



SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.

An Autonomous Institution

COURSE NAME : 23ITT101 PROGRAMMING IN C AND DATASTRUCTURES

I YEAR/ II SEMESTER

UNIT-I INTRODUCTION TO C

Dr.B.Vinodhini

Associate Professor

Department of Computer Science and Engineering



Definition of Computer

What is a Computer System ? :

A **Computer system** is a programmable electronics device that can be programmed to accept some **inputs** in terms of data , then **process** this data and provides the **Output** in the desired format .

- Computer is Digital Electronic Machine .
- Computer Needs to be Programmed .
- Computer Hardware can execute only Machine Code .





Fundamentals of Computer

Parts of Computer:



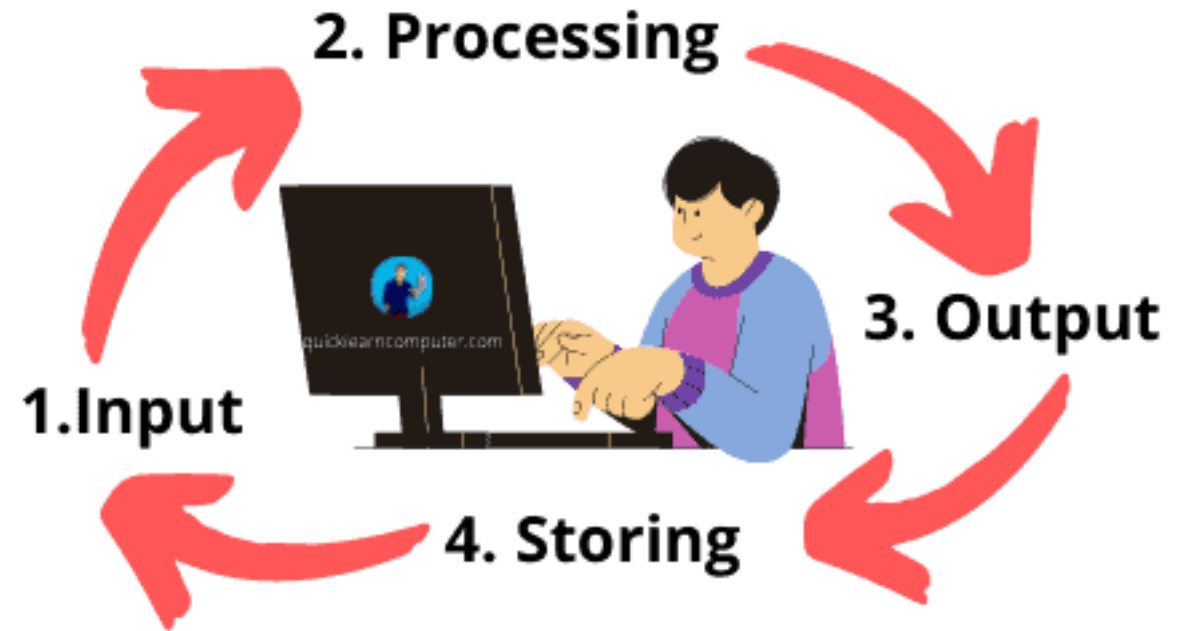


Fundamentals of Computer

Functionalities of Computer:

1. Input Function
2. Processing Function
3. Output Function
4. Storing Function

Basic Functions of Computer



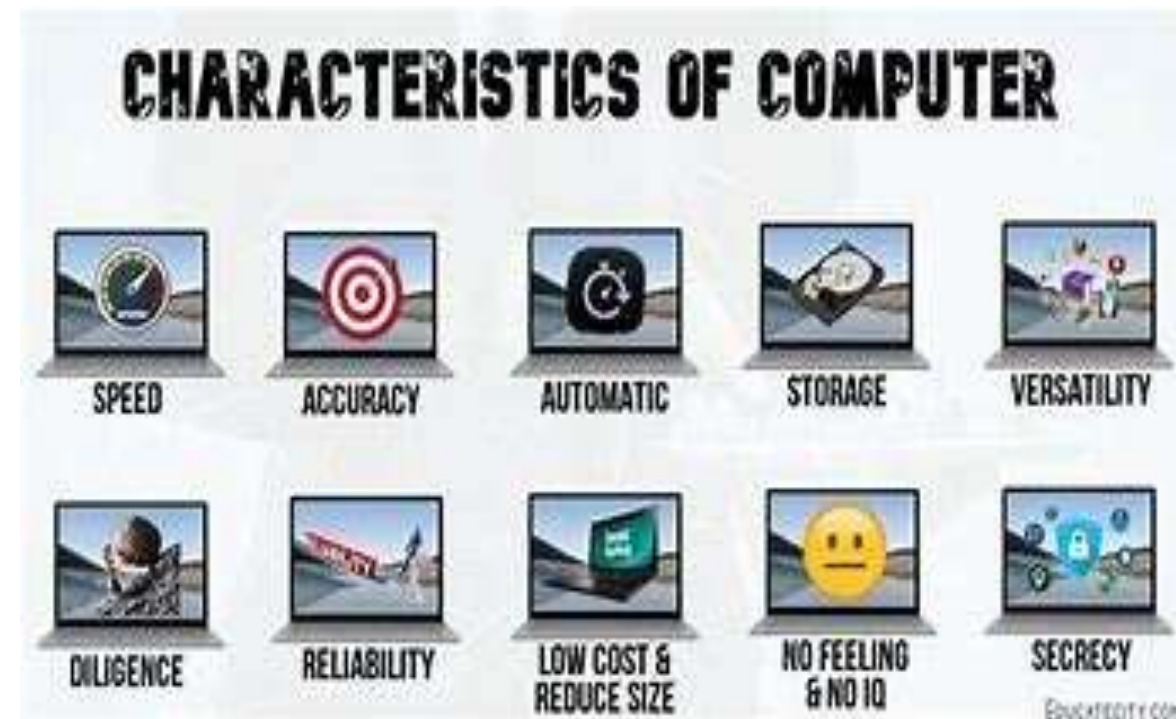


Fundamentals of Computer



Characteristics of Computers:

1. High Speed
2. Accuracy
3. Storage Capability
4. Diligence
5. Versatility
6. Reliability
7. Automation
8. Reduction in Paper Work and Cost





Fundamentals of Computer



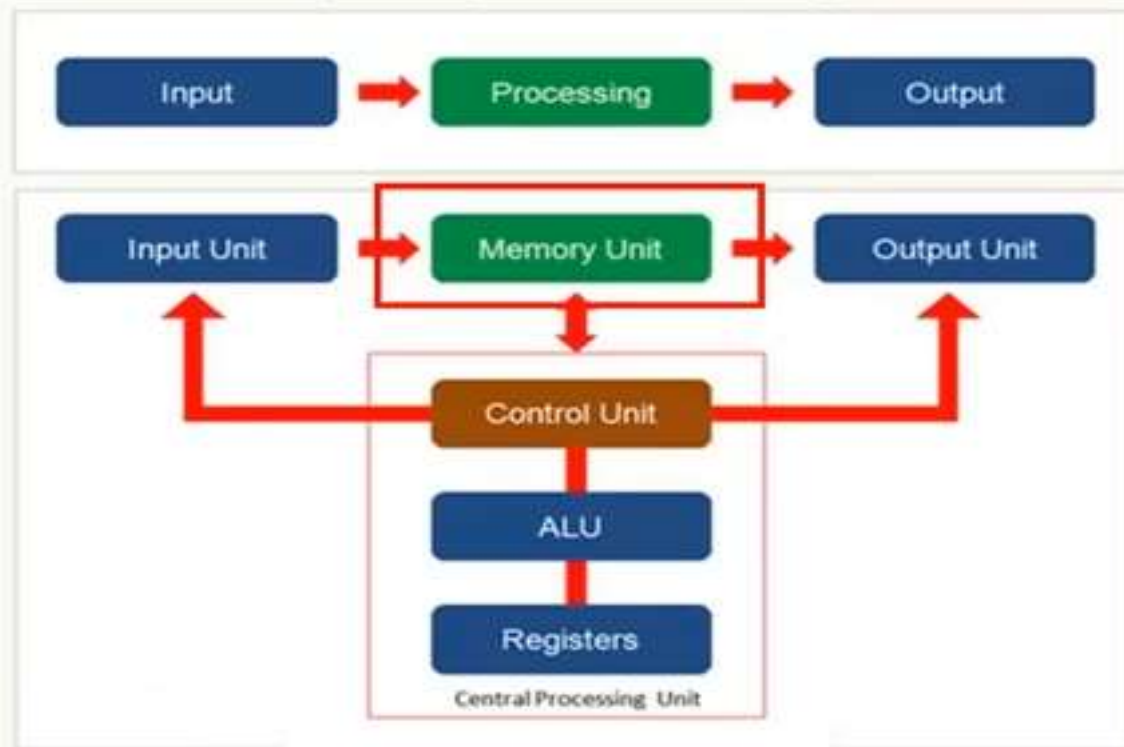
Classifications of Computer System:

- **Classification of Computers On the Basis of Size**
 1. Micro Computer
 2. Mini Computer
 3. Mainframe computer
 4. Super Computer
- **Classification of Computer On the Basis of Type**
 1. Analog Computer
 2. Digital Computer
 3. Hybrid Computer
- **Classification of Computer According to Purpose**
 1. Special Purpose computer
 2. General Purpose computer



Block Diagram of Computer

Computer Block Diagram



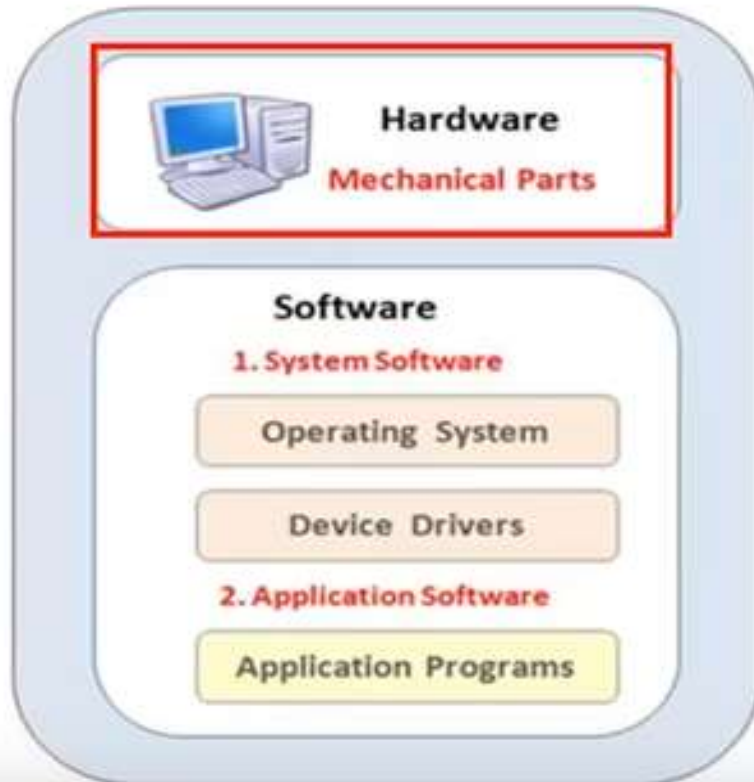
Computer System

Functional Units - Block Diagram

1. Input Unit.
2. Memory Unit.
3. Central Processing Unit - CPU.
4. Output Unit.



Classification of Computer



The **Computer System** Consist of Two Main Components :

- **Hardware** Components.
- **Software** Components.

Computer Software Components

- Operating System .
- System Software .
- Application Programs.



Computer Hardware

Computer Hardware consists of the physical devices associated with computer system.

Computer Hardware

- Input devices
- System unit
- Output devices
- Storage devices
- Processing Unit:
The CPU and
Main Memory



Luai M. Malhis





Computer Hardware

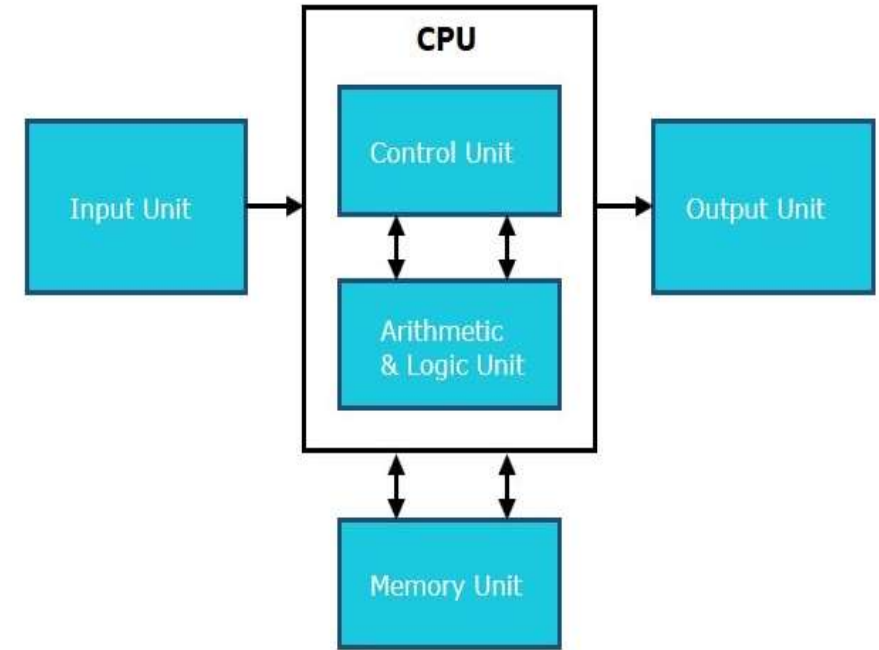


CPU(Central Processing Unit)

- CPU is considered as the brain of the computer.
- CPU performs all types of data processing operations.
- It stores data, intermediate results, and instructions (program).
- It controls the operation of all parts of the computer.

Components CPU:

- Memory or Storage Unit
- Control Unit
- ALU(Arithmetic Logic Unit)
 1. Arithmetic Section
 2. Logic Section



Processor



Input Devices

The Physical Parts of a Computer System which allows data to be entered into a Computer System

- Keyboard
- Graphics Tablet
- Touch-Sensitive Screen
- Mouse
- Microphone
- Digital Camera
- Digital Video Camera
- Webcam
- Trackball
- Trackpad
- Joystick
- Scanner





Output Devices

- An output device is a device which allows data to be displayed or passed out of a computer system
- Printers
 - Laser
 - Inkjet
- Monitor
 - Liquid Crystal Display
 - Thin Film Transistor
 - Cathode Ray Tube
- Plotter
- Loud speaker
- Projector

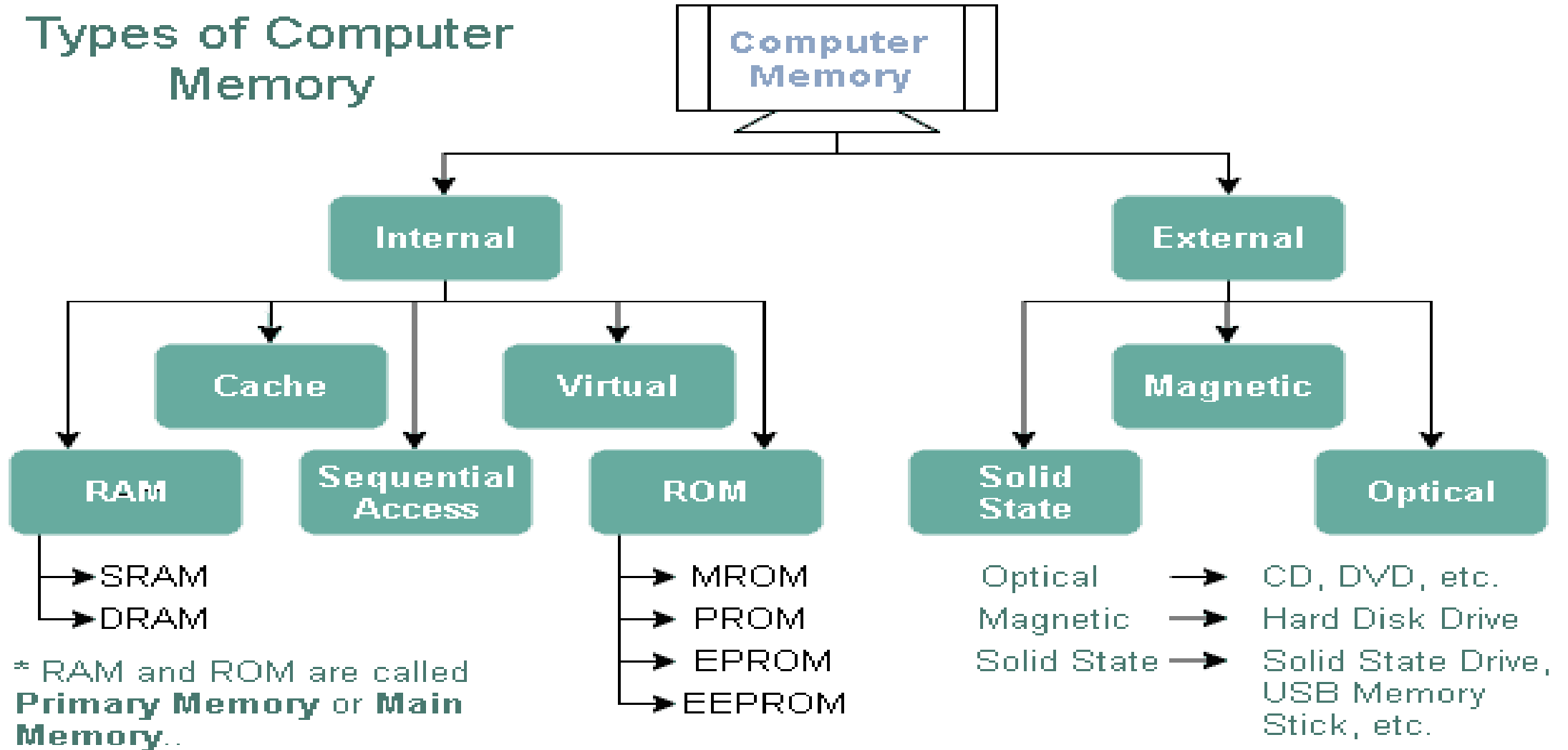




Computer Hardware



Types of Computer Memory





Computer Software

Computer Software is a set of programs, which is designed to perform a well-defined function.

A program is a sequence of instructions written to solve a particular problem.

Two types of software –

- 1. System Software
- 2. Application Software



Types of Computer Software

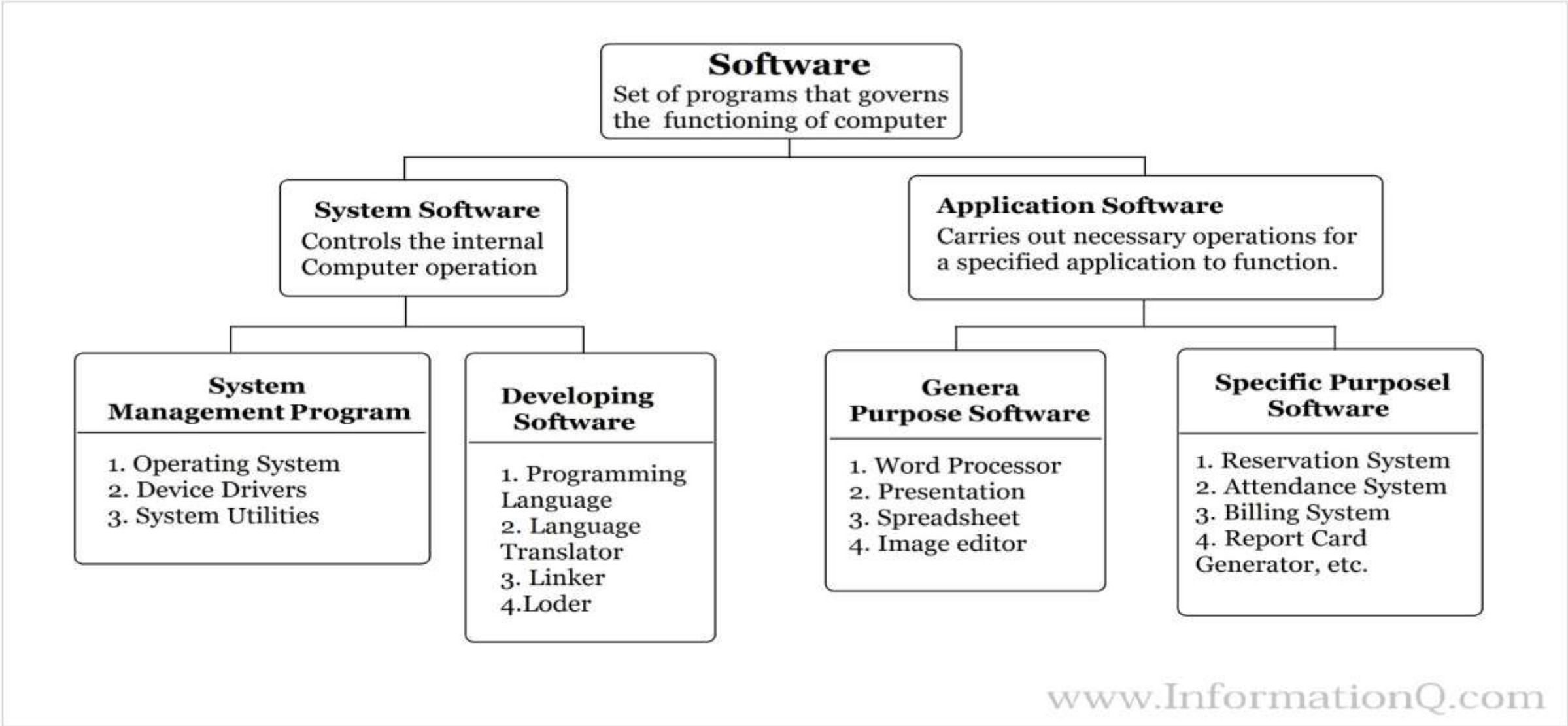
Computer software or just software is a collection of computer programs and related data that provides the instructions for telling a computer what to do and how to do it. Any set of instructions that guides the hardware and tells it how to accomplish each task.

Systems Software

Application Software



Computer Software



www.InformationQ.com

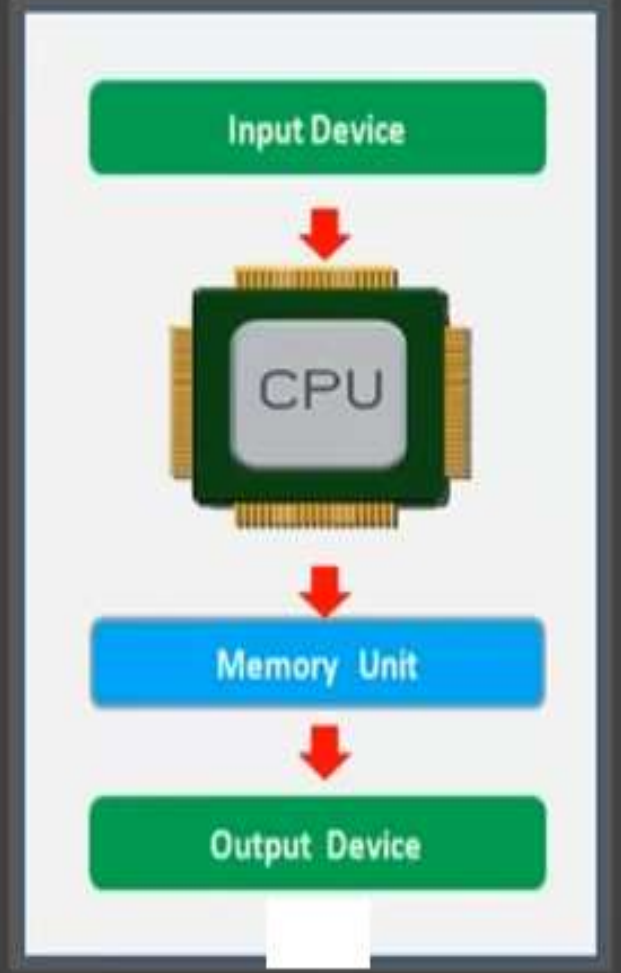


Four basic Components of Computer

A Computer consists of four basic components :

In terms of **functionality** the computer system can be grouped in to four units :

1. **Input** Unit - Input Device .
2. Central Processing Unit - **CPU** .
3. **Memory** Unit - Memory Hierarchy.
4. **Output** Unit - Output Device.

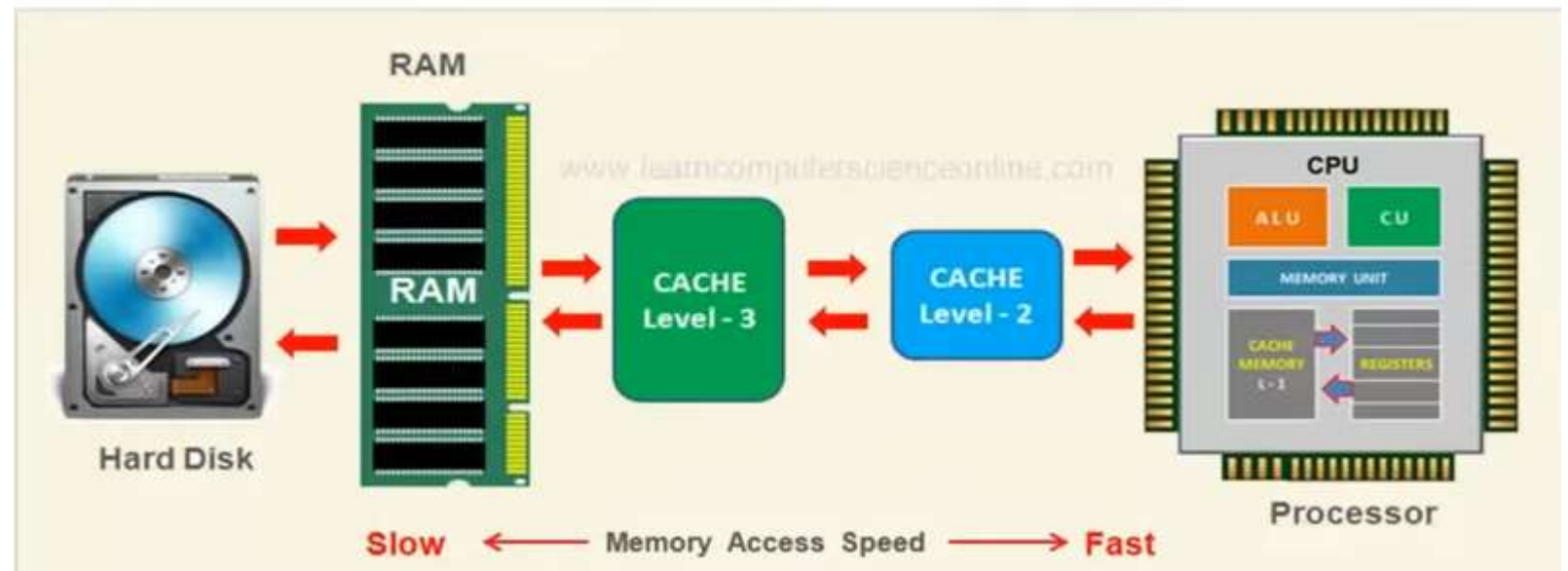




Factorial Using Recursion

- The term **"Input Unit "** refers to the **input** data provided by the **user** by using any **input device** such as **keyboard , mouse , mike , camera** in the form of **input data** to be processed by the **CPU** .

The CPU is the brain of the computer system that provides Computational and Decision making Power





Central Processing Unit

The Central Processing Unit or CPU is also known as the brain of the computer. CPU executes all types of data processing functions.

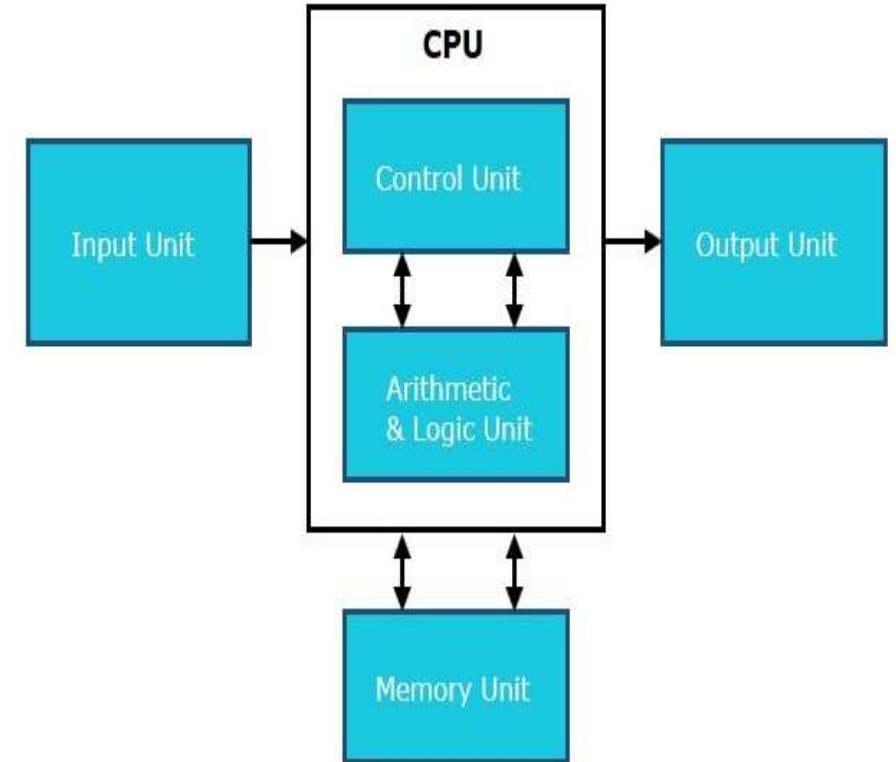
It saves data/intermediate results/instructions (program) and controls the operation of all parts of the computer.

Following are the points to remember for Central Processing Unit (CPU):

- The CPU is taken as the brain of the computer.
- CPU facilitates all types of data processing operations.
- It saves data, intermediate results, and instructions (program).

It handles the operating of all parts of the computer.

- The CPU itself has the following three components.
- Memory or Storage Unit
- Control Unit
- ALU (Arithmetic Logic Unit)





OUTPUT UNIT

Output unit refers to the output devices that are used to communicate data from computers to users. These include hardware that transmits data from computers in a form that is understandable by humans. Examples of output units are microphones, monitors, printers, headphones, etc.





Thank You!