

How Websites Work

Websites function by using a combination of front-end and back-end technologies that communicate through the internet. When you visit a website, several key processes happen in the background:

1. **Client Request (Browser Request)**
 - When a user types a website address (URL) into a web browser, the browser sends a request to the web server hosting that website.
2. **Web Server Processing**
 - The server receives the request and processes it. If the website has dynamic content (e.g., login pages, search results), the server may interact with a database to fetch or store information.
3. **Response to Browser**
 - After processing, the server sends back HTML, CSS, and JavaScript files, which the browser interprets to display the webpage.
4. **Rendering on the User's Device**
 - The browser renders the webpage using received files, showing images, text, videos, and interactive elements.
5. **User Interaction and Further Requests**
 - When a user clicks a button or submits a form, the browser may send new requests to the server, updating the webpage dynamically.

Key Components of a Website

- **Front-End (Client-Side)** – HTML, CSS, JavaScript (What users see)
- **Back-End (Server-Side)** – Databases, APIs, programming languages like Python, PHP, Node.js (Handles logic & data)
- **Web Hosting & Domain** – Websites need hosting services and a domain name to be accessible online.