Basics of MAC Address -

MAC address is known as Media Access Control. MAC address is used for identification of a node in Computer Networks. The difference between MAC address and IP address is -

IP Address - It acts as the Location of Node in a LAN.

MAC Address - It acts as the name of Node in a LAN.

IP address changes if the location of the node is changes, either manually or dynamically, however, the MAC Address does not change based on its geographic location.

* The MAC Addresses are addressed by the switches/hubs in a LAN , whereas, the IP addresses are accessed by routers.
* The Node passes MAC address and IP address during data transmission where MAC is accessed by switch and IP is addressed by router, and same procedure is carried out in the destination to retrieve the transmitted data.

MAC Address is a physical address also known as Hardware Address.

They are Unique in nature. They cannot be dynamically allocated and are only allocated by the manufacturer.

MAC addresses are represented using hexadecimal numbers. Example : 70 - 20 - 11 - 34 - 66 – 43.

They can use multiple separators like hyphen( - ), period( . ) and colon ( : ).

IP address MAC Address

1. Needed for communication 1. Needed for communication
2. 32 bits architecture 2. 48 bits architecture.
3. Represented in decimal 3. Represented in hexadecimal.
4. Router needs IP address to forward data 4. Switch needs IP address to forward data
5. Example : 122.211.165.244 5. Example : 20.3b.64.2h.12.55
6. IP address cannot contain alphabets 6. MAC address can contain alphabets

MAC address can be achieved using ipconfig/all in the command prompt. Look under wireless LAN option for the MAC Address.