**HTML Basics (Lecture 2)**

**1. HTML5 Standard**

HTML (HyperText Markup Language) is the backbone of web pages. The latest version, **HTML5**, introduces new elements and better structure.

**a) DOCTYPE Declaration**

At the beginning of every HTML document, we declare it as HTML5:

<!DOCTYPE html>

This tells the browser that we are using HTML5.

**b) Document Structure**

A basic HTML document follows this structure:

<!DOCTYPE html>

<html>

<head>

<title>My First Webpage</title>

</head>

<body>

<h1>Welcome to My Website</h1>

<p>This is a simple webpage.</p>

</body>

</html>

**2. Essential Tags**

* <html> → Wraps the entire webpage.
* <head> → Contains metadata like title and styles.
* <body> → Holds all visible content.
* <meta> → Provides information about the page (e.g., character set, viewport settings).
* <link> → Used for external stylesheets (CSS).
* <title> → Sets the page title in the browser tab.

**3. Page Elements**

**a) Text Content**

* <p> → Defines paragraphs.
* <h1> - <h6> → Headings (h1 is the largest, h6 is the smallest).
* <span> → Used to style inline text.
* <div> → A block-level container for grouping elements.

Example:

<h1>My Blog</h1>

<p>This is a paragraph of text.</p>

<span style="color: red;">Highlighted text</span>

**b) Grouping Elements**

* <header> → Represents the top section (e.g., logo, navigation).
* <footer> → Contains page footer (e.g., copyright, links).
* <main> → Wraps the main content of the webpage.
* <section> → Groups related content.
* <article> → Represents a standalone piece of content.

**HTML Elements, Block vs. Inline Elements, and Semantic HTML (Lecture 3)**

**1. HTML Elements Overview**

HTML elements define the structure and content of a webpage. They are classified into **block-level elements** and **inline elements** based on how they behave in the document layout.

**2. Block vs. Inline Elements**

**a) Block Elements**

**Definition:** Block elements **start on a new line** and take up the full width of their container.  
**Examples:**

* <div> → Generic container
* <p> → Paragraph
* <h1> - <h6> → Headings
* <ul> → Unordered list
* <ol> → Ordered list

**Example of Block Elements:**

<h1>This is a heading</h1>

<p>This is a paragraph.</p>

<ul>

<li>Item 1</li>

<li>Item 2</li>

</ul>

**Explanation:** Each element starts on a new line and takes full width.

**b) Inline Elements**

**Definition:** Inline elements **do not start on a new line** and only take up as much space as necessary.  
**Examples:**

* <span> → Generic inline container
* <a> → Hyperlink
* <strong> → Bold text
* <em> → Italic text

**Example of Inline Elements:**

<p>This is <strong>important</strong> text.</p>

<a href="#">Click here</a> to visit our website.

🔹 **Explanation:** <strong> and <a> **stay in the same line** as surrounding text.

**3. Semantic HTML**

**a) Purpose of Semantic Tags**

Semantic HTML **improves**:  
**SEO (Search Engine Optimization):** Search engines understand content better.  
**Accessibility:** Screen readers can interpret page structure.  
**Code Readability:** Developers easily understand the page layout.

**b) Common Semantic Tags**

| **Tag** | **Purpose** |
| --- | --- |
| <header> | Defines the top section of a webpage (logo, nav, etc.). |
| <footer> | Contains page footer (copyright, links, etc.). |
| <nav> | Defines a navigation menu. |
| <section> | Groups related content. |
| <aside> | Represents sidebar content (ads, links, etc.). |

**Example of Semantic HTML:**

html

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<header>

<h1>My Website</h1>

<nav>

<a href="#">Home</a> | <a href="#">About</a> | <a href="#">Contact</a>

</nav>

</header>

<main>

<section>

<h2>About Us</h2>

<p>We create awesome websites.</p>

</section>

<aside>

<h3>Related Links</h3>

<p>Check out our <a href="#">blog</a>.</p>

</aside>

</main>

<footer>

<p>&copy; 2025 My Website</p>

</footer>

**Explanation:**

* **<header>** contains the site title and navigation.
* **<section>** groups main content.
* **<aside>** holds sidebar links.
* **<footer>** contains copyright info.

**4. Hands-on Exercise**

**Task:** Create a webpage using **semantic HTML and block/inline elements.**