আন্তর্জাতিক ইসলামী বিশ্ববিদ্যালয় চট্টগ্রাম
الجامعة الإسلامية العالمية شيتاغونغ
International Islamic University Chittagong

Assignment

Course Title: Tools And Technologies For Internet Programming

Course code: CSE-3532

Submitted to:

Mohammad Shabaj Khan

Adjunct Faculty

Submitted by:

Mahabub Alam

Matric ID: C213029, **Section:** 5AM

Department of CSE, IIUC

Cell: 01628804119

E-mail: c213029@ugrad.iiuc.ac.bd

A. Define and give some examples of inline and block level elements in HTML.

In HTML, elements are classified into two main categories: inline elements and block-level elements. These categories determine how elements are displayed within the layout of a webpage and how they interact with other elements. Here's a definition and some examples of each:

1. Inline Elements: Inline elements in HTML are elements that do not start on a new line and only take up as much width as necessary to display their content. They are often used within block-level elements to style or format specific parts of the content. Examples include `<span>`, `<a>`, `<strong>`, `<em>`, and `<img>`.

2. Block-level Elements: Block-level elements in HTML are elements that start on a new line and take up the full width available. They create blocks of content and are often used to structure the layout of the page. Examples include `<div>`, `<p>`, `<h1>` to `<h6>`, `<ul>`, `<ol>`, `<table>`, and `<blockquote>`.

Additionally, CSS styles can be applied to both inline and block-level elements to control their appearance and layout on the page.

B. What do you mean by semantic tag in HTML? Give some examples of semantic and non-semantic tags.

Semantic tags in HTML are elements that carry meaning and describe the structure and content of the web page. They help in making the HTML code more meaningful and understandable, both for developers and search engines. Semantic tags improve accessibility and provide a clear hierarchy of content.

Examples of Semantic Tags:

1. `<header>`: Represents the introductory content of a section or a page.

2. `<nav>`: Represents a navigation menu.

3. `<main>`: Represents the main content of the web page.

4. `<article>`: Represents a self-contained piece of content that can be distributed independently.

5. `<section>`: Represents a thematic grouping of content within a document.

6. `<aside>`: Represents content that is tangentially related to the content around it.

7. `<footer>`: Represents the footer of a section or a page.

Examples of Non-Semantic Tags:

1. `<div>`: A generic container used for layout and styling purposes, lacking inherent semantic meaning.

2. `<span>`: Similar to `<div>`, used for inline styling or scripting without adding any structural meaning.

3. `<b>` and `<i>`: These were traditionally used for bold and italic text, but they lack semantic meaning. Instead, you should use `<strong>` and `<em>`, respectively.

4. `<font>`: An outdated tag used for styling text with font-related attributes, but it doesn't provide any semantic information.

In summary, using semantic tags in HTML improves the overall structure and meaning of the document, making it more accessible, SEO-friendly, and easier to maintain. Non-semantic tags are typically used for presentation and styling purposes without contributing to the document's meaning or structure.

C. Discuss about HTML ordered and unordered list.

HTML provides two types of lists: ordered lists and unordered lists.

1. Ordered Lists (`<ol>`):

- An ordered list is used to represent a list of items in a specific sequence or order.

- Each list item is preceded by a sequential number (1, 2, 3, and so on) by default.

- The numbering can be customized using the `type` attribute (e.g., alphabetic, roman numerals) or the `start` attribute to specify the starting number.

- The list items are wrapped in `<li>` (list item) tags.

- Example:

  ```html
  <ol>
    <li>First item</li>
    <li>Second item</li>
    <li>Third item</li>
  </ol>
  ```

2. Unordered Lists (`<ul>`):

- An unordered list is used to represent a list of items without any specific order.
- Each list item is preceded by a bullet point (•) by default.
- The list items are also wrapped in `<li>` (list item) tags.
- Example:

  ```html
  <ul>
    <li>Red</li>
    <li>Green</li>
    <li>Blue</li>
  </ul>
  ```

Both ordered and unordered lists are commonly used to organize and present information in a structured manner on web pages. The choice between these lists depends on whether the items have a specific order or not.

D.How many ways are there for inserting stylesheet in HTML? Give some examples of all the ways.

1. External Stylesheet:

- Link the external stylesheet using the `<link>` element within the `<head>` section of the HTML document.

- The `href` attribute specifies the path to the external stylesheet file.

2. Internal Stylesheet:

- Define the styles directly within the `<style>` element, placed in the `<head>` section of the HTML document.

- This method allows you to write CSS rules directly in the HTML file.

3. Inline Styles:

- Apply styles directly to individual HTML elements using the `style` attribute.

- This method is useful when you want to apply specific styles to a single element.

Each method has its own use cases and advantages, depending on the requirements of your web project.

E. Discuss about CSS Box Model.

The CSS Box Model is a fundamental concept in Cascading Style Sheets (CSS) that organizes HTML elements into boxes. It consists of four main components:

1. Content: The actual content of the HTML element, such as text, images, or other elements.

2. Padding: The space between the content and the element's border. It provides visual separation between the content and the border.

3. Border: A line that goes around the padding and content, separating the element from its surroundings.

4. Margin: The space outside the border that creates a gap between the element and other elements on the page.

Each component of the box model can be styled individually using CSS properties. Understanding the CSS Box Model is essential for designing and laying out web pages effectively, as it allows developers to control the spacing and sizing of elements to achieve the desired visual appearance.

Let's calculate the total width of the element using the CSS Box Model:

Content Width: 300px (specified width)

Padding: 50px (left padding) + 50px (right padding) = 100px

Border: 15px (left border) + 15px (right border) = 30px

Margin: 20px (left margin) + 20px (right margin) = 40px

Total Width = Content Width + Padding + Border + Margin

Total Width = 300px + 100px + 30px + 40px = 470px

So, the element will have a total width of 470 pixels.

F. What are Pseudo-classes? Why do we use Pseudo-classes?

A pseudo-class is used to define a special state of an element.

For example, it can be used to:

- Style an element when a user mouses over it
- Style visited and unvisited links differently
- Style an element when it gets focus

G. Discuss the following CSS rule/style : margin: 15px 70px:

The CSS rule **margin: 15px 70px;** is a shorthand property for defining margins around an element. The **margin** property is used to control the space outside an element's border. In this case, the shorthand property is specifying margins for the top/bottom and left/right sides of the element.

The values **15px** and **70px** represent the margins in the following order:

- Top and bottom margin: **15px**
- Left and right margin: **70px**

F. Discuss about CSS descendant selectors.

CSS descendant selectors are used to select elements that are descendants (nested) within another specific element. They allow you to apply styles to elements that are nested deeper in the HTML structure, regardless of their direct relationship. The descendant selector is represented by a space ( ) between the parent element and the descendant element.

Here's a breakdown of how descendant selectors work:

- **Parent Selector:** This is the element that acts as the ancestor or container.

Descendant Selector: This is the element that is nested inside the parent element