

Introduction to Computers: The Basics

Terminology

Computer: An electronic device that can store and process data.

Desktop Computer: A computer that has a separate monitor, computer case, keyboard, and mouse.

Laptop Computer: A portable computer that contains the monitor, keyboard, and other parts all in one unit.

Hardware: The physical pieces of the computer.

Software: Instructions that tell the hardware what to do and how to do it.

Monitor: The screen where the computer displays visual information.

Computer Case: On a desktop computer, contains all the machinery that makes the computer work, including the hard drive, which stores all the data. Laptops do not have a separate computer case.

Keyboard: Allows you to type text and give the computer commands.

Mouse: Allows you to interact with images on the screen.

Touchpad: An alternative to the mouse. Found on laptop computers only.

Desktop Computer



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Laptop Computer



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Ports



↑ Power Jack
↑ USB-C Port
↑ HDMI Port
↙ ↘ USB Ports



↑ Headphone Jack
↑ SD Card Slot
↑ USB Port
↑ Ethernet Port

Ethernet Port: Plug in an Ethernet cable to connect to the Internet. If you're using wireless internet (Wi-Fi) you won't need this.

HDMI Port: Used to connect your computer to a TV or monitor with an HDMI cable. Can transmit both sound and images.

Headphone Jack: Plug in headphones.

Power Jack: Plug in your laptop charger.

SD Card Slot: Insert an SD memory card from a smartphone or camera to access saved images/data on your computer.

USB Port: Allows devices to share data with the computer and/or draw power from it.



USB connectors have two open square holes on one side and two square holes with plastic below them on the other side. On most computers, you'll plug USB connectors in with the open square holes on the top.

Turning the Computer On

If the computer is **off**, turn it on by pressing the power button once.

If the computer is in **sleep mode**, you can wake it up by moving the mouse or pressing any key on the keyboard.

The Mouse

Place your hand on top of the mouse with your palm covering the rounded part below the buttons.

Rest your pointer finger on the left button and your middle finger on the right button, with your other fingers against the sides of the mouse, out of the way.

To move the mouse, slide it along the table. The cursor will move across the screen in the direction you move the mouse.



Mouse Terminology

Click: Press the left mouse button and release it. The most common mouse action.


Double-click: Press the left mouse button twice quickly. Mainly used for opening files.

Right-click: Press the right mouse button and release it. Will usually bring up a menu of options.

Click and drag: Hold the left mouse button down while moving the mouse. Used to move something, highlight text, or select multiple objects.

Scroll: Spin the scroll wheel to scroll up and down in a document.

The Cursor

 The cursor (normally a black or white arrow) shows you what the mouse is pointing to. Aim the tip of the cursor where you want to use it.

The cursor changes shapes to let you know about special things it can do:

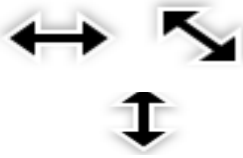


The hand icon lets you know when your mouse is over something you can click to open.



A blue circle next to the cursor lets you know the computer is working on what you have asked it to do.

I The I-beam cursor appears when you have your mouse over a place you can type in.

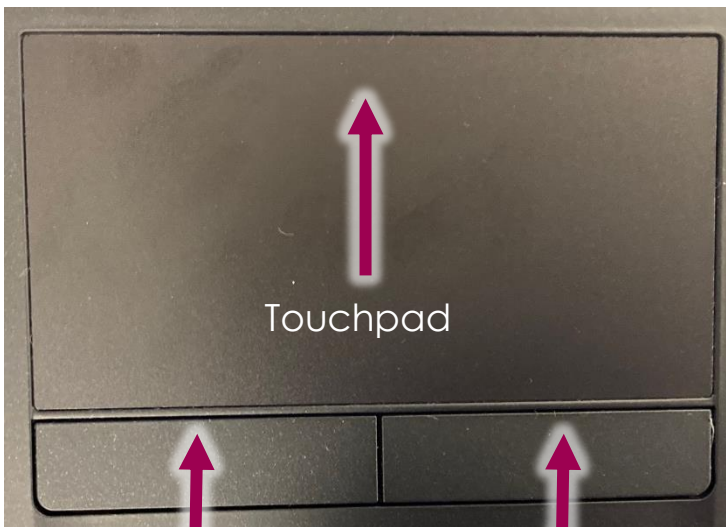


The double-headed arrow cursor appears when your mouse is at the edge of an object on your screen to let you know that you can resize the object by clicking and dragging the corner or edge until it is the size you want.



The four-headed arrow cursor appears when you have selected an object that can be moved in any direction. You can click and drag the object to move it.

The Touchpad



Touchpad

Left Button

Right Button

The touchpad, found on laptops, is an alternative to the mouse.

When you move a finger along the touchpad, the cursor will move in the same direction as your finger.

The buttons below the touchpad perform the same actions as the mouse buttons.

Touch Gestures

Select an item: Tap the touchpad

Scroll: place two fingers on the touchpad and move them horizontally or vertically ("swipe")

Zoom In/Out: place two fingers on the touch pad and either move them closer ("pinch") or further apart ("stretch")

Right-click: tap the touchpad with two fingers or press the Right Button on the lower right corner

Show all Open Windows: swipe up with three fingers on the touchpad

Show the Desktop: swipe down with three fingers on the touchpad

The Keyboard

The keyboard is mostly similar to a typewriter keyboard, but has some differences.

Here are a few of the special keys you need to know:

Spacebar: Often not labeled. Puts spaces between words or letters.

Arrow Keys: Used to move up and down or side to side in a document.

Shift: Hold down when typing to get capital letters or to use the top symbol on a symbol or number key.

Caps Lock: Press to turn on Caps Lock (makes all letters capitalized). Press it again to turn it back off.

Backspace: Deletes text to the left of where you are typing.

Delete: Deletes text to the right of where you are typing.

Enter: When you are typing, starts a new line. Can also be used to confirm a command.

Ctrl, Alt, and Windows keys: Used in combination with other keys to make keyboard shortcuts.


Number Pad: A second set of number keys (not all laptops have a number pad).

Num Lock: Press to activate/deactivate the number pad.

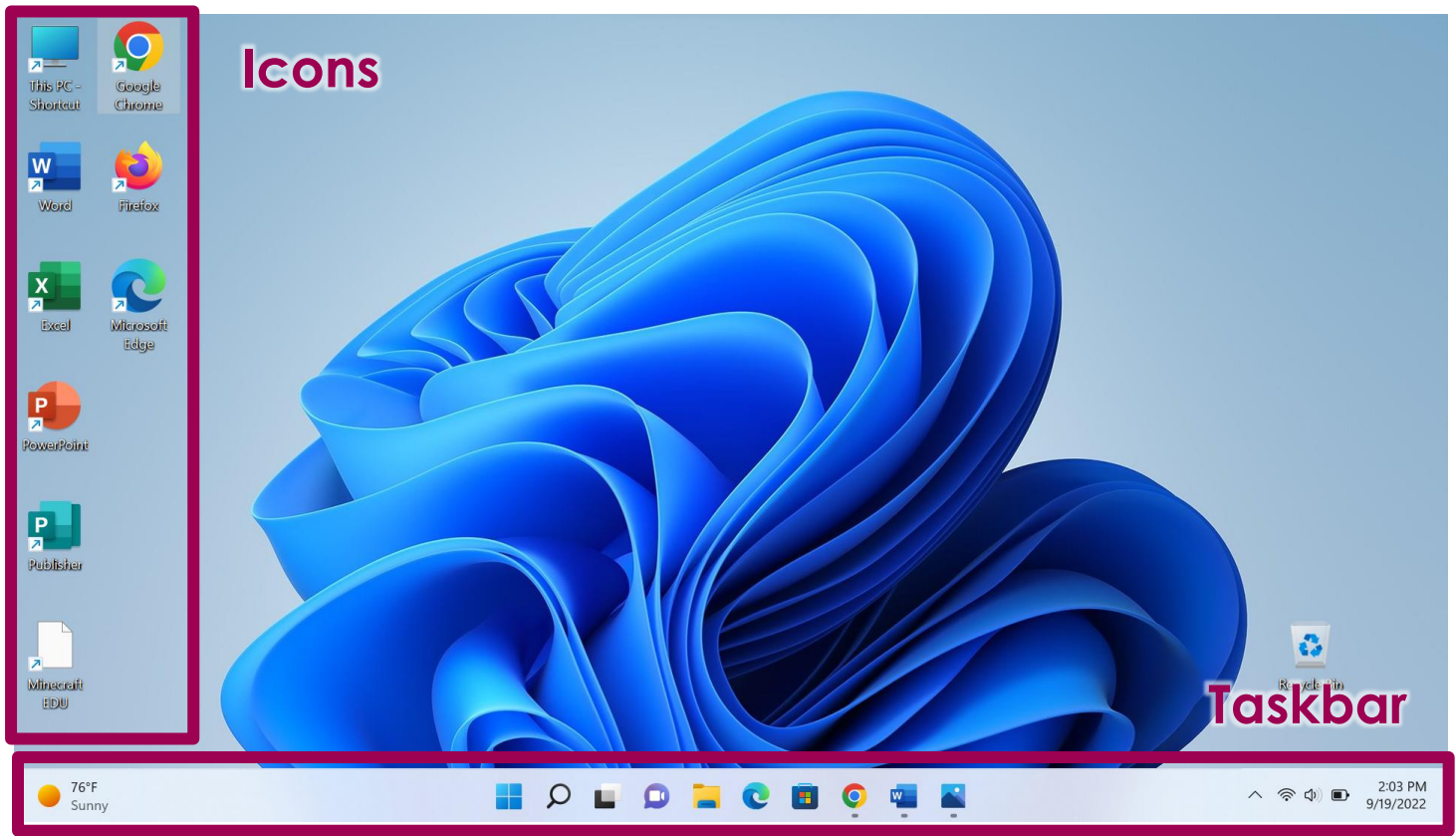
Function Keys: Used to execute special commands (F1 – F12 at the top of the keyboard).

Keyboard Shortcuts

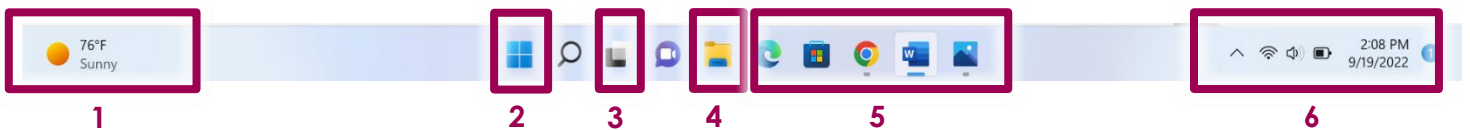
Keyboard shortcuts provide an alternative to using the mouse to perform a function, such as Cut and Paste or Save. If you have difficulty using the mouse, consider using these shortcuts instead.

- **CTRL + A** = Select all text
- **CTRL + C** = Copy highlighted text or item
- **CTRL + V** = Paste previously copied text or item
- **CTRL + Z** = Undo previous action
- **CTRL + X** = Cut
- **CTRL + Y** = Re-do an undo
- **CTRL + F** = Find, useful for exploring PDF documents and web sites
- **CTRL + S** = Save
- **CTRL + P** = Print
- **ALT + Tab** = Switch between open windows
-  + Tab = Switch between open tasks
- **CTRL + ALT + DELETE** = Login to your computer or force a restart if your machine freezes
- **CTRL + Q** = Quit

The Desktop



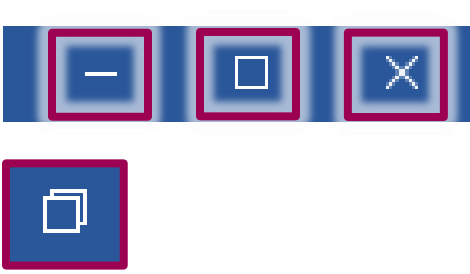
The Taskbar



1. **Widgets:** interactive and customizable information menus, such as the weather or news.
2. **Windows Button:** Opens the Start Menu, where you can find programs or shut down/restart the computer.
3. **Task View:** Allows you to quickly switch between different programs you have open.
4. **File Explorer:** Lets you browse through the files saved on your computer.
5. **Program Shortcuts:** Clicking on a shortcut will open the corresponding program. You can tell that a program is open if there is a blue line below the icon on the taskbar.
6. **System Tray:** See the clock, connect to Wi-Fi, check laptop battery life, and more.

Windows

When you open a program, it will open in a window, which is an area of the screen that displays information for a specific program, independent of other parts of the screen. The symbols seen below are common to all windows and can be found in the top right corner of a window:

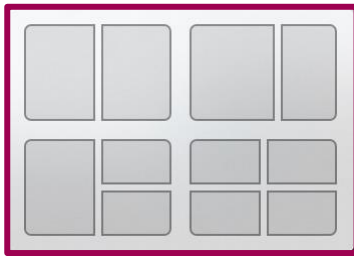


Minimize: Hides the window without closing it. Click on the program icon on the taskbar to see it again.


Full Screen: Makes the current window take up the whole screen.

Exit: Closes the window.


Restore: If the window is already full screen, clicking Restore will return it to a smaller size.

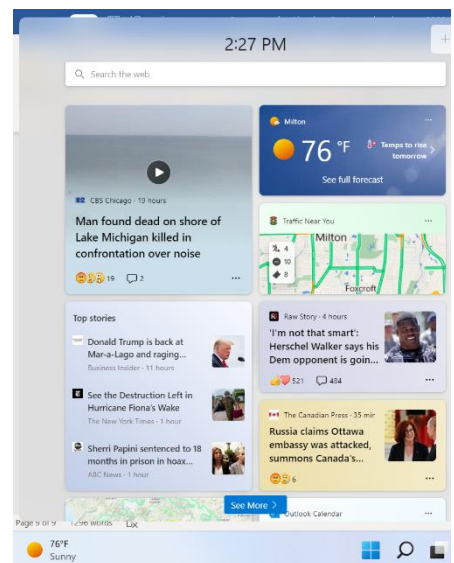


Restore Options

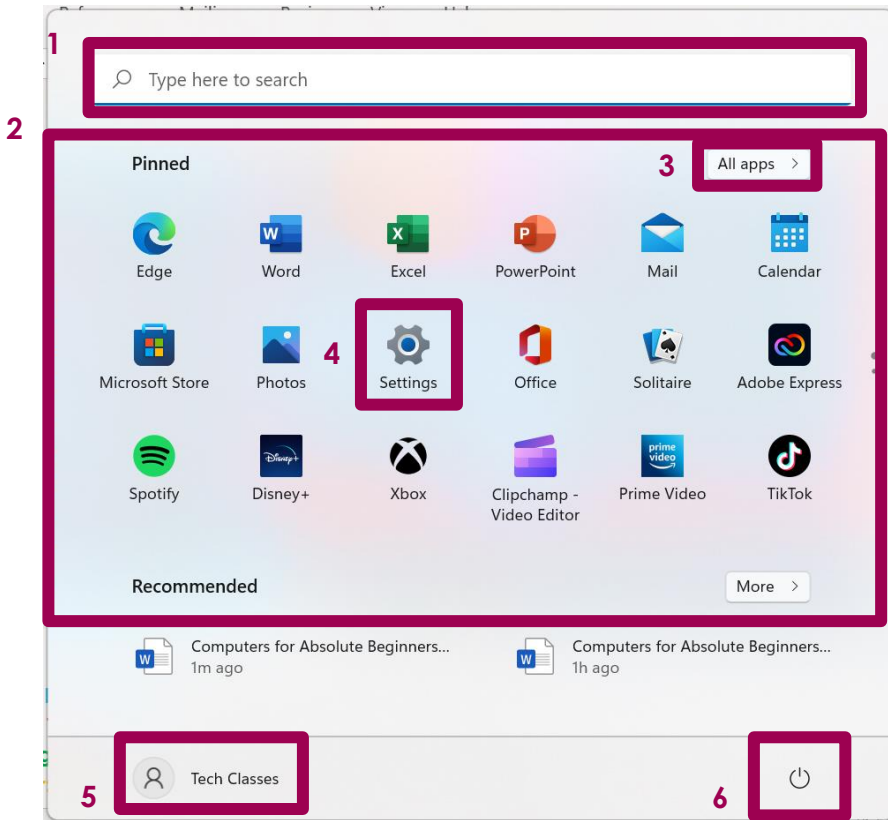
Hover over a window's maximize button or press  + **Z**, then choose a snap layout split your window into multiple views.


Widgets – bottom left corner of the desktop

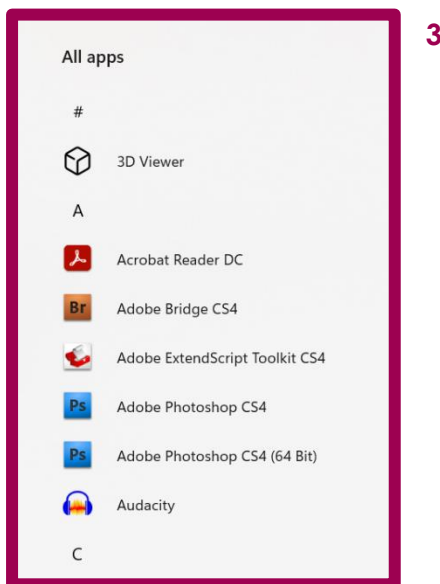
Click  to add additional widgets (e.g. maps, weather, social media, etc.) Open the widget settings by selecting your avatar.



Start Menu – press the Windows button to open



- 1. Search Box:** search for files, apps, or the internet. This is also accessible by clicking  + S
- 2. Pinned apps:** commonly used or popular apps. Customizable
- 3. All apps:** Alphabetical list of installed apps*
- 4. Settings:** Brings you to a menu where you can change various options, such as display, removing apps, power, etc.
- 5. User Name:** the name you used when you set up your computer. In a work environment, there may be multiple users.
- 6. Power:** Allows you to properly shut down your computer.





* The **All Apps** list looks like the Start Menu from Windows 10 and previous operating systems.

Copy, Cut & Paste

- **Copy:** makes a duplicate of a file, image, or text.
- **Paste:** places what you have copied or cut. You can keep pasting the same thing multiple times until you choose something else to copy or the machine is shut down.
- **Cut:** temporarily removes a file, text or an image from a location, and places it on a clipboard for later access.
- **Clipboard:** the temporary location of text/images/files, etc. after you cut or copy but before you paste. Most machines retain files for a short time even after you paste.

Copy and Paste is a 4-step process:

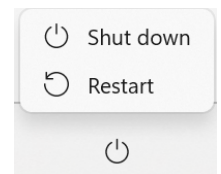
1. Select the item you want to copy (this could be one left click, or highlighting for multiples letters or characters).
2. **Copy** the item. Please note, copy can be found in many locations. In browsers, it is often found in the Customize button () , while in word processing applications, the icon looks like two overlapping pieces of paper (). If you cannot see an option to **Copy**, try using the Right-Mouse button. You will nearly always see it there.
3. Navigate to the area where your copied item will be placed.
4. **Paste** the item. Look in the same areas where you found the **Copy** button. **Paste** is usually found close by.

Turning Off Your Computer

Click on the Windows button  to bring up the Start Menu.

Click on the  Power symbol to bring up these options:

- **Shut Down:** Completely turn off your machine.
- **Restart:** Turn the computer off and back on again.
- **Sleep:** Put your computer to sleep until you need it again. You'll press the power button to wake it back up.



Local Storage versus the Cloud

Local Storage:

- **Hard Disk:** a physical component of the computer that stores and provides access to large amounts of data. Data can be easily added or removed from the hard disk in a process called “writing”. A hard disk is constantly spinning while the computer is operating.
- **RAM (Random Access Memory):** Found on Desktop and Laptop computers, RAM stores information on applications currently in use. Data is available through RAM when the power is on, but disappears as soon as the computer is turned off.
- **SSD (Solid State Drive):** An alternative to a hard drive, Solid State Drives offer storage space without moving parts. Some laptops, Chromebooks, iPads, cell phones and other mobile devices use SSD.
- **USB Drive:** Also called a Flash Drive, a USB drive plugs into the USB Port on your machine. Its purpose is to store files. It can easily be removed from the computer and taken anywhere you might need to access your files.

Cloud Storage:

- Data is stored and accessed remotely, meaning it does not exist on a physical space in your computer.
- The advantage of cloud storage is flexibility – you can access files from any location with an Internet connection. You are not tied to one specific machine.
- The disadvantage is the requirement of an Internet connection. You cannot access any Cloud storage services without being online.
- Google Drive, Microsoft OneDrive, and Apple iCloud are all examples of cloud storage services.

Mouse and Typing Practice

This is a list of websites useful for practicing your mouse and keyboard skills. You will need to open a web browser and type the website address into the address bar to find them. Ask for help from our Tech Center if using a library computer, or call from home: 630-868-7550.

Mouse Skills:

- Mousercise: <http://www.pbclibrary.org/mousing/mousercise.htm>
- Learnfree.org: <https://edu.gcfglobal.org/en/mousetutorial/>

Keyboard Skills:

- Keyboard Tutorial: <https://www.gcflearnfree.org/typing/>
- Senior Typing: <http://sense-lang.org/typing/>

Basic Computer Skills

- <https://edu.gcfglobal.org/en/basic-computer-skills/>