
MODULE 1: INTRODUCTION TO HTML

Lesson 1.2: How Web Pages Work (Part 2)

What is a Web Server?

Definition

A **web server** is a computer that stores websites and webpages and sends them to users when they request them using a web browser.

Whenever you type a website address into your browser, the browser sends a request to the web server. The web server then sends the requested webpage back to the browser for display.

Illustration of a Web Server

WEB SERVER

Home Page

About Us

Contact

Gallery

Images

The web server stores all the files that make up a website.

Examples of Web Servers

Some commonly used web server software includes:

- Apache
- Nginx
- Microsoft Internet Information Services (IIS)

The Client-Server Model

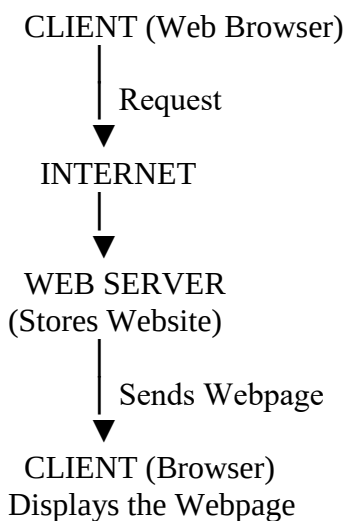
The **Client-Server Model** explains how users access webpages on the Internet.

- The **client** is the user's computer or smartphone using a web browser.
- The **server** is the computer that stores the website.

When a user requests a webpage, the server sends the webpage back to the client.

Illustration of the Client-Server Model

Request for a Webpage



Real-Life Example

Imagine you are in a restaurant.

- You are the **client**.
- The waiter is like the **Internet**, carrying your request.
- The kitchen is the **web server**.
- The food is the **webpage**.

You place an order, and the kitchen prepares and sends your food through the waiter.

Similarly, your browser requests a webpage, and the web server sends it back through the Internet.

How a Web Page Loads

The following steps explain what happens when you open a website.

Step 1

You open a web browser.

Example:

- Google Chrome
- Microsoft Edge
- Mozilla Firefox

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Step 2

You type a website address (URL) into the address bar.

Example:

www.wikipedia.org

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Step 3

The browser sends a request through the Internet to the web server.

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Step 4

The web server finds the requested webpage.

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Step 5

The web server sends the webpage back to your browser.

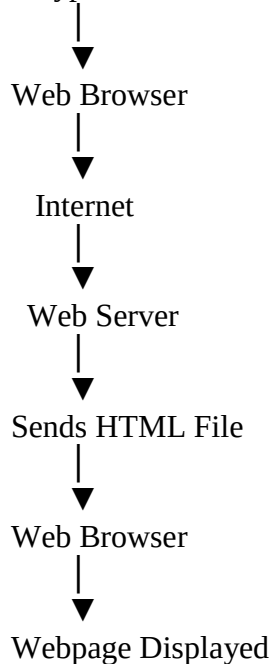
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Step 6

The browser reads the HTML code and displays the webpage on your screen.

Summary Diagram

You Type a Website Address



Internet and the World Wide Web (WWW)

Many learners think the Internet and the World Wide Web are the same, but they are different.

Internet

The **Internet** is a worldwide network of computers connected together.

It allows computers to communicate and share information.

World Wide Web (WWW)

The **World Wide Web (WWW)** is a collection of websites and webpages that can be accessed through the Internet using a web browser.

Difference Between the Internet and the World Wide Web

Internet	World Wide Web (WWW)
A network of computers connected worldwide.	A collection of websites and webpages.
Provides the connection between computers.	Provides information through websites.
Required for accessing websites.	Uses the Internet to work.

Real-Life Example

Think of a road network.

- The **roads** represent the **Internet**.
- The **houses** along the roads represent **websites**.

Without roads, people cannot reach the houses.

Similarly, without the Internet, users cannot access websites.

Browser vs Search Engine

Many learners confuse these two terms.

Web Browser

A **web browser** is software used to access and display webpages.

Examples:

- Google Chrome
 - Microsoft Edge
 - Mozilla Firefox
 - Opera
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Search Engine

A **search engine** is a website that helps users search for information on the Internet.

Examples:

- Google
 - Bing
 - Yahoo
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Difference Between a Browser and a Search Engine

Browser	Search Engine
Software installed on a device.	A website used to search for information.
Displays webpages.	Finds webpages.
Examples: Chrome, Edge, Firefox	Examples: Google, Bing, Yahoo

Important Note

Many people say,

"I opened Google."

In most cases, they actually mean they opened **Google Chrome**, which is a **browser**.

Remember:

- **Google Chrome** = Web Browser
 - **Google Search** = Search Engine
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Static and Dynamic Websites

Static Website

A **static website** displays the same information to every visitor.

Examples:

- School rules
 - Company profile
 - Personal portfolio
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Dynamic Website

A **dynamic website** can display different information to different users.

Examples:

- Facebook
 - Gmail
 - Online Banking
 - School Management System
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Difference Between Static and Dynamic Websites

Static Website	Dynamic Website
Information rarely changes.	Information changes regularly.
Same content for all users.	Content may differ from one user to another.
Easier to create.	More complex to create.

Did You Know?

- Every webpage is requested from a web server before it is displayed.
 - Your browser reads HTML code and converts it into the webpage you see.
 - One website may contain hundreds or even thousands of webpages.
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End of Part 2

In **Part 3**, we will complete the lesson with:

- Importance of Understanding How Web Pages Work
- Real-Life Applications
- Examination Tips
- Common Mistakes
- Key Points Summary
- Practical Activities
- Self-Assessment Questions
- Examination-Style Questions
- Exam Quick Review

This final part will be concise and focused on revision for Grade 12 examinations.