Data transmission

The bit

- **Binary digits (1,0)**

- Computers use binary codes to reptresent and interpret letters, numbers and special charterers with bits. Commonly used code is the American Standard code for information intercharge (ASCII)

With this each character is represented by 8 bits example:  
 A = 01000001  
 B = 00111001

# = 00100011

- each group of 8 bits is known as BYTE

Common methods of data transmission

- after the data is transformed into a series of bits, it must be converted into singals that can be sent across the network media to its destination

MEDIA = physical medium on which the signals are transmitted (copper wire, fiber-optic cables, or electromagnetic waves through the air)

THERE ARE 3 MAIN TYPES:  
 - **electrical signals**

Transmission is achieved by representing data as electrical pulses on copper wire

- **optical signals**

-//- coverting the electrical signals into light pulses

- **wirekess signals**

-//- using infrared, microwave, or radio waves through the air

**The following categories are used to classify types of personal data:**

Volunteered data - This is created and explicitly shared by individuals, such as social network profiles. This type of data might include video files, pictures, text, or audio files.

Observed data - This is captured by recording the actions of individuals, such as location data when using cell phones.

Inferred data - This is data such as a credit score, which is based on analysis of volunteered or observed data.