

Computer engineering
computer installation

first stage
practical part

TEACHING ASSISTANT: ZAINAB ALI

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Dr. ALI HUSSEIN SHAMAN

The first mechanical computer Charles Babbage built the first mechanical computer in the year 1822 AD; Charles developed the Difference Engine, which was considered as the first automatic computing machine, and the Difference Engine was able to perform several arithmetic operations on a set of numbers, and print the results on hard copies.



This figure shows the world's first computer

WHAT IS A COMPUTER?

A computer is an electronic device for processing information or data. It has the ability to store, retrieve and process data. You may already be aware that you can use your computer to write documents, send e-mail, play games, and browse the web. You can also use it to edit or create spreadsheets, presentations, and even video files.

The Importance of Computers

Computers gained great importance because they improved work efficiency and productivity by storing large amounts of information in the industrial and commercial sectors as well as in matters of personal life.

Types of Computers:

- 1- **Desktop computers** :Desktop computers are designed to be placed on or near a desk hence the name desktop, and usually consist of several different parts, including the computer chassis (case), monitor, keyboard, and the mouse.



- 2- **Laptops**: are battery powered computers and are more portable than desktop computers, allowing you to use them almost anywhere.



3. **Tablets**: Tablets use a touch-sensitive screen so you can type or switch between programs.

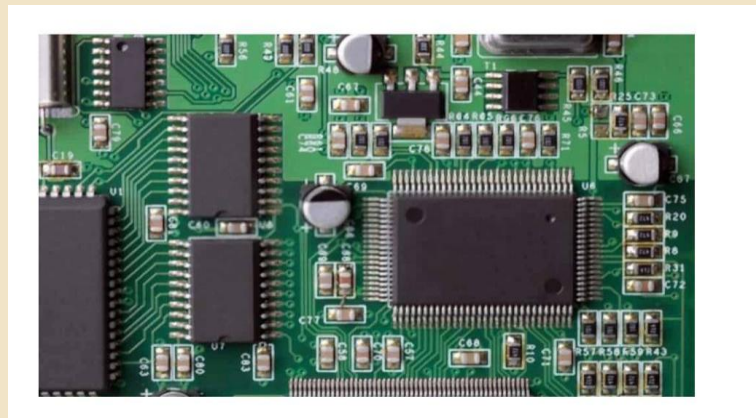


The basic computer components and their functions are:

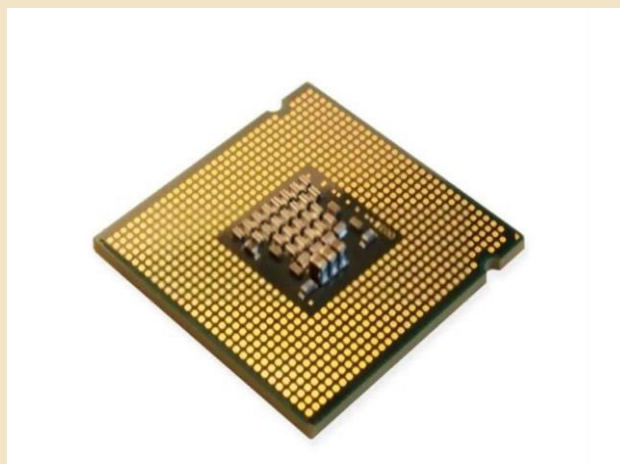
- Mother Board
- CPU
- Graphics Processing Unit Graphics Card - GPU
- RAM
- Storage Memory - Hard Disk
- Power supply - PSU
- optical drives
- Computer Case - Case
- Screen - Monitor
- keyboard and mouse
- headphones

It is an iron plate that connects all parts to each other through a circular plate called the motherboard.

The motherboard comes with a very solid plastic base, which is usually non-conductive in nature in order to connect and fix the various computer parts together, through thin layers of copper or aluminum foil.



A processor is made up of one or more cores, which is how data manipulations are performed. Processor speed is measured in GHz with MB memory, and the speed of this memory definitely varies depending on the number of commands that can be processed per second.



As for the processor cooler, it is a fan used to cool the processor that controls the life of the device, and is responsible for damage to the computer in the event that the required ventilation is not available



VGA Graphics Card - GPU

From one of the basic computer components and the units of the two is that it makes it possible for computers to create high-quality visuals, and this is evident in things like types of video games.. The more graphics card, the better and clearer the details of the image, as it is also responsible for updating the image per second, which is measured HZ .



RAM: It works to store all information and data related to various programs and processes that are accessed frequently, so it is called “volatile memory” because it is erased every time it requires a restart of the computer.



HARD Disk: It is a storage unit in which permanent and temporary data are written via a magnetic head, meaning that it is the opposite of random access memory, as it can save all data even in the event of a power outage.



Hard disk function: It can be considered the component responsible for storing all of the user’s data, including videos, photos, documents, or anything you do on the computer. The hard disk has many types that differ among themselves in terms of strength, speed, and space.

Power Supply - PSU

It is one of the basic components of a computer and its functions are to connect the computer with electricity. Without it, various other parts of the computer, which convert ordinary “AC” electricity into usable energy by converting it directly into “DC” electrical current, would fail.



Of the main computer parts Computer Case – Case



It is the folder that includes all the parts of the computer that we have already talked about, and the case has many different types and shapes, and you can choose this part as you like.

MONITER: It is one of the basic components of the computer and its functions are summarized in displaying images and texts through the use of the video card installed inside the computer case.



Keyboard and Mouse: A component that acts as an intermediary between the user and the computer to facilitate the process of giving commands through input operations such as typing, while the mouse comes to enable the user to deal with the various graphics displayed on the computer screen.



- headphones

One of the most important basic components of a computer and its functions lies in the output of all the sounds that are output from the computer through the speakers



