

UNIT - I: Introduction to Computers

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Generation and Classification of Computers

Computers are classified based on size, processing power, and purpose:

- Supercomputers: High-performance computers for scientific simulations.
- Mainframe Computers: Large-scale computers used in enterprises.
- Minicomputers: Mid-range computers for specialized tasks.
- Microcomputers: Personal computers used by individuals.

Block Diagram of a Computer

A computer system consists of:

- Input Unit: Accepts user input (e.g., keyboard, mouse).
- Central Processing Unit (CPU): Processes instructions.
- Memory Unit: Stores data temporarily or permanently.
- Output Unit: Displays results (e.g., monitor, printer).

Categories of Software

Software is classified into:

- System Software: Operating systems, device drivers.
- Application Software: Productivity tools, games.
- Utility Software: Antivirus programs, disk cleanup tools.

Network Structure

A network connects multiple devices for communication. Common types:

- LAN (Local Area Network)
- WAN (Wide Area Network)
- MAN (Metropolitan Area Network)

Number System and Conversion

Common number systems:

- Binary (Base 2)
- Decimal (Base 10)
- Octal (Base 8)
- Hexadecimal (Base 16)

Conversions between these systems follow specific algorithms.

Algorithm, Pseudo Code, and Flow Chart

- Algorithm: A step-by-step procedure for solving a problem.
- Pseudo Code: A high-level representation of an algorithm using simple syntax.
- Flow Chart: A graphical representation of an algorithm using standard symbols.

