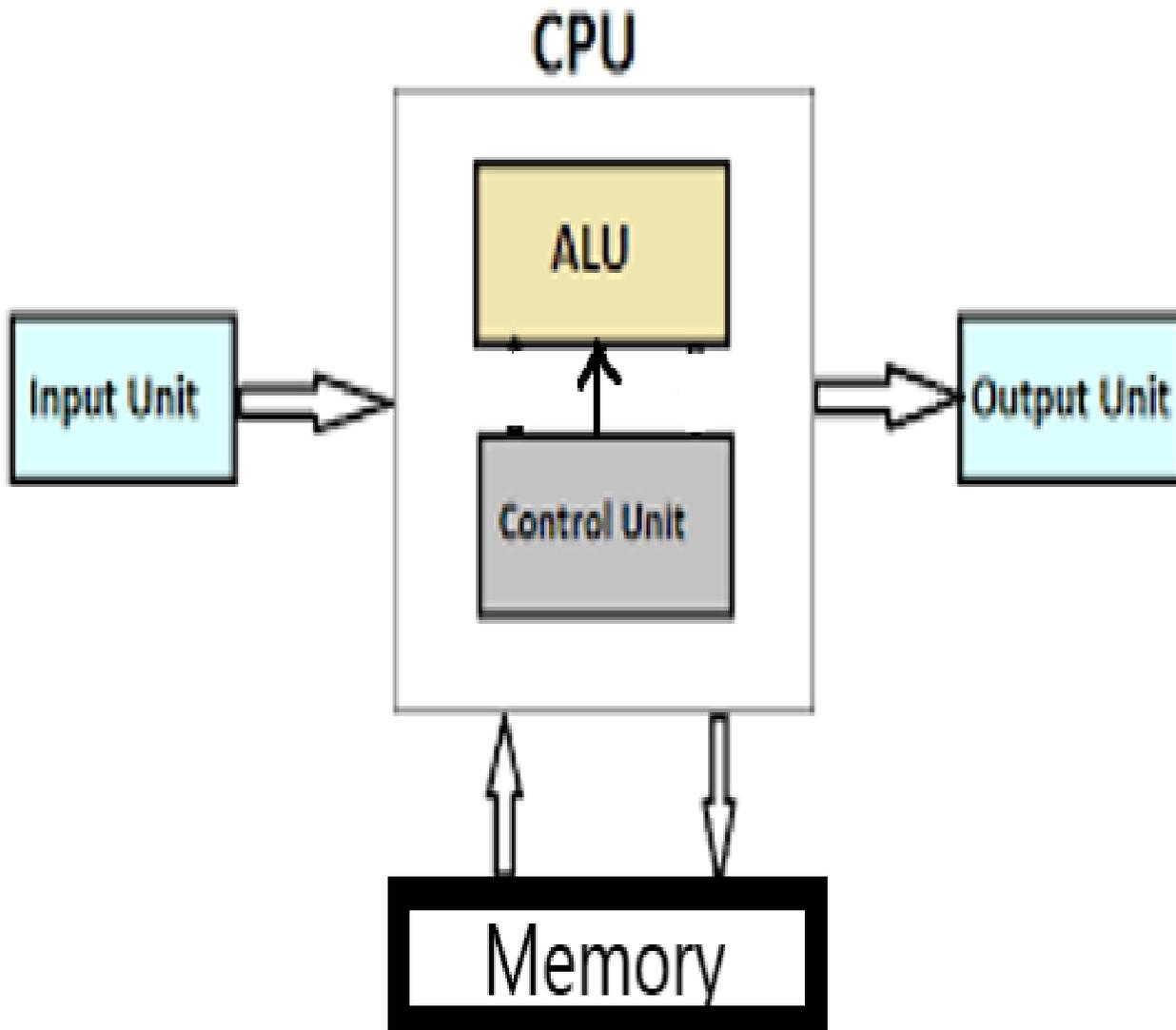


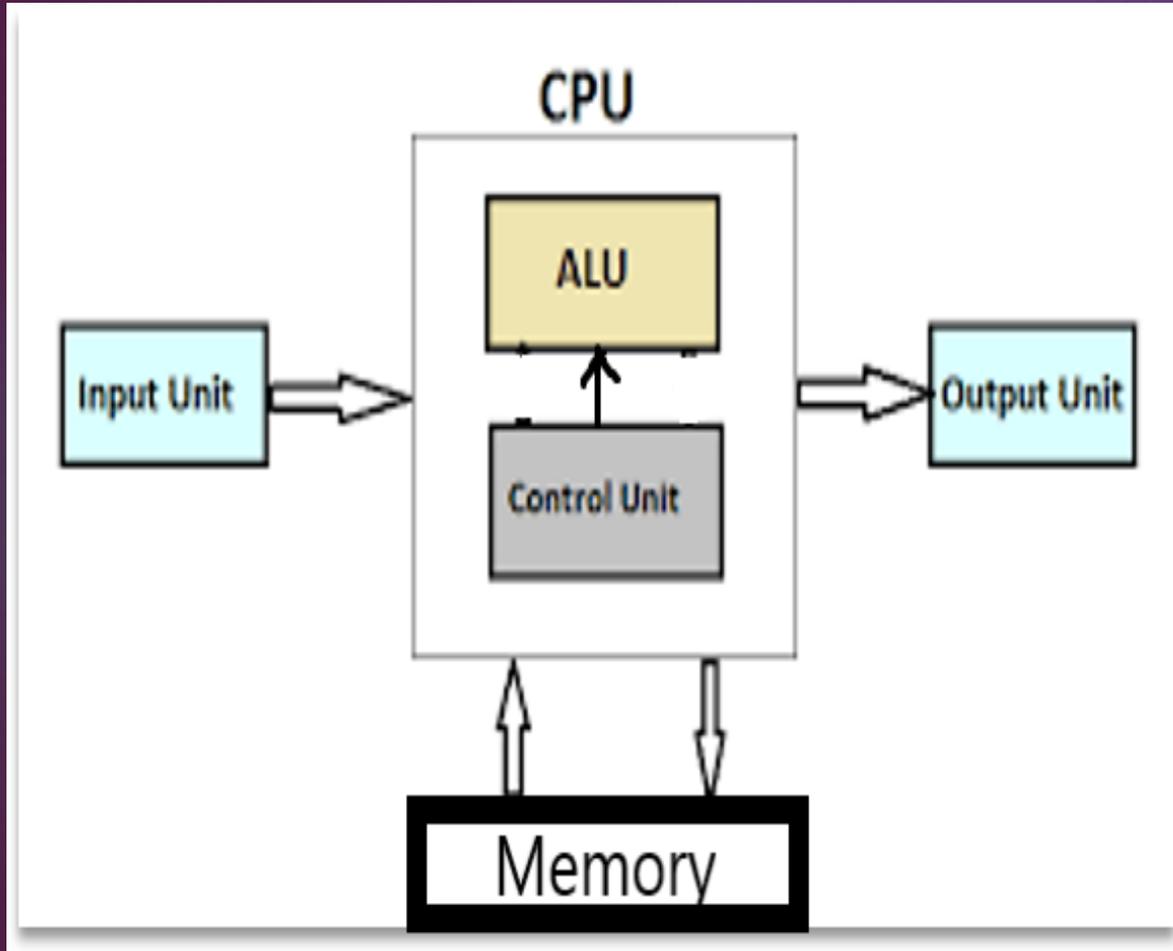


# Computer Fundamentals



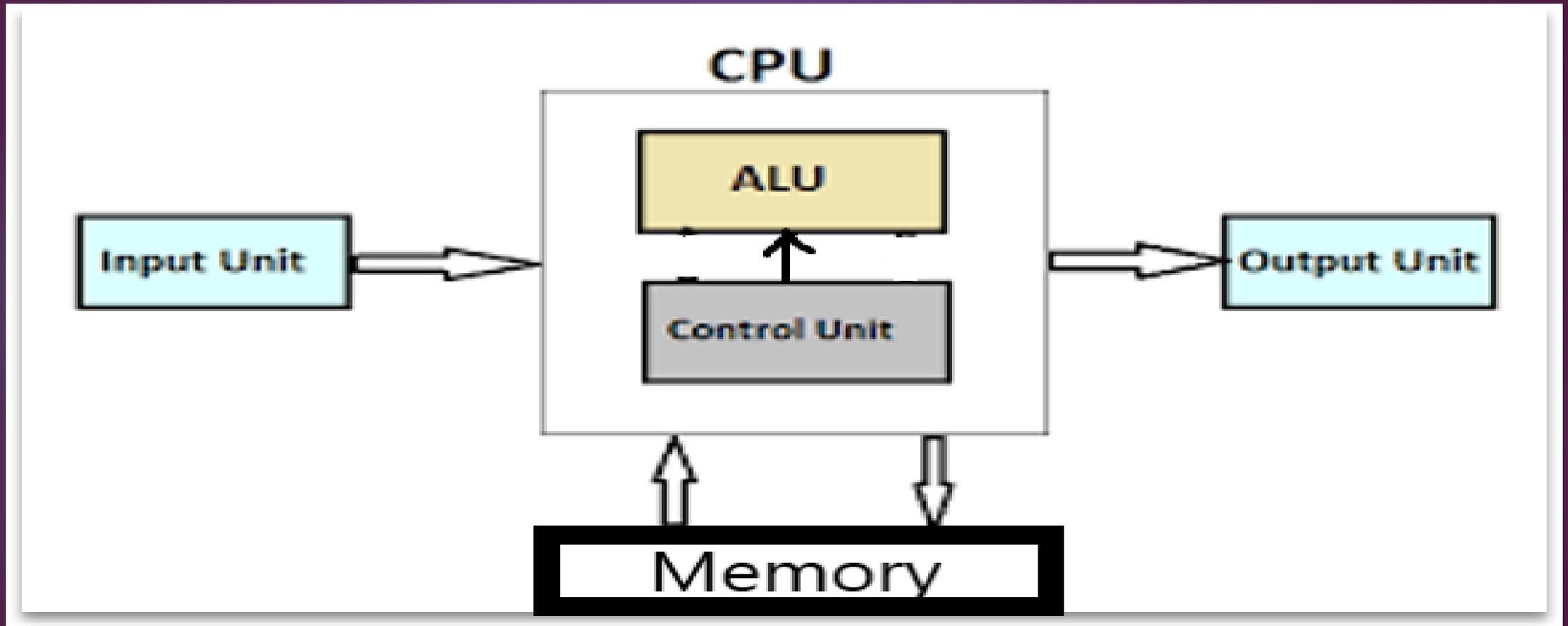
Block  
diagram  
of  
computer

# Block diagram of computer



- ▶ CPU : Central Processing Unit
- ▶ ALU : Arithmetic and Logic Unit
- ▶ CU : Control Unit

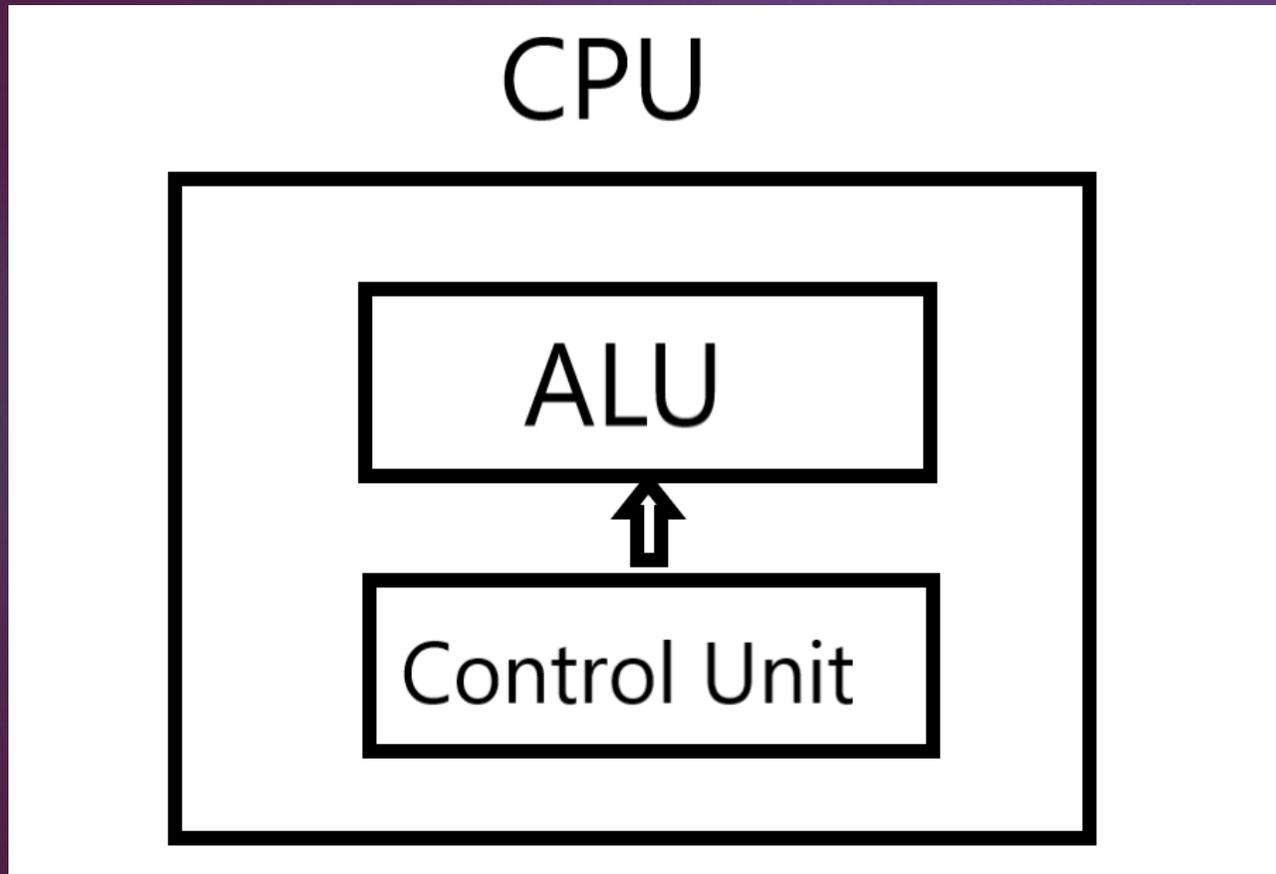
# Interaction between CPU ,memory and input/output devices



# Interaction between CPU, memory and input/output devices

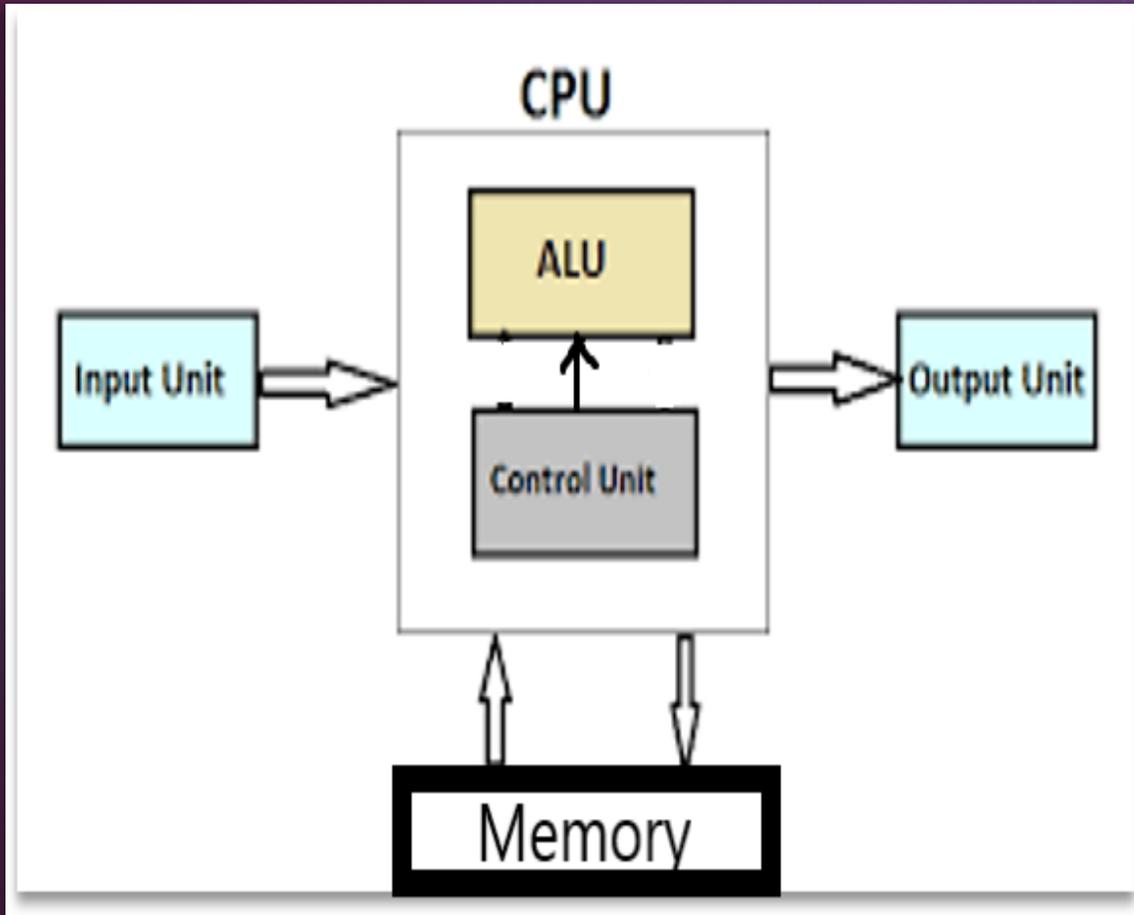
- ▶ Input device input data into computer like data entry through keyboard.
- ▶ Data is then processed by the central processing unit(CPU).
- ▶ Random access memory (RAM) is used for processing.
- ▶ information is displayed through the output device, like on monitor.
- ▶ Data and information can be stored in computer's memory called secondary memory, like on hard disk.
- ▶ Secondary memory of computer includes hard disk, compact disk(CD), digital versatile disk(DVD), pendrive ,memory card etc.

# Function of CPU and major functional parts of CPU.



- ▶ CPU : Central Processing Unit
- ▶ ALU : Arithmetic and Logic Unit

# Function of memory



- ▶ Computer memory is used for processing data.
- ▶ Primary memory processes data.
- ▶ When data is input to the computer it is processed according to the program instructions.
- ▶ Memory stores data also.
- ▶ Like text file, audio file, video file, image file.
- ▶ Data is stored on secondary memory. Secondary memory includes harddisk, CD, DVD, pendrive, memory card etc.

# Describe the function of input output devices

## ▶ **Input device**

- ▶ Input device are used to input data to the computer.
- ▶ Keyboard, mouse, scanner, joystick, lightpen ,touchscreen ,optical character recognition (OCR) etc.

# Input device



# Input device

Input Devices

joystick

mouse

mic

camera

touch tablet

hand-held scanner

keyboard

flatbed scanner

ComputersProfessor.com

A collection of input devices including a joystick, mouse, microphone, camera, touch tablet, hand-held scanner, keyboard, and flatbed scanner. The image is a collage of various input devices. At the top left is a close-up of a joystick. Next to it is a blue and black computer mouse. To the right is a black gooseneck microphone. Further right is a silver and black web camera. Below the joystick is a hand-held scanner being held by a hand. Below the mouse is a black keyboard with blue backlighting. Below the microphone is a silver laptop with a hand writing on a tablet in front of it. Below the camera is a black flatbed scanner. The text 'Input Devices' is centered at the top. The website 'ComputersProfessor.com' is at the bottom right.

# Output device

- ▶ Output device are used to display data.
- ▶ E.g. Monitor , printer , plotter.
- ▶ There are two broad categories of the output from computers
  - ▶ Soft copy
  - ▶ Hard copy

# Output device

CRT Monitor



TFT Monitor



Laser Printer



Inkjet Printer



Dot Matrix Printer



Speakers



Plotters



Multimedia Projectors



# Output device



# Relevance of speed and word length for CPU performance

## ▶ **Wordlength**

- ▶ Wordlength is the number of bits a CPU can process simultaneously. For example a 32 bit processor is faster than that of 16 bit processor.

## **Speed**

- ▶ Speed refers to the clock speed of the processor.

## **Relevance of speed and word length for CPU performance**

- ▶ The computer with more processor clock speed and word length has higher performance than the computer with less wordlength and processor clock speed.