1. **IP Address**:
   * An **IP Address** (Internet Protocol Address) is a unique numerical label assigned to a device on the internet or a local network.
   * It serves two main functions:
     1. **Network Interface Identification**: An IP address identifies a specific network interface (such as a network card) on a device.
     2. **Location Addressing**: It helps route data packets to the correct destination.
   * IP addresses come in two main versions:
     1. **IPv4 (Internet Protocol Version 4)**: These addresses are 32 bits long and are commonly used. However, they are limited in availability.
     2. **IPv6 (Internet Protocol Version 6)**: These addresses are longer (128 bits) and offer trillions of possible combinations.
   * To find your IP address in Windows:
     1. Open the command prompt by searching for “cmd.”
     2. Type ipconfig and look for the “IPv4 Address” under your active network connection. Alternatively, you can find it in the Windows Settings under Wi-Fi.
   * [Remember, IP addresses are essential for communication across networks and the internet 1](https://medium.com/@abhiraghavd/read-about-ip-address-port-http-methods-mac-address-474217fecaf3).
2. **Port**:
   * A **port** is a number that identifies a specific connection endpoint on a computer.
   * Ports help computers sort and direct network traffic to the right services or processes.
   * Types of ports:
     1. **Well-known ports**: Numbered from 0 to 1023, these are standardized and widely recognized. For example, port 80 is used for HTTP web traffic.
     2. **Registered ports**: Fall within a specific range and are used by various applications.
     3. **Dynamic or private ports**: Used temporarily for network communication.
     4. [Other types include **ephemeral ports**, **serial ports**, and **Ethernet ports**](https://medium.com/@abhiraghavd/read-about-ip-address-port-http-methods-mac-address-474217fecaf3)[1](https://medium.com/@abhiraghavd/read-about-ip-address-port-http-methods-mac-address-474217fecaf3).
3. **HTTP Methods**:
   * The **HTTP (Hypertext Transfer Protocol)** defines request methods for interacting with web resources.
   * Commonly used methods:
     1. **GET**: Retrieves data from a web server by specifying parameters in the URL.
     2. **POST**: Sends data to create or update a resource.
     3. **PUT**: Replaces all current representations of a target resource.
     4. **DELETE**: Removes data from a database.
   * [These methods correspond to CRUD (Create, Read, Update, Delete) operations](https://medium.com/@abhiraghavd/read-about-ip-address-port-http-methods-mac-address-474217fecaf3)[1](https://medium.com/@abhiraghavd/read-about-ip-address-port-http-methods-mac-address-474217fecaf3).
4. **MAC Address**:
   * A **MAC address** (Media Access Control address) is assigned to the physical network interface card (NIC) hardware.
   * Unlike IP addresses, MAC addresses are hard-coded into the NIC and cannot be changed.
   * [Each device has one primary IP address but can have multiple MAC addresses for different network interfaces](https://medium.com/@jegan7798/ip-address-port-http-methods-mac-address-6a9b78a8ea01)