

## Q1 Bus of Computer System. Explain.

Bus is a communication system that carries information between components of computer or between computers.

Bus connects components of a computer i.e. CPU, memory, input/output devices.

Examples:

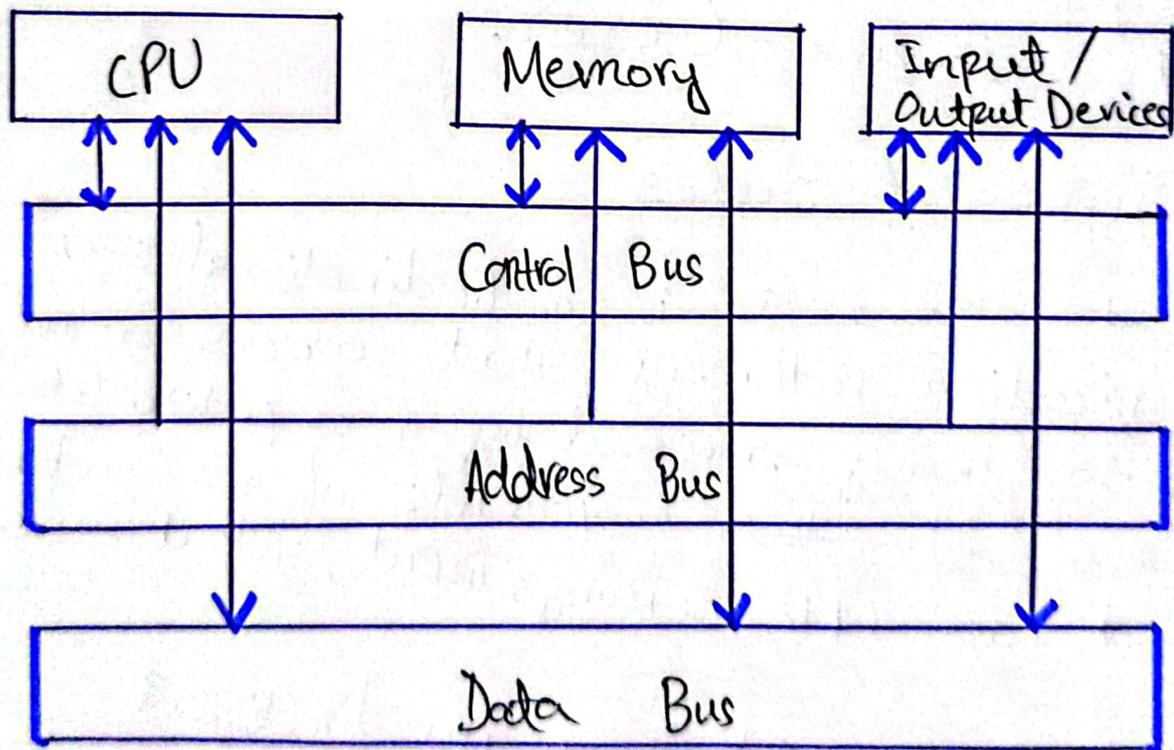
Universal Serial Bus (USB), Peripheral Component Interconnect (PCI), PCI-Express (PCIe).

### Types of Buses

- i- Data Bus: It is a bi-directional communication pathway that carries actual data being processed by a computer between components of a computer such as CPU, memory, input/output devices.
- ii- Address Bus: It is a uni-directional communication pathway that carries address of the data not the data itself between memory and CPU so that the CPU knows where to send and retrieve data.

iii- Control Bus: It is a bi-directional communication pathway that carries read or write signal, interrupt signal, clock signal and status signal between CPU and other components of a computer.

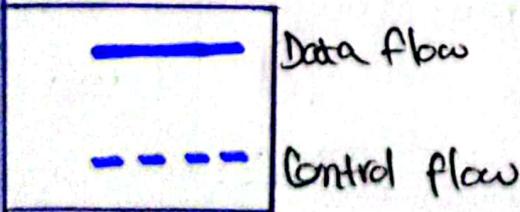
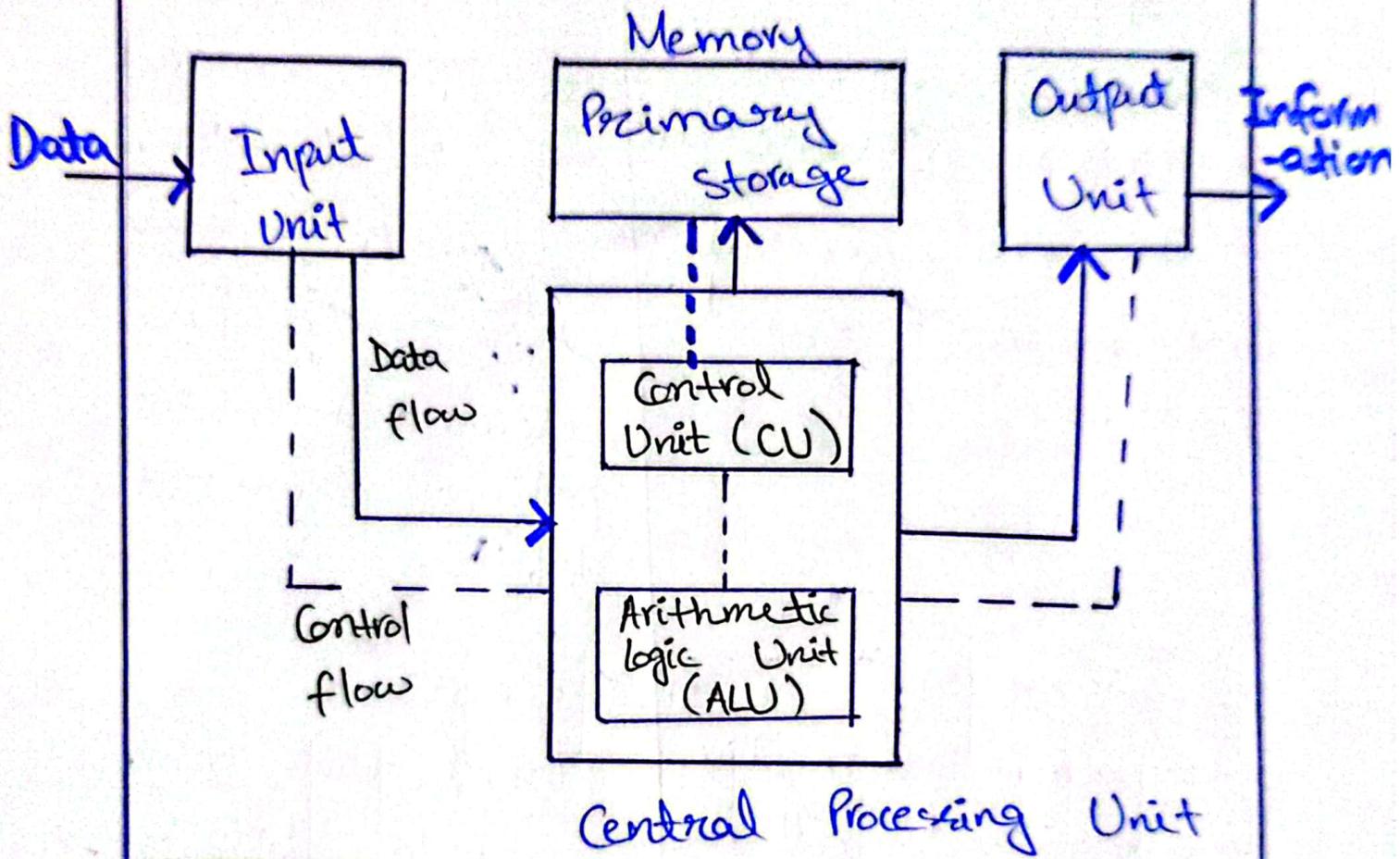
Fig: Bus Infrastructure of Computer



## Block diagram of Computer

The main components of a computer include CPU, memory (Primary storage and secondary storage), input/output devices.

Fig: Block diagram of Computer



Q2 Differentiate between Star and Planet.

Star	Planet
i- definition: Star is a spheroid of plasma held together	i- definition: Planet is a celestial body

due to its own gravity, spinning due to thermal nuclear fusion of hydrogen and helium in its core, generating immense heat and light.

### ii- Formation

Star forms from the gravitational collapse of molecular cloud in nebula.

### iii- Composition

Star is <sup>mostly</sup> composed of hydrogen and helium.

that orbits around a star, and is massive enough for its gravity to make it nearly round and has cleared its orbital path of significant debris.

### ii- Formation

Planet forms from rotating disk of gas and dust around young star through a process called accretion.

### iii- Composition

Planet is composed of rocks (earth), ice (Uranus), and gas (Jupiter).

iv- Temperature  
Star is hotter than planet.

v- Size large and  
Star is more massive than planet.

vi- Light  
It produces its own light due to nuclear fusion in its core.

vii- Movement  
Star orbits around galactic center, appears to be fixed but slightly shifts.

iv- Temperature  
Planet is cooler than star.

v- Size  
Planet is less massive and smaller than star.

vi- Light  
It does not produce its own light; in fact it reflects light from its host star i.e. Sun.

vii- Movement  
It orbits around star in predictable paths.