Week 2: Introduction to HTML and CSS

Introduction to HTML

HTML (HyperText Markup Language) is the standard language for creating web pages. It provides the structure of a webpage using different elements and tags.

Basic Structure of an HTML Document

Every HTML page has a basic structure. Below is an example:

```
<!DOCTYPE html>
<html>
<head>
   <title>My First Web Page</title>
</head>
<body>
   <h1>Welcome to My Website</h1>
   <p>This is my first web page.</p>
</body>
</html>
```

- <!DOCTYPE html>: Declares that this is an HTML5 document.
- <html>: The root element of the page.
- <head>: Contains metadata, title, and links to stylesheets.
- <body>: Contains the visible content of the webpage.

Text Elements in HTML

HTML provides different tags to format text:

- <h1> to <h6>: Headings (H1 is the largest, H6 is the smallest).
- <p>: Paragraphs.
-
: Line break.
- <strong>: Bold text.
- <em>: Italic text.

Example:

```html
<h1>This is a Heading</h1>
<p>This is a paragraph.</p>
<strong>Bold Text</strong> <em>Italic Text</em>
```

Links and Images

- **Hyperlinks (<a> tag)**: These are used to create links to other web pages or sections of a page.

```html
<a href="https://www.google.com" target="_blank">Visit Google</a>
```

- **Images (<img> tag)**: Used to display images on a webpage.

```html
<img src="image.jpg" alt="Sample Image" width="300" height="200">
```

- src: Specifies the path to the image.
- alt: Provides an alternative text for the image.
- width and height: Define the image dimensions.

Lists in HTML

- Ordered List (<ol>): Items are numbered.
- Unordered List (<ul>): Items are bulleted.

Example:

```html
<ul>
   <li>Item 1</li>
   <li>Item 2</li>
</ul>
<ol>
   <li>First</li>
   <li>Second</li>
</ol>
```

Tables in HTML

Tables help organize data in rows and columns.

```
<table border="1">
   <tr>
      <th>Name</th>
      <th>Age</th>
   </tr>
   <tr>
      <td>Ali</td>
      <td>20</td>
   </tr>
</table>
```

Introduction to CSS

CSS (Cascading Style Sheets) is used to style HTML elements.

Ways to Apply CSS

1. **Inline CSS** (inside an element): Used to apply a style directly to a single element.

```
<p style="color: red; font-size: 20px;">This is red text with a font size of 20px.</p>
```

2. **Internal CSS** (inside <style> in the <head> section): Used when styling multiple elements in the same HTML document.

```
<head>
<style>
h1 { color: blue; }
p { font-size: 18px; }
</style>
</head>
```

3. **External CSS** (separate .css file and linked in HTML): Recommended for large projects to keep styles separate from HTML.

```
<head>
<link rel="stylesheet" href="styles.css">
</head>
```

- **Advantages of External CSS:**
    - Keeps HTML clean and organized.
    - Allows reusability of CSS styles across multiple pages.
    - Easier to manage and update styles.

CSS Selectors

Element Selector: Selects all elements of a type.
p { color: green; }

-

Class Selector: Targets specific elements with a class.
.myClass { font-size: 20px; }

-

ID Selector: Targets an element with a unique ID.
#myId { background-color: yellow; }

-

CSS Properties

Colors
h1 { color: red; }
body { background-color: lightgray; }

Text Styling
p { font-family: Arial, sans-serif; font-size: 16px; text-align: center; }

Spacing and Borders
div { margin: 10px; padding: 20px; border: 2px solid black; }

Practice Task for This Week as assignment

✅ Create a simple webpage with:

1. A heading (<h1>), a paragraph (<p>), and a link (<a>).
2. An image (<img>).

3. A list (`<ul>` or `<ol>`).
4. A table (`<table>`).
5. Apply CSS styles using inline, internal, and external CSS methods.