

How Computers Work

Tech Talk
By CommuniTech



OUTLINE

- ❖ Computer Overview
- ❖ Computer Hardware
- ❖ Computer Software
- ❖ Example Computer: Hardware and Software
- ❖ Keywords & Phrases

TYPES OF COMPUTER

Computers come in many forms, the most common of which are:

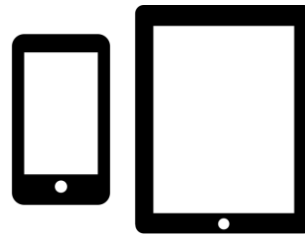
❖ Desktop computers



❖ Laptops



❖ Phones and Tablets



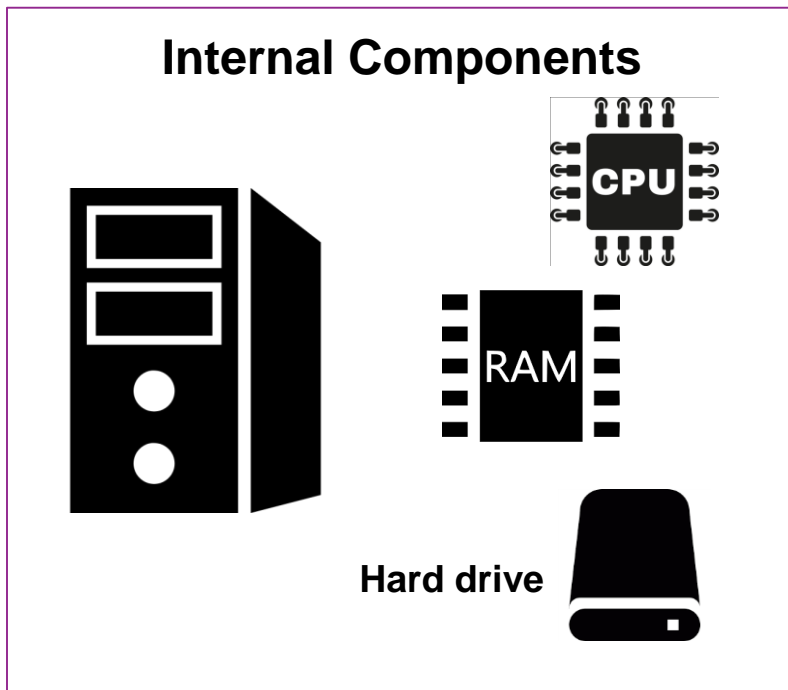
Commonly when people talk about computers they are referring to Desktop computers or laptops

COMPUTER HARDWARE

Hardware are the physical objects that make up a computer and can be broken down into two categories

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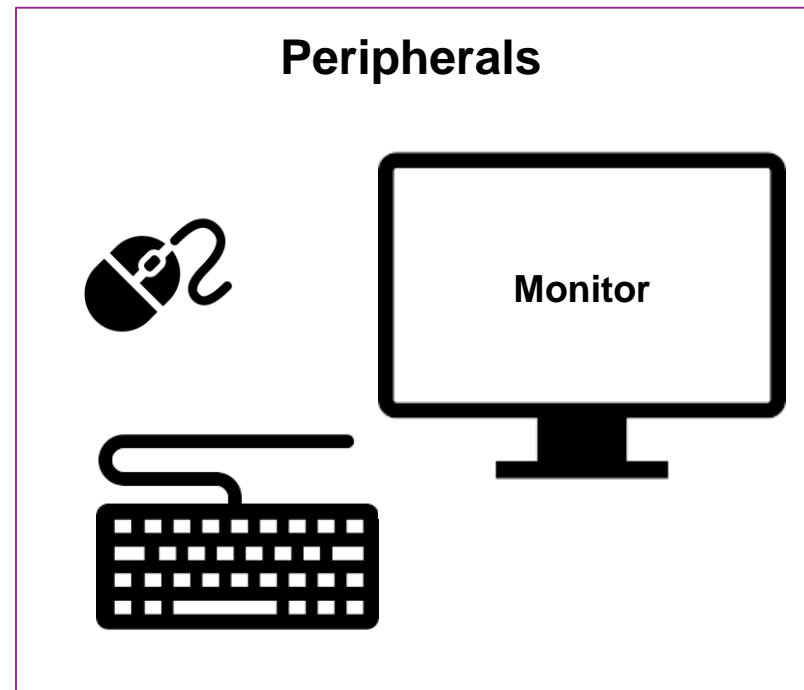


It can be useful to know about the internal elements of a computer, but if you just want to become more confident using a computer, it isn't a necessity

COMPUTER HARDWARE

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These are the things you actually interact with. If you haven't used a computer much before, it can be useful to practice mouse and keyboard skills



COMPUTER HARDWARE

To explain internal components here is an analogy.

- ❖ You enter the library looking for a book
- ❖ You go to ask the librarian for it

The librarian is like the computer processor.
Depending on how many things they have to do
and how efficient they are will determine how
long it takes for them to serve you



COMPUTER HARDWARE

- ❖ Say you have asked for an English Dictionary, the librarian walks over to one of the shelves and hands you the dictionary.



This is similar to data being stored in RAM which is easily accessible and regularly used by the processor

COMPUTER HARDWARE

- ❖ The next day you walk in and ask the librarian for a book on the local history. The librarian mutters something and disappears into the back room. 5 minutes later they emerge with a book
 - This is similar to data being stored on a Hard Disk Drive (HDD). The data is still there but as it is not used as regularly it is stored in a different location which takes longer for the processor to access



COMPUTER SOFTWARE

Software can be split into two categories

Operating Systems



Programs or Applications



OPERATING SYSTEM

Operating Systems help the hardware work together and helps you tell the computer what you want it to do, Windows 10 for example

Having a computer without an operating system is like you entering the library and asking for a book in French when the librarian only speaks English



PROGRAMS/APPLICATIONS

Programs or Applications are things that have been written to allow you to perform different tasks using your computer.

Some more examples of computer programs...



What programs do you use most?

PROGRAMS/APPLICATIONS

Programs can be added to or removed from your computer as and when you want to.



For example, if you decide you don't want Skype anymore, you can just uninstall it!

Operating systems often come with preinstalled programs such as Windows media player for Windows or iTunes for Apple iOS

EXAMPLE COMPUTER



OVERVIEW	
Type	Laptop
Operating system	Windows 10 (64-bit)
PERFORMANCE	
Processor	- Intel® Pentium® Gold 4415U Processor - Quad-core - 2.0 GHz - 2 MB cache
RAM	4 GB DDR4 (2133 MHz)
Storage	128 GB SSD

JARGON RECAP

- ❖ Hardware: The physical components which make up a computer
- ❖ Software: The operating system and Programs which you use on the computer
- ❖ CPU (Processor): Central Processing Unit - The librarian
- ❖ RAM (Memory): The easier to access shelves in our Library
- ❖ Hard Disk Drive: The back room with additional space
- ❖ Operating System: Windows or MacOS
- ❖ Programs and Applications: Skype, Windows Media Player, iTunes etc.