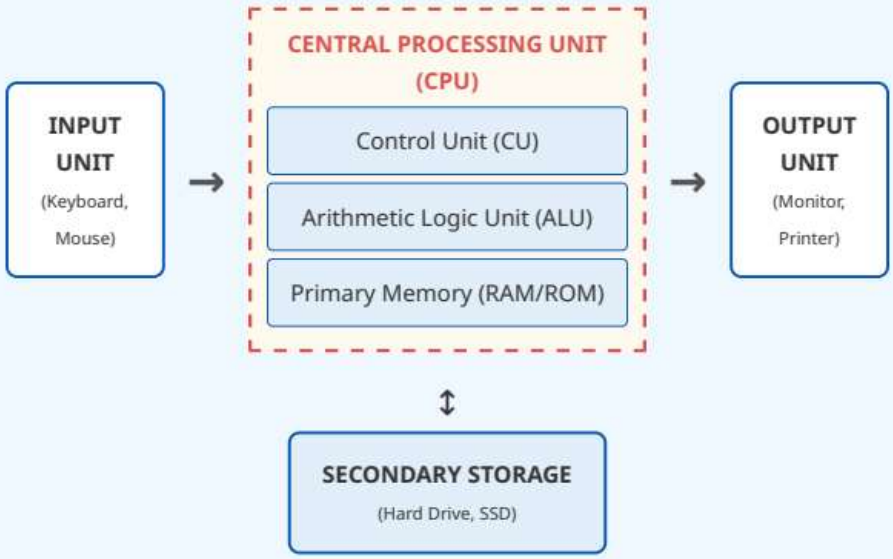
Block Diagram of a Computer

Quick & Easy Study Material

ST.JOSEPH'S COLLEGE(ARTS & SCIENCE)

KOVUR, CHENNAI- 128

A computer might seem incredibly complex on the outside, but internally, its architecture is highly organized. The **Block Diagram of a Computer** illustrates the core components and how data and control signals flow between them to process information. Let's break it down!



Understanding the Components

1. Input Unit

This is how we communicate with the computer. Devices like the keyboard, mouse, or scanner capture raw data and instructions from the user and convert them into a digital format the computer can understand.

2. Central Processing Unit (CPU)

Often called the "brain" of the computer. It processes all the instructions. It has two main sub-components:

- **Arithmetic Logic Unit (ALU):** Performs all mathematical calculations (addition, subtraction) and logical comparisons (greater than, equal to..etc).
- **Control Unit (CU):** Manages and coordinates the flow of data across all parts of the computer. It tells the memory, ALU, and input/output devices how to respond to program instructions.

3. Memory Unit (Primary & Secondary)

- **Primary Memory (RAM/ROM):** Fast memory accessed directly by the CPU. It holds data currently being processed. RAM is temporary (volatile), while ROM is permanent.
- **Secondary Storage:** Used for long-term storage of data and programs (e.g., Hard Disk Drives, Solid State Drives, USB drives). Data here is not lost when the power is turned off.

4. Output Unit

Once the CPU finishes processing the data, it sends the results to the Output Unit. Devices like monitors, printers, and speakers translate the digital results back into a human-readable format.

Study Tip: When drawing this in your exam, remember to use solid lines to show the flow of data, and dotted lines to show the flow of control signals from the Control Unit!

Dr.R.RUBAN
Asst. Professor,
ST.JOSEPH'S COLLEGE(ARTS & SCIENCE)
KOVUR, CHENNAI-128