**Network Terminologies with examples**

**IP Address**

* **Definition:** A unique string of numbers separated by periods that identifies each computer using the Internet Protocol to communicate over a network.
* **Example:** 172.16.254.1 is a typical IP address used in internal networks.

**DNS (Domain Name System)**

* **Definition:** A hierarchical system for naming resources on the Internet that translates domain names into IP addresses.
* **Example:** Typing www.google.com in a web browser translates to the IP address 172.217.14.206

**MAC Address (Media Access Control Address)**

* **Definition:** A unique identifier assigned to network interfaces for communications at the data link layer of a network segment.
* **Example:** 00:1A:2B:3C:4D:5E is an example of a MAC address.

**Router**

* **Definition:** A networking device that forwards data packets between computer networks.
* **Example:** A home Wi-Fi router connects your devices to the Internet.

**Switch**

* **Definition:** A network device that connects devices together on a computer network, using packet switching to forward data to its destination.
* **Example:** An Ethernet switch with 8 ports allows 8 computers to communicate within a local network.

**Firewall**

* **Definition:** A network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.
* **Example:** A firewall can block incoming traffic from unauthorized users, enhancing network security.

**LAN (Local Area Network)**

* **Definition:** A network that connects computers within a limited area such as a residence, school, or office building.
* **Example:** The network within an office building that connects all the employees’ computers and printers.

**WAN (Wide Area Network)**

* **Definition:** A telecommunications network that extends over a large geographic area for the primary purpose of computer networking.
* **Example:** The internet is the largest WAN, connecting computers all over the world.

**VPN (Virtual Private Network)**:

* **Definition:** A secure network connection that enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network.
* **Example:** Using a VPN to securely access your work network from a remote location.