Simple Model of Computer

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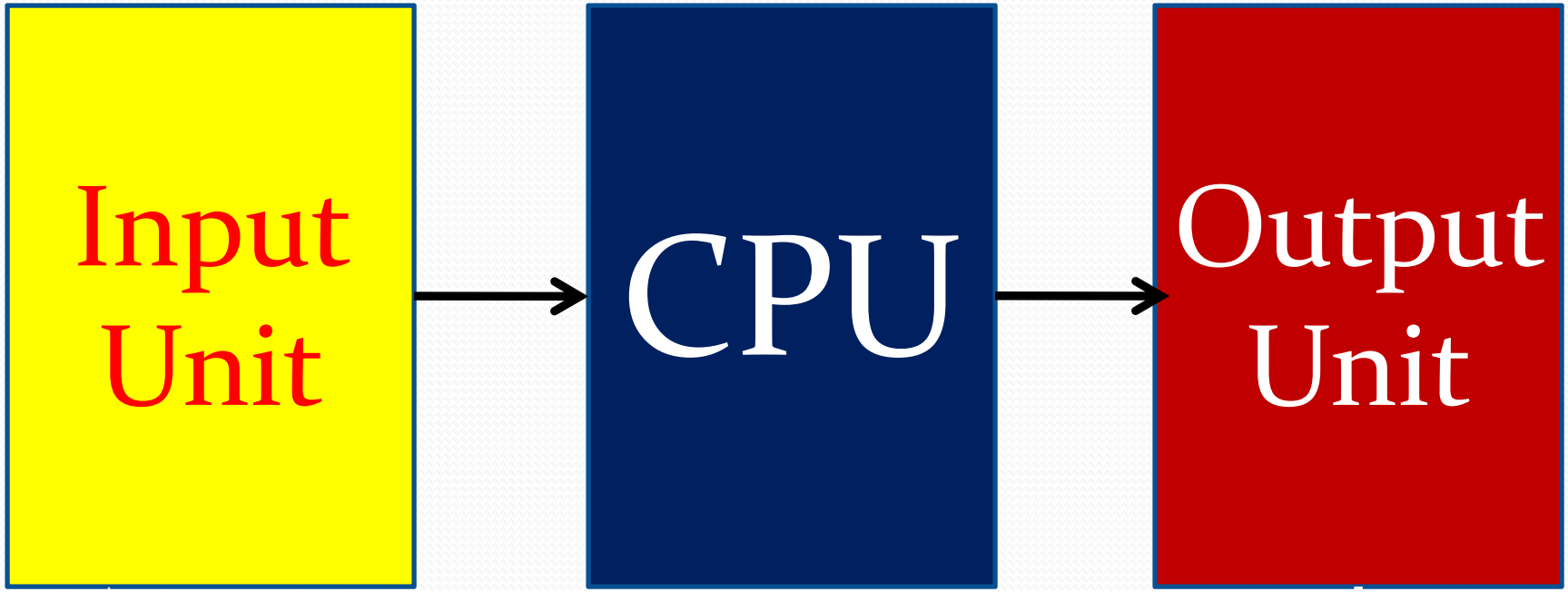
Computer

- **Store** Data or Information
- **Process** Data or Information
- **Retrieve** Data or Information

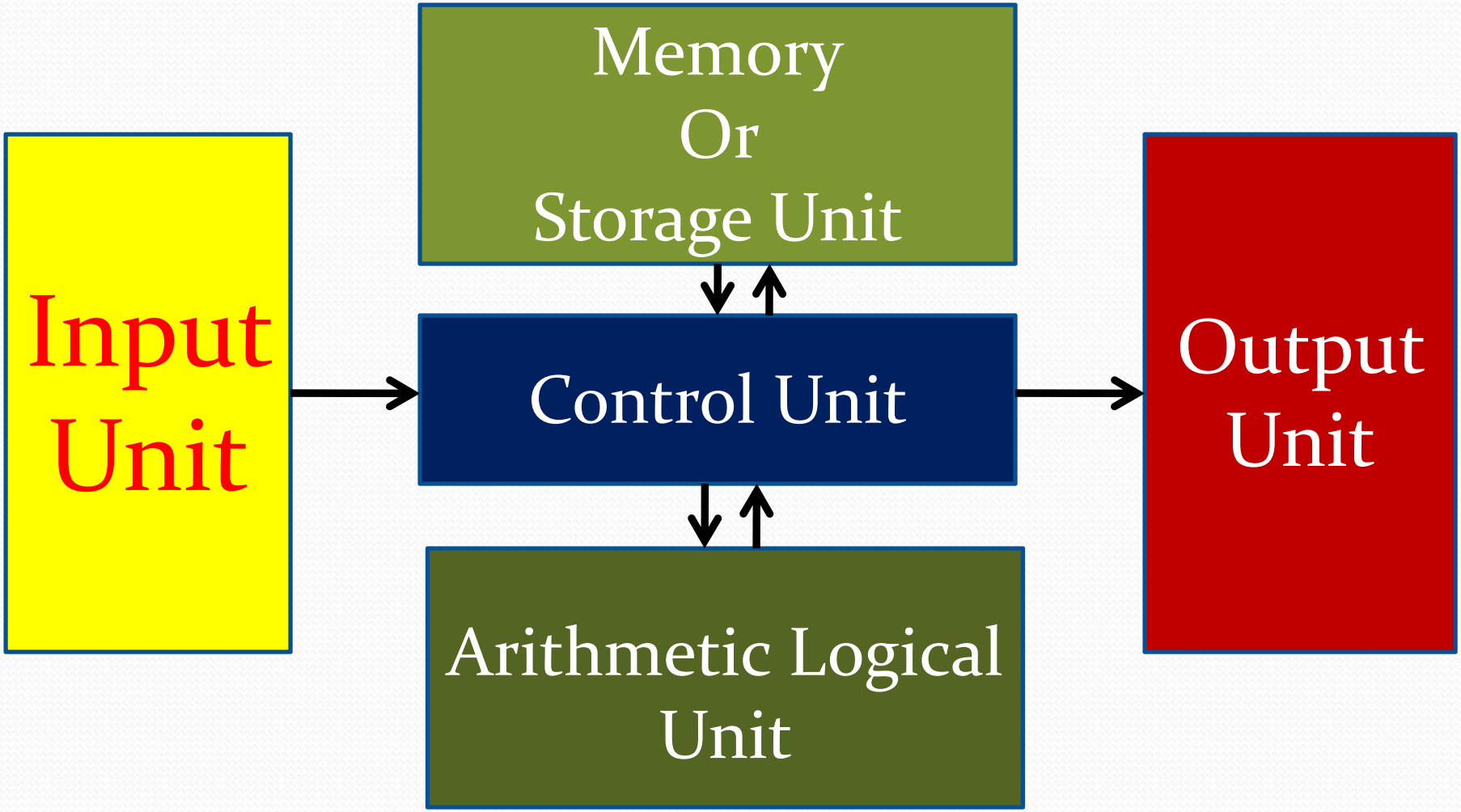
Units of Computer

- Input Unit
- Central Processing Unit (CPU)
- Output Unit

Simple Model of Computer



Block Diagram of Computer



Input Unit

Input unit is that unit which provides a user interaction with CPU.

Input Devices

The devices through which the user communicate with computer known as input devices. Computer system uses many devices for input purposes

Input devices, which allow direct human- machine communication.

Keyboard

Mouse

Joystick

Control Pad

Touch Screen

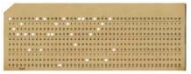
Bar Code Reader

Scanner

Mike

Input Pen

Punch Cards



Webcam

OCR and OMR

Input devices, which require data to be recorded on an input medium.

Floppy Disk	CD ROM & DVD ROM	Pen Drive	Other Storage Medium

Output Unit

Output Unit is that unit which provides a CPU interaction with user.

Output Devices

Output devices are instruments of interpretation and communication between computer and humans. These devices take machine- coded output results from the processor and convert them into a form that can be used by people (e.g. , printed or displayed reports) e.g. Visual Display Unit (VDU), Speaker, Printer etc…

Output Devices

Visual Display Unit (VDU),

Speaker,

Printer

And Other Storage Medium Devices etc…

Memory

Temporary Memory – Primary Memory – Working Memory Random Access Memory

Permanent Memory – Secondary Storage – Read Only Memory

Output Devices

We can categorize output devices in

1. **Soft copy Output devices are those only displays the output. E.g. Display Devices and memories like floppies, CDs, Pen drive, Memory card etc.**
2. **Hard copy output devices are those which gives us output in printed form. Printers are the best example of output devices.**

CPU

CPU is the brain of computer, because all the operations (storing / processing / retrieval) are performed in this part.

CPU is divided into three main sections

- **Memory**
- **Control Unit**
- **Arithmetic Logical Unit(ALU)**

Memory

A computer system also has storage areas, often referred to as memory.

The memory can receive, hold, and deliver data when instructed to do so.

Primary Memory

Data that are being processed are held in primary memory (also called working memory or primary storage), which is capable of sending and receiving the data at very high speeds.

Secondary Memory

Also called long-term memory or secondary storage, stores data not currently being used and operates more slowly, but it is capable of storing large volumes of data. This form of storage stores the data permanently in the given media and examples are floppy diskettes, CD/DVD, Pen Drive, Magnetic tapes magnetic drums, Hard Disk etc.

Control Unit

How does the input device know when to feed data into storage?

How does the arithmetic- logic section know what should be done with the data once they are received?

How is the output device able to obtain finished rather than intermediate results?

Control Unit

By selecting, interpreting, and seeing to the execution of program instruction, the control section of the CPU **maintains order and directs the operation of the entire system.**

Control Unit

is

Obedient & Nonsense

Being obedient without exercising 'commonsense' can be very annoying and unproductive.

Colonel and his Orderly

"Go to the Post Office and collect stamps of Rs. 5, 25 paisa each". The orderly went with the money to the post office and did not return for a long time. The Colonel got worried and went in search of him to the post office and found the orderly standing there with the stamps in his hand.

When the Colonel became angry and asked the orderly why he was standing there, he came the reply that he was ordered to buy stamps but not ordered to return with them.

THE ARITHMETIC-LOGIC UNIT (ALU)

All calculations are performed and all comparisons (decisions) are made in the arithmetic logic section of the CPU. Once data are fed into primary storage from input devices, they are held and transferred as needed to the arithmetic logic section where processing takes place.

Data may thus move from primary storage to the arithmetic- logic unit and back again to storage many times before the processing is finished.

Once completed, the final results are released to an output storage section and from there to an output device.

Thank you!

For Any Question…

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