Transmission Modes:
It means transferring data between two devices. There are three transmission modes:

1. **Simple Mode:**
   Communication is uni directional. The simplex mode can use the entire capacity of the channel to send data in one direction. Only one device can transmit, and the other can only receive. Example: Radios, Keyboard and traditional monitors. The keyboard can only introduce input, the monitor can only give the output.

   Advantages:
   a. Cost effective as only one channel is required.
   b. Easiest and simplest mode of communication.
   c. Used where feedbacks or response is not needed.

   Disadvantages:
   a. One-way communication only
   b. No way to verify data has been transmitted or not.
   c. Not suitable for application that requires bi-directional communication.

2. **Half-Duplex:**
   Only one station can transmit at one time. When one device is sending, the other device can only receive, and vice-versa. The entire capacity of the channel can be utilized for each direction. Example: Walkie-talkie in which message is sent one at a time and messages are sent in both directions.

   Advantages:
   a. Bi-directional communication.
   b. More efficient communication mode than simplex as the channel can be used for sending and receiving as well.
   c. Less expensive than full-duplex mode as it requires only one communication channel.

   Disadvantages:
   a. Both device cannot transmit at the same time.
   b. Delay between transmission and reception which cause problems in some applications.

3. **Full Duplex:**
   Both devices can send as well as receive in the same real time. Like a telephone where both parties can speak and listen same time. The capacity of the channel, however, must be divided between the two directions.

   Frequently Asked Questions on Transmission Media – FAQs
   Among Simplex, Half duplex and Full Duplex Transmission Modes, which offers highest data rate?
   Full Duplex Transmission Mode generally offers the highest data rate, because it can transmit in both directions simultaneously.
   Which mode is most complex to implement?
   Full Duplex transmission Mode is the most complex to implement because of its simultaneous transmission and receiving capabilities.
   Is WiFi full duplex?
   No Wi-Fi can not work as a full duplex.