Task: What is web server?

➢ A web server is a combination of hardware and software that manages and responds to user requests over the internet. Its main function is to deliver web content, such as web pages, to users' browsers.

Types of Web Servers

1. Apache HTTP Server

   o Description: One of the most widely used web servers, maintained by the Apache Software Foundation.

   o Uses:

      ▪ Hosting static and dynamic websites.

      ▪ Works with multiple operating systems (Windows, Linux, macOS).

   o Key Features:

      ▪ Modular architecture.

      ▪ Compatible with PHP, Python, Perl, and other programming languages.

      ▪ Extensive community support.

2. Nginx

   o Description: Known for its high performance and low resource usage.

   o Uses:

      ▪ Handling static content, reverse proxying, and load balancing.

      ▪ Often used for high-traffic websites.

   o Key Features:

      ▪ Event-driven architecture.

      ▪ Excellent at serving concurrent connections.

      ▪ Integration with caching mechanisms.

3. Microsoft Internet Information Services (IIS)

   o Description: A web server created by Microsoft, optimized for Windows environments.

   o Uses:

      ▪ Hosting ASP.NET applications.

      ▪ Enterprise solutions on the Windows ecosystem.

   o Key Features:

      ▪ Tight integration with Windows Server and Active Directory.

      ▪ GUI-based management tools.

      ▪ Secure by default settings.

4. LiteSpeed

    o Description: A high-performance web server, often considered a drop-in replacement for Apache.

    o Uses:

        ▪ E-commerce websites.

        ▪ Platforms requiring high-speed processing.

    o Key Features:

        ▪ Built-in caching.

        ▪ Enhanced security against DDoS attacks.

        ▪ Easy compatibility with Apache configurations.

5. Node.js

    o Description: Not a traditional web server but a runtime environment that allows building custom web servers using JavaScript.

    o Uses:

        ▪ Real-time applications (e.g., chat apps, streaming services).

        ▪ Lightweight and fast server-side applications.

    o Key Features:

        ▪ Event-driven, non-blocking architecture.

        ▪ Highly customizable.

6. Caddy

    o Description: A modern web server focused on simplicity and automation.

    o Uses:

        ▪ Deploying static and dynamic websites.

        ▪ Quick setups with automatic HTTPS.

    o Key Features:

        ▪ Auto-configuration and HTTPS.

        ▪ Simple configuration file (Caddyfile).

        ▪ Lightweight and efficient.