**TCP/IP & HTTP**

* TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language of the Internet.
* It ensures data is sent reliably and in order across networks.

**TCP/IP Layers:**

1. **Application Layer:** Protocols like HTTP, FTP, SMTP
2. **Transport Layer:** TCP (reliable) & UDP (faster but no guarantees)
3. **Internet Layer:** IP addressing and routing
4. **Link Layer:** Hardware-level data transfer

**Example of TCP in Action:**

When you open a webpage:

1. **TCP handshake** establishes a connection.
2. Data (HTML, CSS, JS) is **sent in packets** and **reassembled** on your device.
3. **Errors are checked** and corrected before completion.

**Notes on HTTP (HyperText Transfer Protocol)**

* **Application layer protocol** built on TCP/IP.
* Follows a **request-response model**.

**Common HTTP Methods:**

* **GET:** Retrieve data (e.g., view a webpage)
* **POST:** Send data (e.g., submit a form)
* **PUT:** Update existing data
* **DELETE:** Remove data

**Example of HTTP Response**

