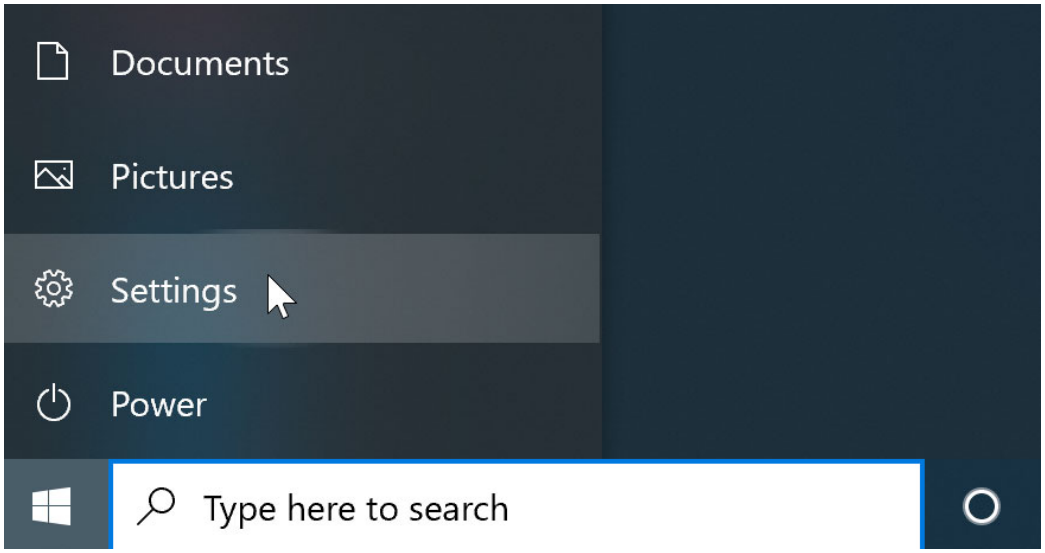
- **Features for blind or low-vision computer users**: Features such as **text-to-speech** allow users to hear what's on the screen instead of reading it. Other features, like **high-contrast themes** and **enlarged cursors**, make it easier for users with limited vision to see the screen.
- **Features for deaf or low-hearing computer users**: **Closed-captioning** helps to convey audio information to deaf users in visual form. **Mono audio** systems transmit right and left audio signals through both earbuds and headphones so users with limited hearing in one ear will not miss part of what they are listening to.
- **Features for limited-mobility computer users**: **Keyboard shortcuts** are convenient for many people, but they are especially helpful to those with difficulty physically manipulating a mouse. For users who have difficulty pressing several keys at once, **sticky keys** allows them to press keys one at a time to activate a shortcut.



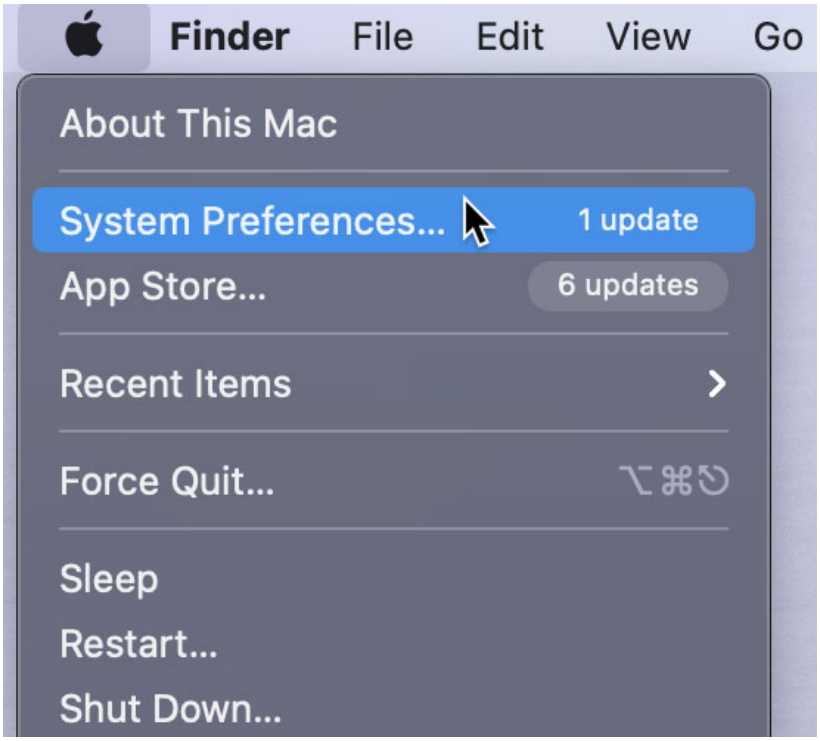
Using accessibility features

Most computers and mobile devices come with built-in accessibility features, although they'll usually need to be turned on before you can use them. Let's take a look at how to locate these features for your device.

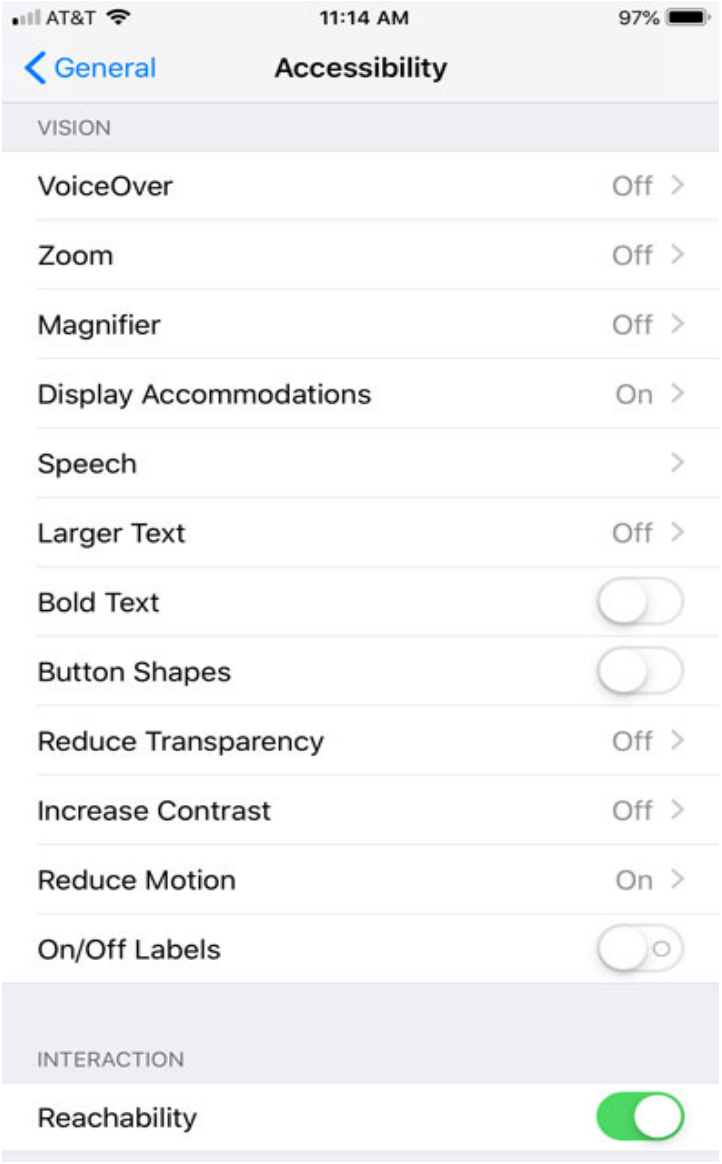
- In **Windows**, open the **Settings** app (or **Control Panel** in Windows 8 and earlier), then click **Ease of Access**.



- In **macOS**, open **System Preferences**, then click **Accessibility** (or **Universal Access** in older versions).

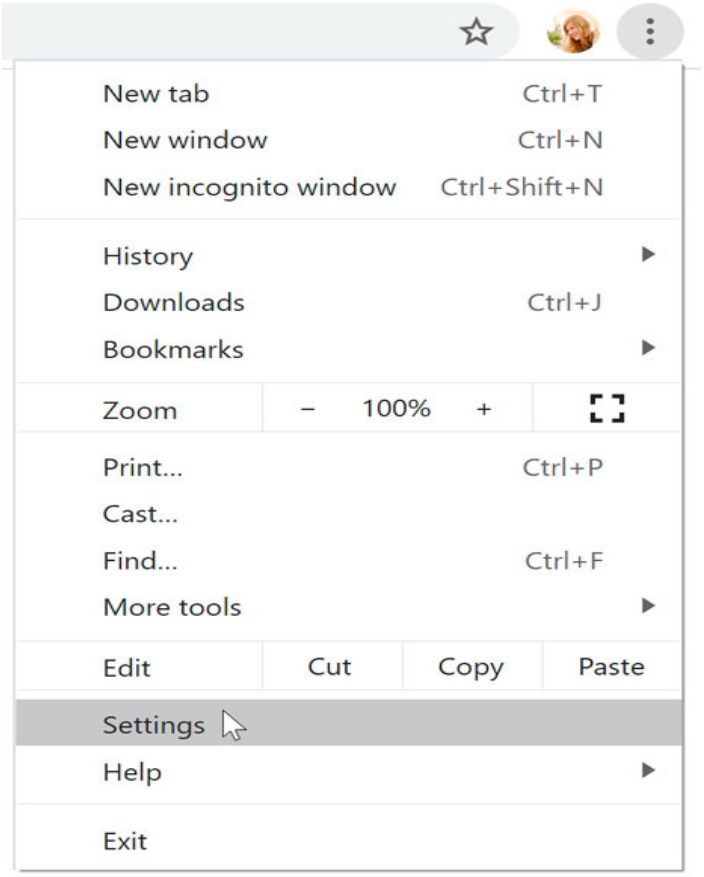


- On mobile devices that use **Android** or **iOS**, open the **Settings app**, then locate the **Accessibility** section. On iOS devices, you'll find it within the **General** settings category.



Web accessibility

Most web browsers also offer their own built-in accessibility features. You'll usually find these options in your browser's settings.



Before you adjust these settings, you may want to try **zooming** instead. Zooming is an easy way to make webpages easier to read, and it works the same way in most browsers. If you're using a browser in **Windows**, you can **zoom in or out** by pressing **Ctrl+** or **Ctrl-** (hold down the **Ctrl** key and press the **+** or **-** key). If you're using a Mac, you'll press **Command+** or **Command-**.

To return to the default zoom level, press **Ctrl+0** (hold down the **Ctrl** key and press the **zero** key). If you're using a Mac, press **Command+0**.

Congratulations … You Have Completed

UNDERSTANDING COMPUTER BASICS