

Introduction to the Internet and Web Development

What is the Internet?

The **Internet** is a global network that connects millions of computers and devices worldwide. It allows people to **share information**, **communicate**, and **access resources** like websites, videos, and apps.

Think of the Internet as a huge “digital world” where everything — from YouTube videos to online shopping — happens through connected systems.

How Does the Internet Work?

1. **Client (Your Device)** – When you open a browser (like Chrome or Edge) and type a website name, your device sends a request.
2. **Server** – The server is a computer that stores the website’s files (HTML, CSS, images, etc.).
3. **Internet Connection** – The request travels through the Internet to reach the server.
4. **Response** – The server sends the website data back to your browser, and you see the page displayed.

Example:

When you visit **www.google.com**

- your browser sends a request to Google’s server
- the server sends back the homepage
- you see Google’s search page.


What is Web Development?

Web Development means creating and maintaining websites or web applications.

It’s divided into **three main parts**:

1. Front-End (Client Side)

- This is what users see and interact with in their browser.
- Built using:
 - **HTML** – Structure (the content of the page)
 - **CSS** – Style (colors, layout, design)
 - **JavaScript** – Behavior (buttons, animations, forms)

 Example: The design, images, and buttons on Amazon’s homepage.

2. Back-End (Server Side)

- This is the brain of the website — it handles logic, data, and communication with the database.
- Built using:
 - **Languages:** Python, Java, Node.js, PHP, etc.
 - **Databases:** MySQL, MongoDB, PostgreSQL

⚙️ Example: When you log into Instagram — the back-end checks your username/password and loads your profile data.

3. Full-Stack Development

- A **Full-Stack Developer** works on both **Front-End** and **Back-End**.
 - They understand how the entire system works — from the user interface to database handling.
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Types of Websites

1. **Static Websites** – Fixed content (built using only HTML, CSS).
 2. **Dynamic Websites** – Content changes dynamically (built using front-end + back-end).
 3. **Web Applications** – Interactive sites like Gmail, Netflix, YouTube, etc.
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How Websites Work Together

1. **Browser (Client)** – Sends request.
2. **Server** – Receives and processes the request.
3. **Database** – Stores data like user info, posts, etc.
4. **Response** – Server sends the processed data back to the browser.