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Definition

A computer is an electronic machine or device that performs processes, calculations and operations based on instructions provided by a user.

It has the ability to accept data (input), process it, and then produce outputs as desired.

Uses/Applications of Computer

- Banking
- Education
- Industries
- Entertainments
- Hospitals
- Business
- Defence
- Reservation
- Science and Research
- Data processing

Capabilities of Computer

- Speed
- Storage capacity
- Accuracy
- Deligency
- Versatility

Limitations of Computer

- No IQ
- No Brain

History of Computer

- Abacus (5000 Year before)
- Napier Bones (John Napier 1614)
- Pascaline Machine (Blaise Pascal 1642)
- Difference Engine (Charles Babbage 1822) automatic mechanical computing machine
- Analytical Engine (1833) digital, programmiable and automatic computer
- MARK I (Howard Aiken 1937-44) First fully automatic calculating machine
- ENIAC (J. Presper Eckert and John Mauchly 1943-46)
- EDVAC (1946-52) Electronic Discrete Variable Automatic Computer used stored program
- EDSAC (1947-49) Electronic Delay StoragebAutomatic Calculator
- UNIVAC(1951) First digital Computer

Generation of Computer

On the basis of technology used computer is divided in to generations.

- First Generation (1946-1954) Vaccum Tubes
- Second Generation (1955-1964) Transistors
- Third Generation (1965-1974) Integrated Circuits
- Forth Generation (1975-1990) VLSI (Microprocessor), PC, semiconductor replaced magnetic core memories, Networking,DOS, Unix, Windows, Apple Os
- Fifth Generation (1991-now) ULSI, Portable PC,CD-ROM, Internet

Difference between Computer and Calculator

The main difference between Computer and Calculator is that the Computer is a simple general-purpose device for performing arithmetic or logical operations and Calculator is a electronic device used to perform arithmetic operations only.

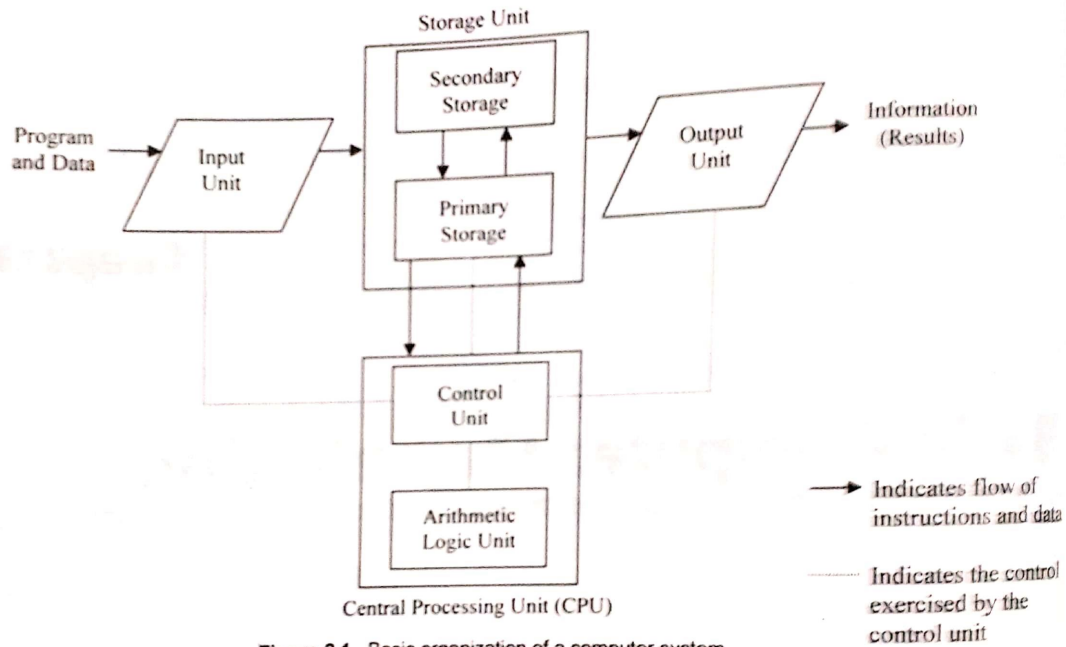# Block Diagram of Computer

Figure 2.1. Basic organization of a computer system.

- Hardware

- Software

- Firmware

Type of computer

- On the basis of operating principles
    - ✓ Digital computer
    - ✓ Anolog Computer
    - ✓ Hybrid Computer
- On the basis of applications
    - ✓ General purpose computer
    - ✓ Special purpose computer
- On the basis of size and capability
    - ✓ Micro computer
    - ✓ Mini computer
    - ✓ Mainframe computer
    - ✓ Super computer

Personal Computer (PC)

- A PC can be defined as a small, relatively inexpensive micro computer designed for an individual user.

- PCs are based on the microprocessor technology that enables manufacturers to put an entire CPU on one chip.

- PC is made by IBM.

- Home and office use

Types of PC

- PC

- PC-XT (8087-88, 256 kb RAM,10-40 MB HDD, 1-2 FDD,Monochrome monitor,135 walts power supply, 1 serial & 1 parallel port)

- PC-AT (80286-486, 4-128 mb RAM,80-640 MB HDD, 1-2 FDD, CD,14/20 inch CGA/SVGA monitor, 2 serial & 1 parallel port)

- Pentium (petium, 256-512mb RAM,584 MB-13 GB HDD, 1 FDD, CD,color monitor, multimedia support)

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- Computer system: characteristics and capabilities.

- Computer Hardware and Software

- Block Diagram of a Computer

- Different Data Processing: Data, Data Processing System, Storing Data, Processing Data.

- Types of Computers: Analogue, Digital, Hybrid, General and Special Purpose Computers.

- Generation of Computers