



Aniveru Akkuveru

Computer Hardware

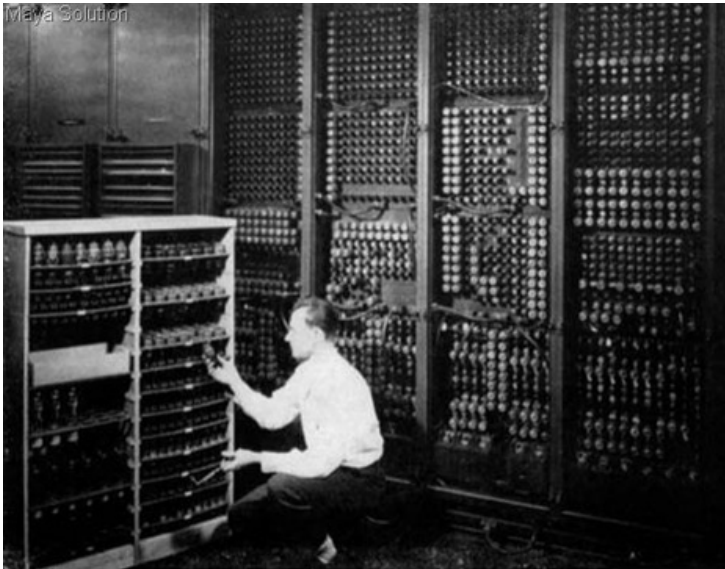
Introduction to Computer Hardware

Coordinator

Tamilselvan S

Old Vs. New

- Computers have been around for a long time. Some of the first computers ever made were used to perform simple calculations. They were the size of a big room and could only do what your calculator can do now!



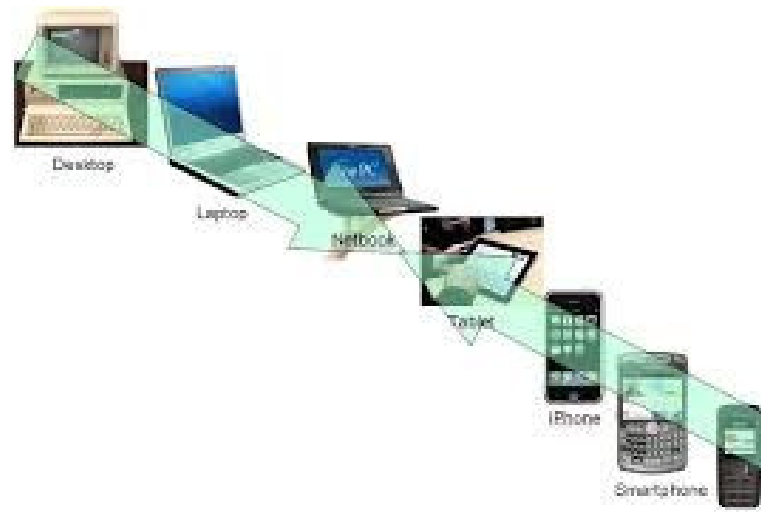
Replacing a bad tube meant checking among ENIAC's 19,000 possibilities.



- Nowadays computers are everywhere



- And over the years they are getting small and more powerful



Computer Case

- You may have a PC at home, but do you know what is really inside it and how it works?



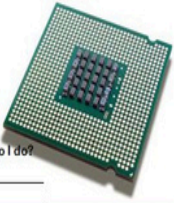





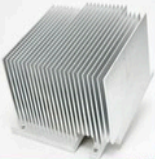


Computer

The computer is made up of several different **components**.

This is what makes up a computer

- Your task today will be to complete your components worksheet and understand what is in a computer

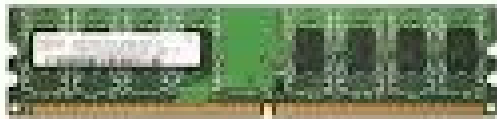
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RAM

- **Random-access memory** is a form of **temporary** computer data storage. This is where all your files and programs are stored on your computer when it is switched on



DDR



DDR 2



DDR 3



DDR 4



CPU

- The **Central Processing Unit** is the brains of the computer. This hardware makes the computer work by telling all the components what to do and when to do it

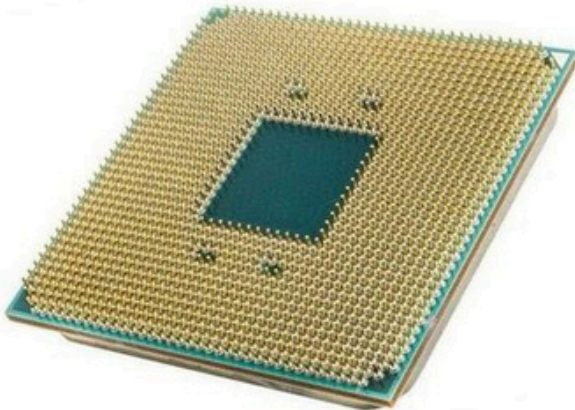


LGA



The LGA (Land Grid Array) design improves the reliability of a computer system by reducing the likelihood of bent or damaged central processing unit (CPU) pins during installation or removal

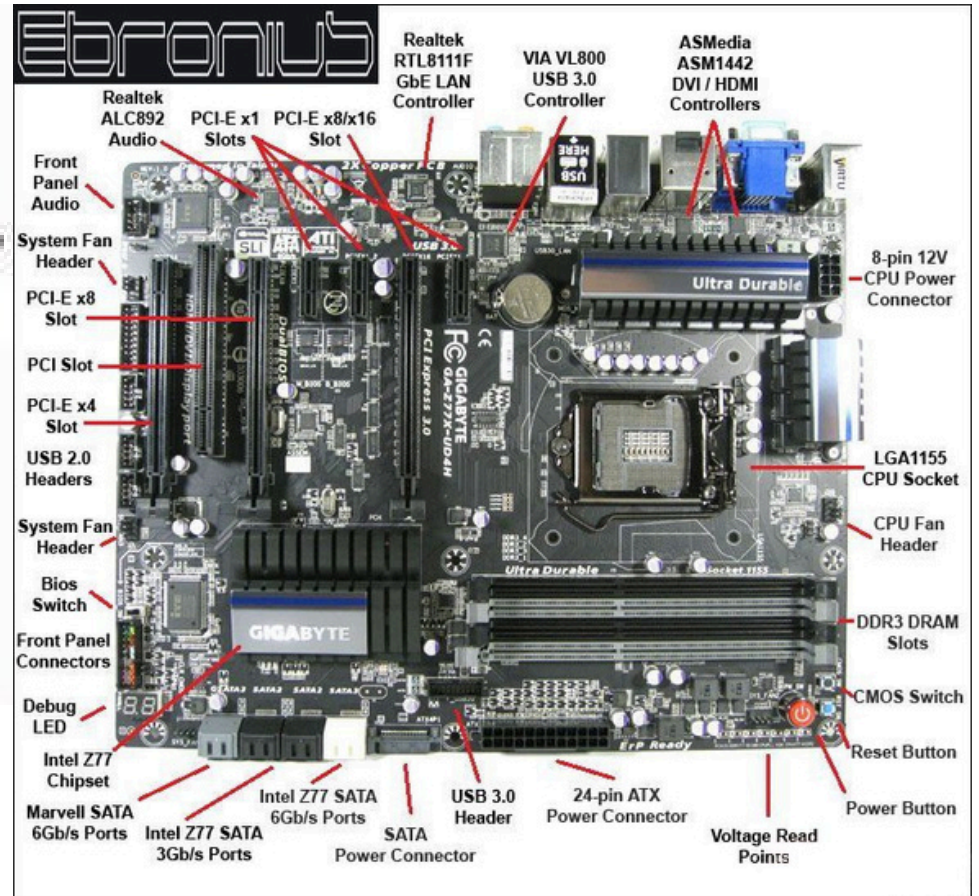
PGA



PGA CPU stands for Pin Grid Array CPU, a type of processor packaging where pins are arranged in a grid on the underside of the CPU to plug into holes in the motherboard socket. This is in contrast to LGA (Land Grid Array), where flat contact pads are on the CPU and pins are in the socket. While PGA CPUs are known for being easy to install because gravity helps them drop into place, their delicate pins can bend or break, making them fragile and potentially costly to repair.

• Motherboard

The Motherboard is the web that connects all the components together through electrical currents



PSU

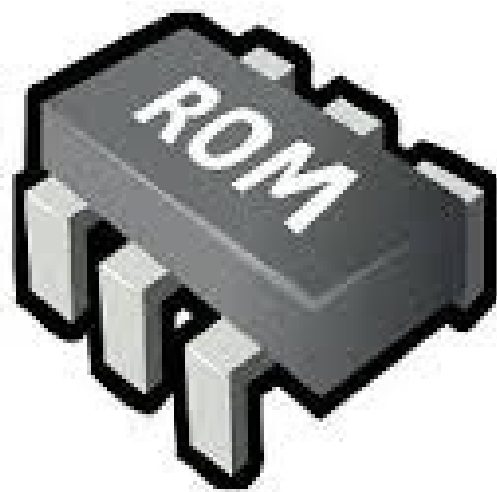
- The Power Supply Unit is the connection to pass power into the computer from the plug



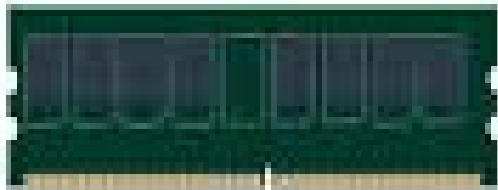
Hard Drive

- The Hard Drive is where all your programs are stored on a computer. If this breaks you will lose everything on your computer (Programs, Music, Files)

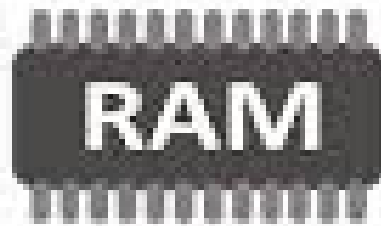




overall storage



RAM



USB flash Drive



SD Card



CD ROM disc



SSD (Solid State Drive): A fast storage device that uses flash memory instead of moving parts to store data.

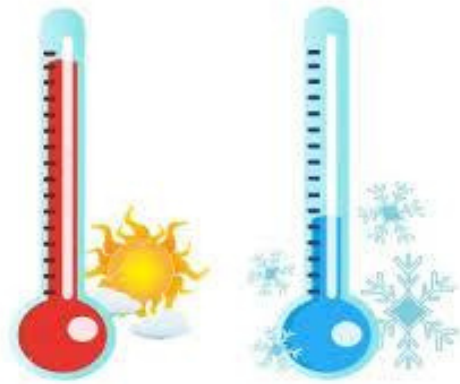
HDD (Hard Disk Drive): A traditional storage device that uses spinning magnetic disks to read and write data.

NVMe (Non-Volatile Memory Express): A high-speed protocol that allows SSDs to communicate directly with the CPU via PCIe for faster performance.

SATA (Serial ATA): An interface used to connect storage devices like HDDs and SSDs to the computer's motherboard.

Heat Sink

- The Heat Sink keeps the CPU cool. As the CPU works very hard to gets very hot. If it gets too hot it will stop working



Fan

- The Fan is also used to keep the CPU cool. It sits on top of the heat sink and blows the heat away from the CPU



Graphics Card

- Graphics cards are used by computers that perform the dual role of sending pixels to the display and providing a specific type of processing using a GPU (graphical processing unit).



Sound Card

A Sound Card is a device which

- can be slotted into a computer to allow the use of audio components for multimedia applications.



CD Drive

- A CDDrive is a **drive** that reads a **compact disc** and that is connected to an audio system.



USB Ports

- A **USB port** is a connection point on computers and many other types of consumer electronics which allow used to plug in a USB which the computer can read

