

MODULE 1: INTRODUCTION TO HTML

Lesson 1.2: How Web Pages Work (Part 1)

Introduction

Every day, millions of people use the Internet to search for information, communicate with others, shop online, watch videos, and access educational resources. Whether you are opening Google, YouTube, Facebook, or your school website, the process of displaying a webpage follows a series of steps that happen within a few seconds.

When you type a website address into a web browser and press **Enter**, your browser sends a request through the Internet to a computer called a **web server**. The web server processes the request and sends the requested webpage back to your browser, where it is displayed for you to read and interact with.

Understanding how web pages work is important because it helps learners appreciate the role of HTML in web development and understand how browsers, web servers, and the Internet work together to deliver web content.

Learning Outcomes

By the end of this lesson, learners should be able to:

- Define a website.
 - Define a webpage.
 - Differentiate between a website and a webpage.
 - Define a web browser.
 - Explain the purpose of a web browser.
 - Identify common web browsers.
 - Explain the relationship between websites, webpages, and web browsers.
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What is a Website?

Definition

A **website** is a collection of related web pages that are connected together under one domain name and can be accessed through the Internet using a web browser.

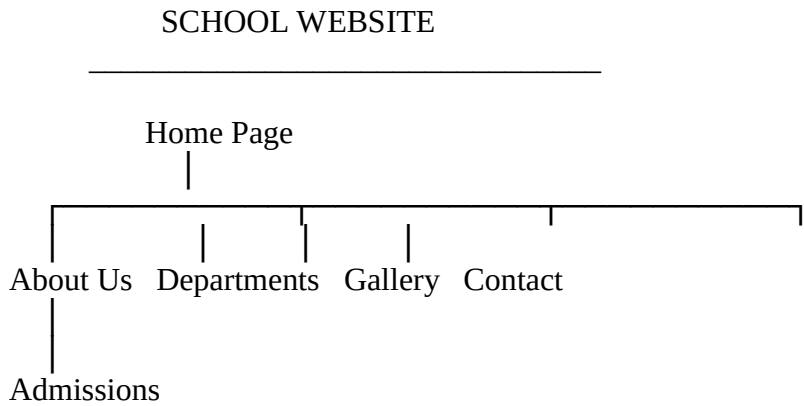
A website may contain information about a person, school, business, government institution, or organisation. Most websites consist of multiple webpages that are linked together using hyperlinks.

For example, a school website may contain separate webpages for:

- Home
- About Us
- Admissions
- Academic Departments
- News
- Contact Us

All these webpages together make up one website.

Illustration of a Website



Explanation

The diagram above shows that a website is made up of several webpages. Each webpage contains different information, but they all belong to the same website.

Examples of Websites

Website	Purpose
Google	Search for information on the Internet
YouTube	Watch and share videos
Wikipedia	Online encyclopedia
School Website	Provides information about the school
Bank Website	Online banking services
Government Website	Public information and services

Characteristics of a Website

A website:

- Contains one or more webpages.
- Has its own unique domain name.
- Is stored on a web server.
- Can be accessed through the Internet.

- May contain text, images, videos, tables, forms, and links.
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What is a Web Page?

Definition

A **webpage** is a single document or page on a website that is displayed in a web browser.

Each webpage usually focuses on one topic or provides specific information.

For example:

A school website may contain the following webpages:

- Home Page
- About Us Page
- Admissions Page
- Contact Page
- Gallery Page

Each of these is an individual webpage.

Illustration of a Webpage

SCHOOL WEBSITE

HOME PAGE

Welcome to Kabwe Secondary School

Latest News

Upcoming Events

Quick Links

Contact Information

The illustration above represents a single webpage called the **Home Page**.

Relationship Between a Website and a Web Page

A website is made up of many webpages.

Think of it like this:

Real-Life Object	Web Technology
A book	A website
A page in a book	A webpage

Just as a book contains many pages, a website contains many webpages.

Another Illustration

WEBSITE

Home Page

About Us

Gallery

News

Contact

Every item inside the website represents an individual webpage.

Difference Between a Website and a Web Page

Website	Web Page
A collection of webpages.	A single page within a website.
Contains many webpages.	Contains information about one topic.
Has one domain name.	Has its own web address within the website.
Larger in size.	Smaller part of the website.

Real-Life Example

Imagine a **Computer Studies textbook**.

The entire textbook represents a **website**.

Each chapter in the textbook represents a **webpage**.

Therefore:

Textbook = Website

Chapter = Webpage

What is a Web Browser?

Definition

A **web browser** is a software application used to access, retrieve, and display webpages from the Internet.

A browser reads HTML code and displays it in a format that users can easily understand.

Without a web browser, it would not be possible to view websites on the Internet.

Functions of a Web Browser

A web browser performs several important functions:

- Connects to websites through the Internet.
 - Requests webpages from web servers.
 - Reads HTML code.
 - Displays webpages.
 - Allows users to navigate between webpages using hyperlinks.
 - Stores browsing history.
 - Saves favourite websites (bookmarks).
 - Downloads files from websites.
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Examples of Web Browsers

Some of the most popular web browsers include:

- Google Chrome
- Microsoft Edge
- Mozilla Firefox
- Safari
- Opera
- Brave

Illustration of Popular Web Browsers

Popular Web Browsers

Google Chrome

Microsoft Edge

Mozilla Firefox

Safari

Opera

Brave

Components of a Web Browser Window

A typical browser window contains the following components:

| Back | Forward | Refresh | Address Bar | Search | Tabs |

Web Page Display Area

Status Bar (Optional)

Explanation of Browser Components

Component	Purpose
Back Button	Returns to the previous webpage.
Forward Button	Moves to the next webpage.
Refresh Button	Reloads the current webpage.
Address Bar	Used to enter a website address (URL).
Tabs	Allow multiple webpages to be opened simultaneously.
Webpage Display Area	Displays the contents of the webpage.

Real-Life Example

Imagine visiting a library.

- The **library** is like the **Internet**.
- The **books** are like **websites**.
- The **pages inside the books** are like **webpages**.
- The **librarian** helps you find the correct book, just as a **web browser** helps you find and display websites.

This analogy helps us understand the relationship between the Internet, websites, webpages, and web browsers.

Did You Know?

- Every website you visit is made up of one or more webpages.
 - The first page of a website is commonly called the **Home Page**.
 - Modern web browsers can display not only HTML but also CSS, JavaScript, images, videos, and multimedia content.
 - A web browser does not store all websites. Instead, it requests webpages from web servers whenever you visit a website.
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End of Part 1

Part 2, we will cover:

- What is a Web Server?
- The Client-Server Model
- How a Web Page Loads (step-by-step)
- Internet vs World Wide Web (WWW)
- Browser vs Search Engine
- Static vs Dynamic Websites