Introduction to
COMPUTERS

GUBA IVAN

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What is a Computer?

A computer is an electronic device that processes data and performs tasks based on a set of instructions or programs. It can store, retrieve, and manipulate information, allowing users to perform a wide range of activities such as browsing the internet, creating documents, playing games, and running software applications.

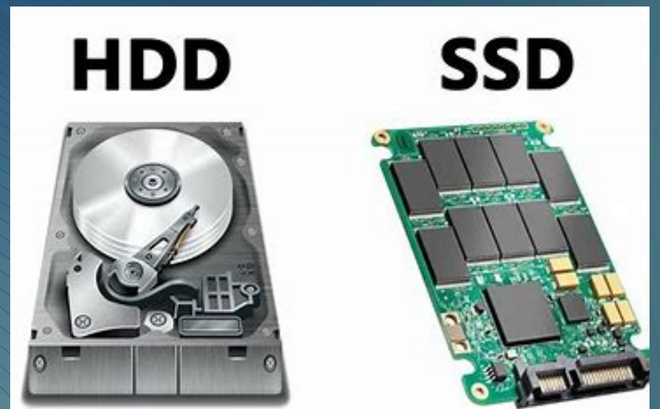
Main Components of a Computer

- Central Processing Unit (CPU)

The brain of the computer that performs calculations and executes instructions.

- Storage (HDD/SSD)

Storage devices where data, programs, and the operating system are permanently stored.



- Motherboard

The main circuit board that connects and allows communication between all parts of the computer.

- Memory (RAM)

The computer's short-term memory that temporarily stores data for quick access.

- Power Supply Unit (PSU)

Converts electricity from the outlet into a usable form to power all computer components.

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Types of Computers

- **Desktop Computers:** Stationary computers used at desks for home or office tasks.
- **Laptops:** Portable computers for on-the-go use.
- **Tablets:** Touchscreen devices for casual browsing and media consumption.
- **Smartphones**: Handheld devices combining phone and computing capabilities.
- **Servers**: Powerful computers managing network resources.

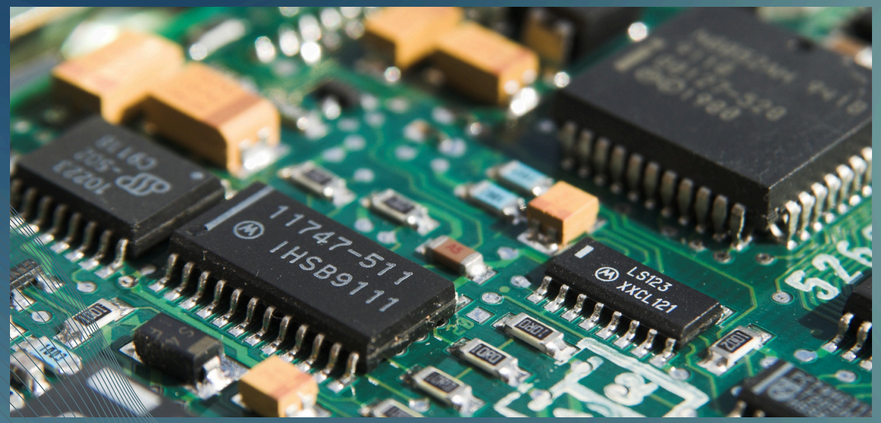
Hardware vs Software

Hardware

Hardware refers to the physical components of a computer system. These are the tangible parts you can touch and see, such as the computer case, monitor, keyboard, mouse, and internal components like the motherboard, CPU, RAM, storage drives, power supply, and GPU

Software

Software refers to the programs and applications that run on a computer and perform specific tasks. Unlike hardware, software is intangible and consists of written code that tells the computer how to function and execute various operations.



Operating Systems (OS)

An operating system (OS) is software that manages the hardware and software resources of a computer. It provides a user interface and acts as an intermediary between the user and the computer hardware.

The operating system allows users to run applications, manage files, and perform tasks such as input/output operations, memory management, and device control. Examples of popular operating systems include Windows, macOS, Linux, and Android.

Input & Output Devices

Input

Input devices are hardware components used to enter data and control signals into a computer system. They allow users to interact with the computer by providing information or instructions for processing. Here are some common input devices:

Output

are hardware components that receive data from a computer and convert it into a form that humans can understand. These devices display, print, or project information from the computer. Here are some common output devices:

The Internet and Networking

- ***Definition***

  A global network of computers connected to share data.

- ***Basic Components***

  Router, Switch, Modem, Ethernet Cable

- ***Internet Uses***

  Communication, data sharing, cloud computing

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Trends in Computing

Artificial Intelligence (AI)

Machines mimicking human intelligence

Quantum Computing

Future technology with much faster processing

Cloud Computing

Storing and accessing data over the internet

5G Networking

Faster wireless communication

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THANK YOU