



جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

كلية العلوم
قسم الانظمة الطبية الذكية

Lecture: (1)

Subject: **Introduction to Web Development**

Level: Third stage

Lecturer: Msc najwan thaeer ali



Introduction

Web Development is a fundamental subject that focuses on designing, building, and deploying websites and web applications. This course introduces students to the essential concepts, tools, and technologies required to understand how the web works and how modern websites are created and maintained.

The course combines theoretical knowledge with practical skills, enabling students to progress from basic website creation to more advanced server-based applications in later stages.

Importance of Web Development

Web development plays a vital role in today's digital world. Websites are used in education, healthcare, business, communication, and scientific research. Understanding web development enables students to:

- Create professional websites
 - Publish academic and scientific content online
 - Develop interactive web applications
 - Understand how client-server systems operate
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Course Objectives

By the end of this course, students will be able to:

- Understand the structure and architecture of the World Wide Web
 - Identify core web development technologies
 - Organize website files and folders correctly
 - Understand domains, hosting, and servers
 - Set up a basic web development environment
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Course Syllabus Overview

The main topics covered in this course include:



1. Introduction to Web Development
2. Web Terminology and Concepts
3. Files and Folder Organization
4. Domains and Web Hosting
5. Local and Remote Hosting
6. Server Configuration Basics
7. Website Creation and Deployment
8. Required Development Tools

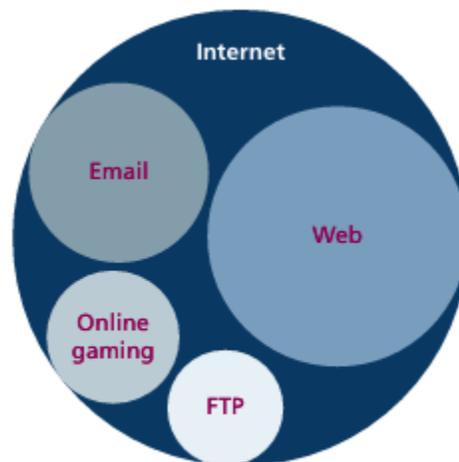


FIGURE 1.1 The web as a subset of the Internet

Key Terminology

- **World Wide Web (WWW):** A system of interlinked web pages accessed via the internet.
 - **Website:** A collection of web pages under a single domain name.
 - **Web Browser:** Software used to access websites (e.g., Chrome, Firefox).
 - **Web Server:** A server that stores and delivers web pages to users.
 - **Client–Server Model:** A communication model where clients request services and servers respond.
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Files and Folders in Web Projects

Proper file organization is essential for scalable and maintainable websites.

Basic Website Structure:

```
/website
├── index.html
├── about.html
├── contact.html
├── css/
│   └── style.css
├── images/
├── js/
└── php/
```

Domains and Hosting

Domain Name

A domain name is the unique address of a website on the internet (e.g., www.example.com).

Web Hosting

Web hosting provides server space and services required to make a website accessible online.

Types of hosting include:

- Shared Hosting
- VPS Hosting
- Dedicated Hosting
- Cloud Hosting

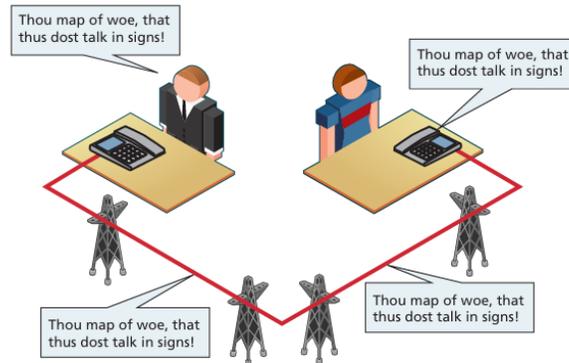


FIGURE 1.2 Telephone network as example of circuit switching

Local vs Remote Hosting

- **Local Hosting:** Used for development and testing on a personal computer (e.g., XAMPP).
- **Remote Hosting:** Used to publish websites on the internet through hosting providers.

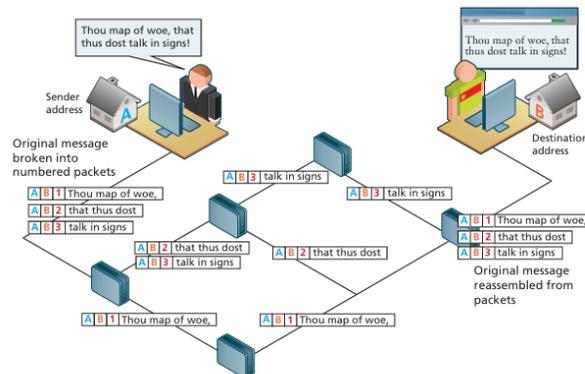


FIGURE 1.3 Internet network as example of packet switching

Server Configuration (Basic Concept)

Server configuration involves setting up:

- Web server software (Apache / Nginx)
- PHP interpreter
- Database services

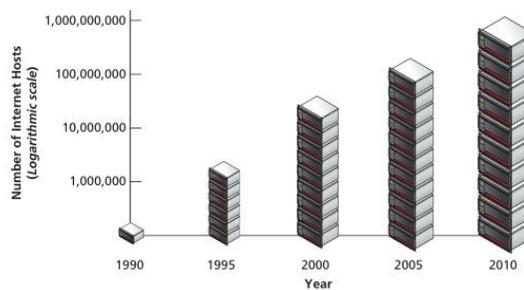


- File permissions and security settings

Starting a Website

Basic steps to start a website:

1. Plan the website content
2. Create files and folders
3. Write HTML and CSS code
4. Test the website locally
5. Upload files to a remote server



6. **FIGURE 1.4** Growth in Internet hosts/servers based on data from the Internet Systems Consortium.⁵

Required Tools Installation

Students are required to install the following tools:

- **Visual Studio Code** – Code editor
- **XAMPP** – Local server environment
- **Web Browser** – Google Chrome or Firefox
- **FileZilla** – FTP client