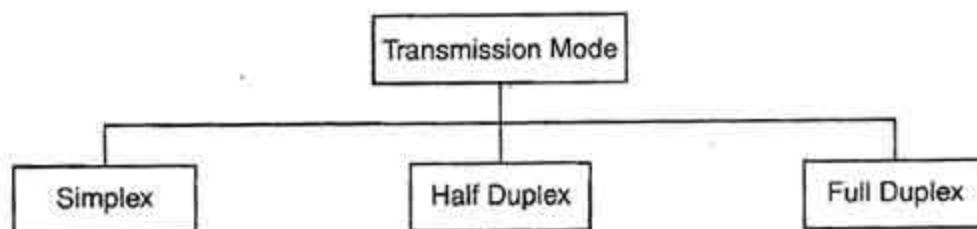


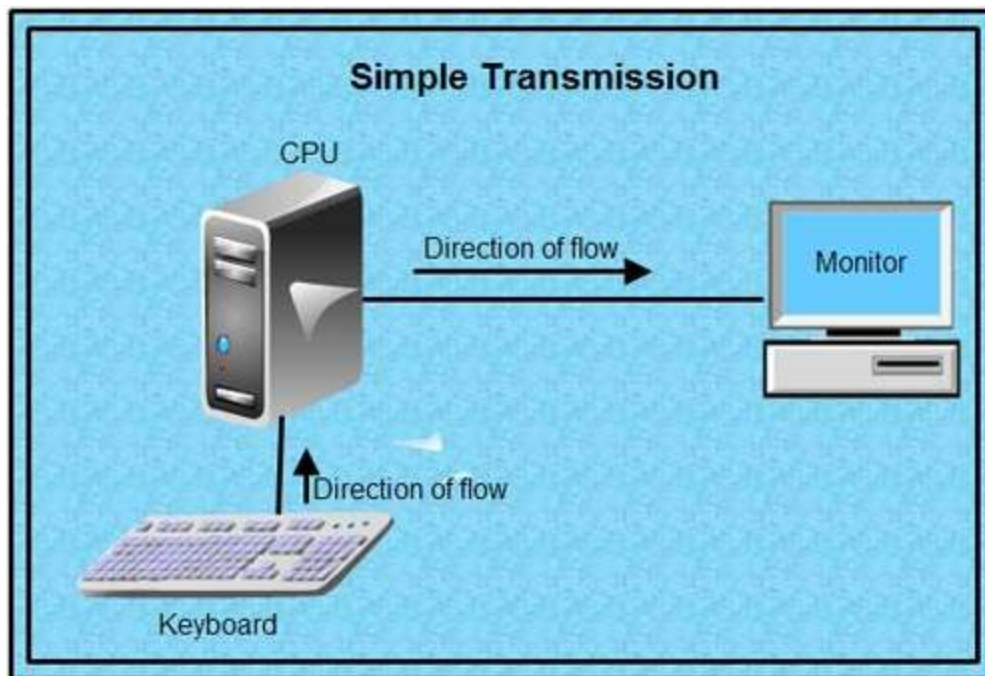
TRANSMISSION MODES

The term **Transmission Mode** defines the direction of the flow of **information** between two communication devices *i.e.* it tells the direction of signal flow between the two devices.

There are three ways or **modes of data transmission**: Simplex, Half duplex (HDX), Full duplex (FDX)



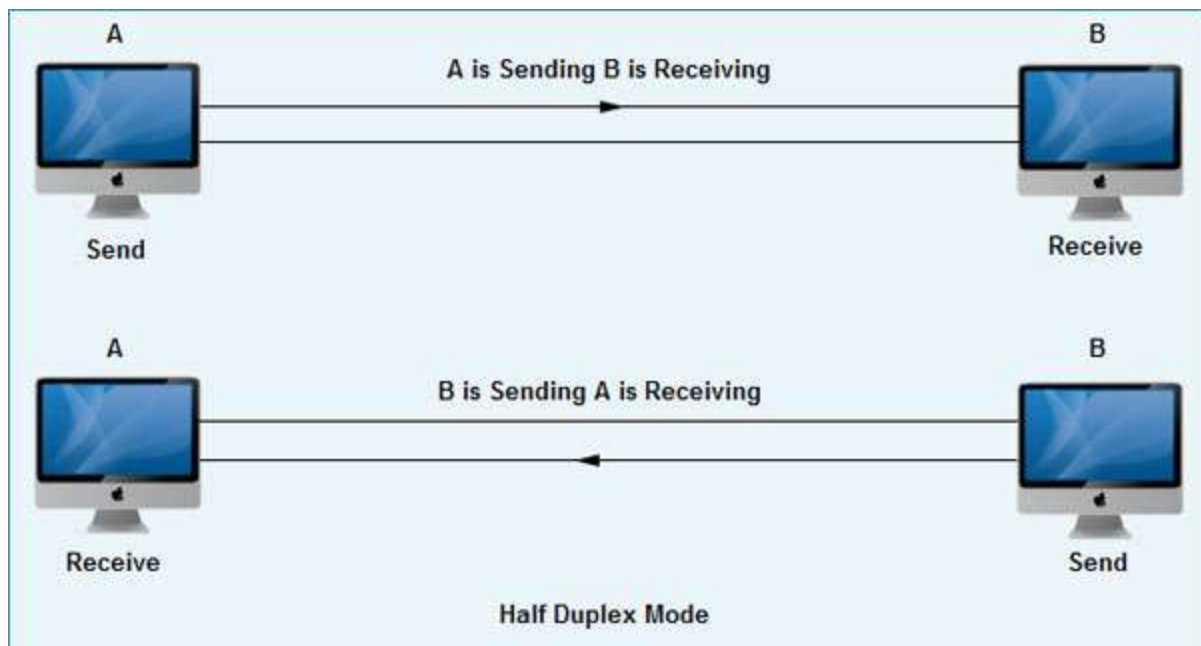
Simplex: In Communication Networks, Communication can take place in one direction connected to such a circuit are either a send only or receive only device. There is no mechanism for information to be transmitted back to the sender. Communication is unidirectional. TV broadcasting is an example. Simplex transmission generally involves dedicated circuits. Simplex circuits are analogous to escalators, doorbells, fire alarms and security systems.



Examples of Simplex mode:

1. A Communication between a **Computer** and a keyboard involves simplex duplex transmission. A television broadcast is an example of simplex duplex transmission.
2. Another example of simplex transmission is loudspeaker system. An announcer speaks into a microphone and his/her voice is sent through an amplifier and then to all the speakers.

Half Duplex: A half duplex system can transmit data in both directions, but only in one direction at a time that mean half duplex modes support two-way traffic but in only one direction at a time. The interactive transmission of data within a time sharing system may be best suited to half-duplex lines. Both the connected devices can transmit and receive but not simultaneously. When one device is sending the other can only receive and vice-versa. Data is transmitted in one direction at a time, for example. a walkie-talkie.



Example of half duplex mode:

A walkie-talkie operates in half duplex mode. It can only send or receive a transmission at any given time. It cannot do both at the same time.

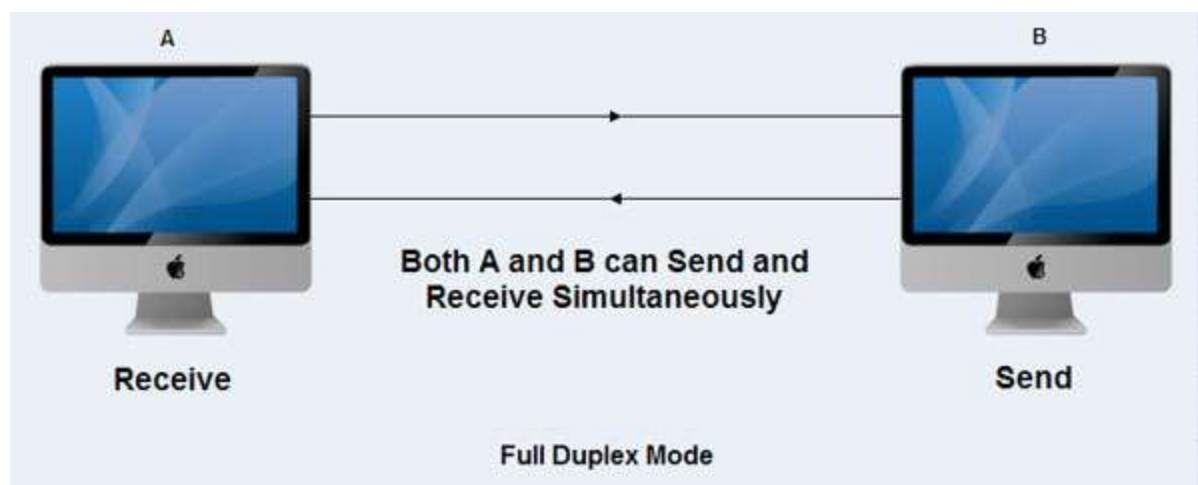
As shown in fig. computer A sends information to computer B.

Full Duplex: A full duplex system can transmit data simultaneously in both directions on transmission path. Full-duplex method is used to transmit the data over a serial communication link. Two wires needed to send data over a serial communication link layer. Full-duplex transmission, the channel capacity is shared by both communicating devices at all times.

Both the connected devices can transmit and receive at the same time. Therefore it represents truly bi-directional system. The link may contain two separate transmission paths one for sending and another for receiving.

Example of Full duplex mode:

Telephone networks operate in full duplex mode when two persons talk on telephone line, both can listen and speak simultaneously.



Analog **Transmission** is a **Transmission Method** of conveying voice, data, image, **signal** or video information using a continuous **signal** which varies in amplitude, phase, or some other property in proportion to that of a variable. Fire alarm systems work the same way.