Q4. Why we use ip address, & how to get public ip address in our machine/pc.

Ans:

**An IP is an internet protocol address and every type of network device — ie anything connected to the internet — is assigned one** An IP is an internet protocol address. Essentially, it is a numeric value assigned to a network device, and it is used for the identification and location of a network device.

IP addresses are assigned to every type of network device. It could be an IP camera, a laptop, a desktop device, an IP phone, a cell phone on a wireless network, computer servers, or websites. Even children’s toys that are internet connected will have an IP address assigned to them.

IPs are broken up into IPv4 and IPv6. IPv4 is made up of a 32-bit address. IPv6 is the new standard and is made up of 128-bit addresses. IPv6 came out because all possible IPv4 addresses are close to being assigned, so IPv6 is the new standard.

A subnet cannot have a duplicate IP address. This means that if your laptop has an IP address of 10.1.10.1, no other devices on your network can have that IP address as it causes an IP conflict. If two devices have the same IP address, the network will confuse the devices, and to resolve the conflict, one will be kicked off the network. Generally, the network will initially accept the second device, and when it realises there is a conflict, it will kick the first device off the network.

* **For Wi-Fi connection**

Select **Start** > **Settings** > **Network & internet** > **Wi-Fi** and then select the Wi-Fi network you're connected to.

Under **Properties**, look for your IP address listed next to **IPv4 address**.

* **For Ethernet connection**

1. Select **Start** > **Settings** > **Network & internet** > **Ethernet**.
2. Under **Properties**, look for your IP address listed next to **IPv4 address**.

* **Find your public IP address using the Command Prompt (CMD)**

The Windows Command Prompt tool can also help you get your public IP address. Here’s how to find your external IP address with Command Prompt.

1. Open the Start menu and type **cmd**.
2. Enter the following command into the Command Prompt and press **Enter**:

**nslookup myip.opendns.com resolver1.opendns.com**

* **Find your IP address using the command prompt (CMD)**

You can quickly get your local IP address on your computer with the Windows Command Prompt tool. It’ll show you both your IPv4 address as well as IPv6 address. Here’s how to find your IP address using CMD:

1. Open the Start menu and type **cmd** to open the Command Prompt.
2. Type **ipconfig** into the Command Prompt and press **Enter**. The tool will return a set of data that includes your IP address.