

## WEEK 9 – FOUNDATIONS & HTML

**HTML (HyperText Markup Language)** — the foundation of all web pages. Students will understand how HTML defines the structure and meaning of web content, the basic syntax and elements used in HTML documents, and how browsers interpret HTML to render web pages. The lesson also introduces text editors, developer tools, and basic accessibility and usability concepts.

### 1. Introduction to HTML

- HTML is the **standard markup language** used to create web pages.
- It describes the **structure of a web page** using a system of elements and tags.
- HTML elements tell the browser **how to display content** (e.g., headings, paragraphs, links, and images).
- Every HTML page starts with a **document type declaration** `<!DOCTYPE html>`, followed by the `<html>`, `<head>`, and `<body>` sections.

### 2. HTML Document Structure

- **`<!DOCTYPE html>`** – Declares the document as HTML5.
- **`<html>`** – The root element that contains all content.
- **`<head>`** – Holds metadata such as title and links to stylesheets.
- **`<title>`** – Specifies the page title shown in browser tabs.
- **`<body>`** – Contains all visible content (text, images, tables, etc.).

### 3. HTML Elements and Tags

- An HTML element usually has **an opening tag, content, and a closing tag**.
- Example format: `<tagname> Content </tagname>`
- Elements may also include **attributes** that provide extra information.
- Example: `<a href="https://example.com">Visit site</a>`

### 4. Semantic Structure

Semantic HTML uses tags that clearly describe their purpose:

- **Headings:** `<h1>` to `<h6>` (hierarchical importance)
- **Paragraphs:** `<p>` for blocks of text
- **Lists:** `<ul>` (unordered) and `<ol>` (ordered)
- **Links:** `<a>` for navigation and external references
- **Images:** `<img>` with `src` (source) and `alt` (alternative text)

- **Tables:** <table>, <tr>, <th>, <td> for organizing data
- **Forms:** <form>, <input>, <label>, <button> for collecting user input

## 5. Accessibility Basics

Good HTML ensures accessibility for all users:

- Always include **alt attributes** for images.
- Use **proper heading levels** for page hierarchy.
- Maintain a **semantic structure** for screen readers and assistive technologies.

## 6. Development Tools

- **Text Editors:** Tools like Notepad++, Sublime Text, or VS Code are used to write HTML.
- **Developer Tools:** Browser tools (e.g., Inspect Element) help analyze, test, and debug HTML structure.
- **File Organization:** Keep a clear folder structure with HTML files, assets, and resources organized.

## 7. Basic UI and Usability Principles

- **Readability:** Use appropriate font sizes and spacing.
- **Navigation:** Ensure links and menus are intuitive.
- **Visual Hierarchy:** Use headings, lists, and spacing to guide user focus.