

### **Q1. What is a HTTP?**

**Ans:** HTTP (HyperText Transfer Protocol) is a communication protocol used for transferring data on the World Wide Web. It defines how messages are formatted and transmitted between a web browser (client) and a web server.

- When you enter a website URL in a browser, the browser sends an HTTP request to the server.
- The server processes the request and sends back an HTTP response, usually containing web pages, images, or other resources.

### **Q2. What is a Browsers? How they works?**

**Ans:** A web browser is an application software that allows users to access, retrieve, and view information from the World Wide Web (WWW). Examples include Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari.

- **User Request** – When you type a URL (like [www.google.com](http://www.google.com)) or click a link, the browser sends a request to the web server using HTTP/HTTPS protocol.
- **DNS Resolution** – The browser contacts the Domain Name System (DNS) to translate the website name into an IP address of the server.
- **Server Response** – The server processes the request and sends back an HTML document with other resources (CSS, JavaScript, images).
- **Rendering Engine** – The browser's rendering engine reads the HTML, CSS, and JavaScript, then displays the webpage in a user-friendly format.
- **Execution of Scripts** – JavaScript is executed by the JavaScript engine inside the browser to make the page interactive.
- **Display to User** – Finally, the browser combines everything and shows the complete web page on the screen.

### **Q3. What is Domain Name?**

**Ans:** A Domain Name is the human-readable address of a website that is used to identify and access resources on the internet.

- Instead of remembering long IP addresses (like 192.168.1.1), we use domain names (like [www.google.com](http://www.google.com)).
- Every domain name maps to an IP address using the Domain Name System (DNS).

**Structure of a Domain Name:**

- **Top-Level Domain (TLD):** .com, .org, .net, .in, etc.

- **Second-Level Domain:** The actual name chosen (e.g., google in google.com).
- **Subdomain (optional):** Like mail.google.com.

**Example:**

- **www.facebook.com**
  - **www** → Subdomain
  - **facebook** → Second-level domain
  - **.com** → Top-level domain

**Q4. What is hosting?**

**Ans:** Hosting (Web Hosting) is a service that allows individuals or organizations to store their website files (HTML, CSS, images, videos, etc.) on a special computer called a web server, which is connected to the internet.

- When a user types your website's domain name (e.g., www.example.com), the hosting server delivers the stored files to the browser.
- Without hosting, your website cannot be accessed publicly on the internet.

**Types of Hosting:**

1. **Shared Hosting** – Many websites share one server.
2. **VPS Hosting** – Virtual private server with more control.
3. **Dedicated Hosting** – Entire server dedicated to one website.
4. **Cloud Hosting** – Website runs on multiple connected servers.

**Example:**

If you create a website on your computer, only you can see it. To make it accessible to everyone, you need hosting services like Hostinger, Bluehost, or GoDaddy.