
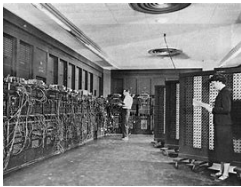



Y7—Computer Types

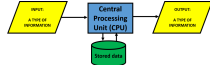
Important ideas

	A computer is an electronic device for storing and processing data , usually in binary form, according to instructions given to it in a program.
	In 1943, two scientists build the Electronic Numerical Integrator and Calculator (ENIAC). Considered the grandfather of all digital computers, it fills a 20-foot by 40-foot room and has 18,000 vacuum tubes.
	There are lots of different types of computer . The design of a computer is based on what it needs to do. There are lots of companies (brands) that make computers (eg Dell, Apple).

Important vocabulary

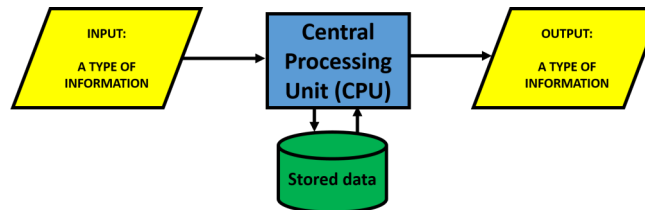
Personal Computer (PC)	A computer that can be used in a home or workplace.
Electronic Point of Sale (PoS)	This is a type of computer used in retail. Sometimes called a till.
Architecture	This is the way that all the parts of computer are put together. This requires careful design.
Peripheral	Something connected to a computer (a device)
Digital	Only having two states (eg ON or OFF or 1 and 0) - binary

Quick recall facts

Von Neumann Model (1945) 	This is the structure of most modern computers. There is a Central Processing Unit (CPU), input and output devices and storage. Modern computers are built around this idea.
Computers run software (programs) that gives instructions to the CPU.	A computer cannot do anything without a set of instructions to follow. A computer program is a list of instructions (algorithms) that sequence what a CPU should do.
People confuse the brand of a computer with the type of computer!	A laptop, tablet, desktop PC, games console and smartphone are all types of computer. Apple, Samsung, Dell, Sony and Microsoft are all brands!

How it connects...

Computers are electronic devices that use **logic gates** to carry out operations (processing). They follow **Boolean Logic** (eg TRUE or FALSE, AND, OR, IF, ADD, SUBTRACT etc)



John Von Neumann came up with a 'model' for how a computer should be structured (in 1945). Most modern computers are based on this structure (**architecture**).

Computers have become more powerful, smaller and more efficient over time.

Computers need **software** (programs) to run. The software instructs the CPU what to do in a logical and efficient way.

Computers can be connected to **peripheral** devices. The peripheral devices allow **INPUTS** and **OUTPUTS**.

Important examples

Desktop PC (Personal Computer)	This is the most common computer that is used in the workplace. They are fast, reliable and can run lots of types of software. They need to have a power supply to work.
Laptop	This is a miniature PC. They can run lots of software and don't need to be plugged in. To get good battery life, they can't be as fast as a desktop PC.
Tablet and Smartphone	These are like laptops but with less functions. They run limited software but the battery lasts a long time.
Electronic Point of Sale (ePoS)	These are the tills in shops and restaurants - they only do limited tasks like recording sales and printing receipts.
Server (mainframe)	These are where most Desktop PCs and laptops connect to. They are usually tasked with networking. They are powerful with lots of memory.
Workstation	These are desktop PCs designed for one specific task eg music or video production. They cannot do other tasks.
Supercomputer	These are expensive, fast and single task computers. Weather prediction is done through a supercomputer.

I must be able to...

Identify a type of computer from an image or description	For example, this type of computer is designed for a workplace. It has a scanner, keyboard and mouse and it also has a credit card reader. It outputs to a printer. This is an electronic Point of Sale (ePOS) system.
Compare and contrast different types of computer	Use information on peripherals, functionality, size, battery life, processing speed and range of tasks to decide on the most appropriate computer for a task. If the task requires the computer to be portable then a Desktop PC is not appropriate.