Assignment 1

An HTML document follows a specific structure that helps browsers correctly interpret and display the content. It starts with the <!DOCTYPE html> declaration, which informs the browser that the document is an HTML5 document. This declaration is crucial for ensuring proper rendering of the webpage, as it triggers the browser to use the latest HTML standard, preventing compatibility issues with older versions of HTML.

The document itself is enclosed within the <html> tag, which serves as the root element. Inside the <html> tag, there are two main sections: the <head> and the <body>.

* The <head> section contains metadata about the document, such as the title (<title>), character encoding (<meta>), external stylesheets (<link>), and scripts (<script>). It does not display content on the page itself but is essential for defining how the document behaves and is presented.
* The <body> section holds the visible content of the webpage, such as text, images, links, tables, and forms. This is where all the elements that users interact with are placed.

The <!DOCTYPE html> declaration ensures that the browser follows modern HTML rules, making the page display consistently across different platforms and devices.

Assignment 2

Here are five common HTML tags frequently used in website design, each serving a specific purpose:

1. **<div> (Division)**
   * **Purpose:** The <div> tag is a block-level container used to group content together for styling or layout purposes. It's often used in combination with CSS to create sections, structure the page, or apply specific styles to certain areas.
   * **Example:**
   * <div class="header">Welcome to My Website</div>
2. **<a> (Anchor)**
   * **Purpose:** The <a> tag is used to create hyperlinks that allow users to navigate between pages or external websites. It requires the href attribute to specify the URL destination.
   * **Example:**
   * <a href="https://www.example.com">Visit Example Website</a>
3. **<img> (Image)**
   * **Purpose:** The <img> tag is used to embed images in a webpage. It requires the src attribute to specify the image location and the alt attribute to provide alternative text for accessibility.
   * **Example:**
   * <img src="logo.png" alt="Website Logo">
4. **<h1> to <h6> (Headings)**
   * **Purpose:** These tags define headings on a webpage, with <h1> being the most important and <h6> the least. They help structure content and improve readability, as well as assist with SEO (Search Engine Optimization).
   * **Example:**
   * <h1>Main Title of the Page</h1>
   * <h2>Subheading</h2>
5. **<p> (Paragraph)**
   * **Purpose:** The <p> tag is used to define paragraphs of text. It's a block-level element that helps organize text content into distinct sections, making the content easier to read.
   * **Example:**
   * <p>This is a paragraph of text that provides information about the website.</p>

These tags are essential building blocks in web design, allowing you to structure, link, display images, organize content, and improve readability. They are often used in combination with CSS to control the layout and styling of the page.

Assignment 3

In HTML, **block-level elements** and **inline elements** differ primarily in how they are displayed and how they occupy space within the document layout.

**1. Block-Level Elements**

* **Definition:** Block-level elements occupy the full width of their container, meaning they extend from the left edge to the right edge, and they start on a new line, causing a line break before and after the element.
* **Behavior:** They stack vertically one after the other, taking up the entire width available by default. You can adjust their width, height, margins, and padding to modify their layout.
* **Examples:**
  + <div>
  + <h1> to <h6>
  + <p>
  + <form>
  + <section>
  + <article>
* **Use Case:** Block-level elements are typically used to structure the layout of a page (e.g., creating sections or containers for different content).

**Example:**

<div>This is a block-level element.</div>

<div>This is another block-level element.</div>

Both div elements will appear one after the other on new lines.

**2. Inline Elements**

* **Definition:** Inline elements only occupy as much width as necessary and do **not** start on a new line. They flow within the content, meaning they stay in line with surrounding content, allowing text or other inline elements to appear next to them.
* **Behavior:** They don't create line breaks, and their width and height cannot be adjusted directly (though padding and margins can be applied to the left and right). They are typically used for small pieces of content, like text or links, within a block-level element.
* **Examples:**
  + <span>
  + <a>
  + <strong>
  + <em>
  + <img>
  + <b>
* **Use Case:** Inline elements are often used to format or style parts of text or to place images within text, without affecting the overall flow of the content.

**Example:**

<p>This is <span>an inline element</span> inside a paragraph.</p>

In this case, the span element will appear on the same line as the text, without disrupting the flow.

**Key Differences:**

1. **Layout Behavior:**
   * **Block-level** elements create a new block and take up the full width available.
   * **Inline** elements only take up as much width as needed and do not break the flow of content.
2. **Display Mode:**
   * **Block-level** elements start on a new line and take up the full width of their container.
   * **Inline** elements do not start a new line and only take as much width as their content requires.
3. **Content Structure:**
   * **Block-level** elements are used to structure larger sections of a page.
   * **Inline** elements are used for smaller, inline content like links, text styles, and images inside a block.

Understanding the difference between these types helps you control layout and design more effectively when structuring an HTML document.