I2C

12C makes use of the master-slave notion. It can have a single master connected to multiple slaves and vice versa. It makes use of two data lines for transmission of data, which are the Serial data line (SDA) and the Serial clock line (SCL). The SDA enables the master and slave to both receive and transmit data, while the SCL is simply just the clock signal, which is controlled by the master. This means that the 12C is synchronous.

In I2C, data is transmitted in messages, which have start and stop conditions and other commands. The start condition is when the SDA line changes from a high voltage value to a low voltage value, while the stop condition is from a low voltage value to a high voltage value.

The advantages of 12C are, it has only two wires and it can have multiple masters or slaves unlike SPI. The disadvantage is that it is slower than SPI in data transfer and it is more complicated as well.