# HOW BROWSERS LOAD WEBPAGES



## **URL - INPUT**

- Input You type the website address.
- Address The unique name for a web resource.
- Request The browser prepares to fetch data.



# **DNS RESOLUTION**

- **Lookup** Finds the server linked to the name.
- Resolve Converts domain to IP address.
- **IP** The actual address of the server.



# TCP/TLS

- Connect Starts communication with server.
- Handshake Sets up a trusted link.
- **Secure** Encrypts the connection for safety.



# **HTTP REQUEST**

- Method Defines the type of action (GET, POST).
- **Header** Sends extra info like browser type.
- **Send** Delivers the request to the server.



#### SERVER RESPONSE

- Status Shows if request was successful (e.g., 200 OK).
- **Content** Sends back HTML, CSS, etc.
- **Deliver** Data reaches your browser.



## **BROWSER PARSES**

- Parse Reads and understands the HTML.
- Construct Builds structure (DOM).
- **Load** Loads scripts, styles, and assets.



# **PAGE RENDERED**

- **Render** Turns code into visible page.
- **Display** Shows layout and visuals.
- Interact Enables user actions and features.