A Bus is a collection of wires that connects several devices.

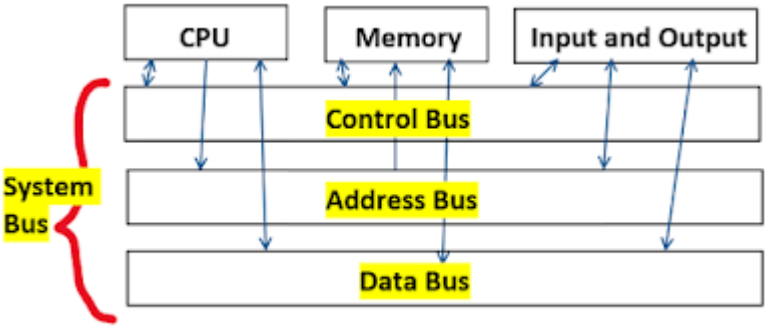
Buses are used to send control signals and data between the processor and other components

This is to achieve a reasonable speed of operation.

In computer system all the peripherals are connected to microprocessor through Bus.

Types of Bus structure:

1. Address bus
2. Data bus
3. Control bus



Types of Buses in Computer Architecture

1. Address Bus:

1. Address bus carry the memory address while reading from writing into memory.
2. Address bus caary I/O post address or device address from I/O port.
3. In uni-directional address bu only the CPU could send address and other units could not address the microprocessor.
4. Now a days computers are haing bi-directional address bus.

2. Data Bus:

1. Data bus carry the data.
2. Data bus is a bidirectional bus.
3. Data bus fetch the instructions from memory.
4. Data bus used to store the result of an instruction into memory.
5. Data bus carry commands to an I/O device controller or port.
6. Data bus carry data from a device controller or port.
7. Data bus issue data to a device controller or port.

3. Control Bus:

Different types of control signals are used in a bus:

1. Memory Read: This signal, is issued by the CPU or DMA controller when performing a read operation with the memory.
2. MemoryWrite: This signal isissued by the CPU or DMAcontroller when performing a write operation with the memory.
3. I/O Read: This signal isissued by the CPU when it is reading from an input port.
4. I/O Write: This signal is issued by the CPU when writing into an output port.
5. Ready: The ready is an input signal to the CPU generated in order to synchronize the show memory or I/O ports with the fast CPU.

A **system bus** is a single computer bus that connects the major components of a computer system, combining the functions of a data bus to carry information, an address bus to determine where it should be sent, and a control bus to determine its operation.