**IP address:**

An IP address is the unique identifying number assigned to every device connected to the internet.

Devices that communicate over the internet or via local networks share information to a specific location using IP addresses.

Internet protocol is the standard network layer for communication protocols between computers interconnected in a network.

This protocol defines how the computers interact with each other, transferring datagrams and packets between computers.

Internet protocol sets the rules for how these interactions happen, where data transfers across the network based on a source IP addresses and a destination IP addresses.

**IP versions:**

IPv4 and (IPv6)

Types of IP addresses include public and private, with public IP addresses being either dynamic or static.

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**Port:**

A port is a virtual point of a network connection used to exchange information.

Each port is associated with a specific process or service.

Each port assigned with an unique number that allows protocols to send and receive the services between client and the servers.

**Port Numbers:**

Example:

Port 80 : This port is used by hypertext transfer protocol (HTTP) to transmit web content from a web server to a web client over the Internet.

Port 21 : This port is used by file transfer protocol (FTP) to transfer files between a client computer and the server.

Port443 : This port is used by hypertext transfer protocol secure (HTTPS), an extension of HTTP which runs on SSL (Secure Sockets Layer) of the computer network.

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**HTTP Methods:**

**GET:**

GET request is used to read/retrieve data from a web server.

GET returns an HTTP status code of 200 (OK) if the data is successfully retrieved from the server.

In an error case, it most often returns a 404 (NOT FOUND) or 400 (BAD REQUEST).

**POST:**

POST request is used to send data (file, form data, etc.) to the server and to create new resources.

While creating a new resource it assign in a ID.

On successful creation, it returns an HTTP status code of 201.

**PUT:**

A PUT request is used to modify the data on the server.

It replaces the entire content at a particular location with data that is passed in the body payload.

If there are no resources that match the request, it will generate one.

**DELETE:**

A DELETE request is used to delete the data on the server at a specified location by filters or ID.

On successful deletion, the HTTP response status code 204 (No Content) returns with no response body.

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**MAC Address:**

A physical address that operates at the Data Link Layer which uniquely identifies each device on a network is called a MAC(Media Access Control) address.

Both an IP address and a MAC address are required for two networked devices to communicate with one another.

MAC address represented by six groups of two hexadecimal digits. Those digits are separated by hyphens or colons. For example, if you locate your device’s MAC address, it could like similar to this: 00:9A:CD:3C:4D:5E.

The 12-digit MAC address is 48 bits long in size.