WEB DESIGNING Assignment
MODULE: 1 (HTML)

1. **Are the HTML tags and elements the same thing?**

   No, the HTML tags and elements are not the same thing.

   HTML Tags:
   - They are basic building blocks of HTML.
   - They are used to create elements and structure the content of a webpage.
   - They are used are used to markup the text in HTML.
   - Tags are enclosed in angular brackets, eg. <p>, which is a paragraph tag.
   - There are basically two types of tags:
     a) ***Opening/Starting Tag***, which marks the beginning of an element, eg. <p> is an opening tag for paragraph.
     b) ***Closing/Ending Tag***, which marks the ending of an element, eg. </p> is a closing tag for paragraph.
     c) Some tags are ***self closing tag***, which do not need a separate closing tag, eg. <img />,

   HTML Elements:
   - It is a combination of an opening tag, the content and the closing tag.
   - ***Example:*** <p> This is a paragraph.</p>

     In the above example, <p> is the opening tag, 'This is a paragraph' is the content and </p> is the closing tag. Altogether, these components from a paragraph element.

2. **What are tags and attributes in HTML?**

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HTML Attributes:

- They provide additional information about HTML elements.
- It enhances the functionality of elements by defining properties such as color, size,etc.
- They are included in opening tag and usually come in name/value pairs.
- *Syntax:* <tagname attribute= "value">content</tagname>
- *Example:*
  In the above example, src="image.jpg" specifies the source file of image
  alt="Description" provides alternative text for the image.

3. What are void elements in HTML?

- Void elements in HTML are also known as self closing tags or empty elements.
- These are elements which do not have any content and therefore do not require a closing tag.
- They are self contained and perform their function within a single tag.
- For example, <br>, <hr>, <img>, <meta>, etc.

4. What are HTML Entities?

- They are special codes used in HTML to represent characters that have special meaning in HTML.
- These entities ensure that these characters are displayed correctly in browser without being interpreted as HTML code.
- HTML entities start with an ampersand (&) and end with a semicolon (;).
- Example: < for <(less than sign), > for >(greater than sign), & for &(ampersand)

5. What are different types of lists in HTML?
   In HTML, there are several types of lists available to organize and structure the content,
   Ordered List :

- This type of list is used to represent a list of items in a specific order, typically with numbers or letters.
- Each item is wrapped in tags
- *Example:*

  First item
  Second item

Third item

Unordered List :

- This type of list is used to represent a list of items with bullet points and the items are not necessarily in a specific order.
- Each item is wrapped in tags
- *Example:*

Apple

Banana

Orange

Description List<dl></dl>:

- This type of list is used to describe a list of terms and their corresponding description.
- Each term is wrapped in description term <dt></dt> tags and each description is wrapped in description tags <dd></dd>
- *Example:*

<dl>

 <dt>HTML</dt>

 <dd>HyperText Markup Language</dd>

<dt>CSS</dt>

<dd>Cascading Style Sheets</dd>

</dl>

6. What is the "class" attribute in HTML?

- The "class" attribute in HTML is used to assign one or more class names to an HTML element.
- These are used to apply CSS styles or Javascript functions to the elements they are assigned to.

7. What is the difference between the "id" attribute and "class" attribute of HTML elements?

'id' attribute:

- Unique within the document
- Targets single, specific elements

- Higher specificity in CSS
- Used with # in CSS and getElementById in JavaScript

'class' attribute:

- Can be reused on multiple elements
- Groups elements for common styling/behavior
- Lower specificity in CSS
- Used with . in CSS and getElementsByClassName or querySelectorAll in JavaScript

8. What are the various formatting tags in HTML?

- **Heading Tags (<h1> to <h6>):** Used to define headings and subheadings, with <h1> being the highest level and <h6> the lowest.
- **Paragraph Tag (<p>):** Used to define paragraphs of text.
- **Bold Tag (<b>):** Used to make text bold.
- **Italic Tag (<i>):** Used to make text italic.
- **Underline Tag (<u>):** Used to underline text
- **Strike Tag (<strike> or <s>):** Used to draw a horizontal line through text, indicating that it's no longer relevant.
- **Superscript Tag (<sup>):** Used to display text in a superscript, typically smaller and above the normal line of text.
- **Subscript Tag (<sub>):** Used to display text in a subscript, typically smaller and below the normal line of text.
- **Code Tag (<code>):** Used to represent computer code snippets.
- **Preformatted Tag (<pre>):** Used to preserve the spacing and line breaks within text, displaying it exactly as it's written in the HTML code.
- **Blockquote Tag (<blockquote>):** Used to denote a section of quoted text.
- **Inline Quote Tag (<q>):** Used to denote a short inline quotation.
- **Abbreviation Tag (<abbr>):** Used to define an abbreviation or acronym.
- **Address Tag (<address>):** Used to denote contact information or addresses.
- **Mark Tag (<mark>):** Used to highlight text within a document.
- **Time Tag (<time>):** Used to represent dates or times.

9. How is cell padding different from cell spacing?

- Cell padding is the space between cell and content whereas cell spacing is the space between cells
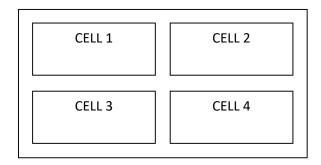- ***Example:***
  ```
  <!DOCTYPE html>
  <html>
  <head>
  <title>Table Example</title>
  ```

```
</head>
<body>

<!-- Table with cellpadding and cellspacing attributes -->
<table border="1" cellpadding="10" cellspacing="10">
  <tr>
    <td>Cell 1</td>
    <td>Cell 2</td>
  </tr>
  <tr>
    <td>Cell 3</td>
    <td>Cell 4</td>
  </tr>
</table>
</body>
</html>
```

- In the above example cell padding=10px, adds 10 pixels of padding inside each cell, meaning there will be 10 pixels of space between the content of cell and its border.
- Whereas, cell spacing=10px, adds 10 pixels of space between the borders of adjacent cells.

10. How can we club two or more rows or columns into a single row or column in an HTML table?

- In an HTML table, you can merge (or "span") two or more rows or columns into a single row or column using the rowspan and colspan attributes, respectively.
- *Example:*

```
<!DOCTYPE html>
<html>
<head>
<title>Table Example - Combined</title>
</head>
<body>
```

```
<table border="1">
 <tr>
  <td rowspan="2">Row 1 and 2, Cell 1</td> <!-- This cell spans 2 rows -->
  <td colspan="2">Row 1, Cell 2 and 3</td> <!-- This cell spans 2 columns -->
 </tr>
 <tr>
  <td>Row 2, Cell 2</td>
  <td>Row 2, Cell 3</td>
 </tr>
 <tr>
  <td>Row 3, Cell 1</td>
  <td>Row 3, Cell 2</td>
  <td>Row 3, Cell 3</td>
 </tr>
</table>
</body>
</html>
```

- **Output:**

Row 1 and 2, Cell 1	Row 1, Cell 2 and 3	
	Row 2, Cell 2	Row 2, Cell 3
Row 3, Cell 1	Row 3, Cell 2	Row 3, Cell 3

11. What is the difference between a block-level element and an inline element?

Block-level elements:

- These elements typically start on a new line and occupy the full width available to them.
- Examples: <div>, <p>, <h1> to <h6>, <ul>, <ol>, <li>, <table>, <form>, etc

Inline elements:

- These elements do not start on a new line and only occupy the space bounded by the tags themselves.
- Examples :<span>, <a>, <strong>, <em>, <img>, <input>, <br>, <i>, <b>, etc.

12. How to create a hyperlink in HTML?

- To create a hyperlink in HTML, anchor <a> tag is used.
- Syntax: Link Text

  href attribute specifies the URL of the destination page or resource.

  Link Text is the text that will be displayed as hyperlink

- ***Example:***

```
<!DOCTYPE html>
<html>
<head>
<title>Hyperlink Example</title>
</head>
<body>
<!-- Hyperlink that opens in a new tab -->
<a href="https://www.example.com" target="_blank">Visit Example.com</a>
</body>
</html>
```

13. What is the use of an iframe tag?

- The <iframe> tag in HTML is used to embed another HTML document within the current document.
- An inline frame, or iframe, can be used to display content from another webpage, which could be from the same site or an external site.
- This can include documents, videos, maps, and other web content.

14. What is the use of a span tag? Explain with an example.

- Span tag groups the content but not the entire block.
- It is used to style a particular element of content without affecting the entire content.
- Example:
  <p>This is a highlighted word in a paragraph.</p>

15. How to insert an image into a background of a webpage?

- In order to insert an image into background of a webpage, we use inline CSS property called "background-image" in the body tag of HTML file.
- The syntax is as follows:
  <body style= "background-image: url('path-to-your-image.jpg')></body>

16. How are active links different from normal links?

Active links:

- These links are currently being clicked or in the process of being activated by the user.
- This state only lasts for a moment, during the click action.

- They can be styled differently to indicate that they are in the active state, often using a different color or visual effect.

Normal links:
- These are further categorized as visited links and unvisited links.
- The links that have not been clicked or visited by the user are unvisited links and often have blue color.
- The links that the user has clicked on or visited are termed as visited links and often have purple color.

17. What are the different tags to separate sections of text?
- The different tags used to separate sections of text are as follows:
    a) **Headings <h1 to h6>:** defines headings
    b) **Paragraph<p></p>:** defines a paragraph
    c) **Line break
:** inserts a line break
    d) **Horizontal rules <hr />:** creates a horizontal line
    e) **Division<div></div>:** used as a container for other HTML elements
    f) **Section<section></section>:** defines a section in a document
    g) **Article<article></article>:** defines an independent self-contained article
    h) **Navigation<nav></nav>:** defines a set of navigation links
    i) **Aside<aside></aside>:** defines content aside from the main content (like a sidebar)
    j) **Header<header></header>:** defines a header for a document or section
    k) **Footer<footer></footer>:** defines footer of a document or section

18. What is SVG?
- Scalable Vector Graphics (SVG) is an XML based markup language for designing two-dimensional vector graphics.
- It allows creating complex graphics and shapes using XML elements and attributes, which is specifically used for responsive web designing

19. What is the difference between HTML and XHTML?

Aspect	HTML	XHTML
Tag Closure	Tags can be unclosed or improperly closed.	All tags must be properly closed.
Case Sensitivity	Tags and attributes are case-insensitive.	Tags and attributes are case-sensitive (lowercase).
Document Structure	Less strict structure (e.g., optional <html>).	Strict structure (mandatory <html> and <body>).
DOCTYPE Declaration	Various DOCTYPEs (e.g., <!DOCTYPE html>).	Specific DOCTYPE for XHTML (e.g., XHTML 1.0 Strict).
Parsing	Browsers correct errors leniently.	Browsers are stricter, errors can cause parsing issues.

20. What are logical and physical tags in HTML?

Logical Tags:

- They are also known as semantic tags or structural tags.
- They represent the meaning or the purpose of the content they enclose.
- They convey the intended structure of the document without specifying how the content should be presented visually.
- Semantic helps to improve accessibility, Search Engine Optimization (SEO), and maintainability of the code providing clear and meaningful structure to the content.
- *Examples:*

  <header>: Represents introductory content or a group of introductory elements.

  <footer>: Represents a footer for its nearest sectioning content.

  <article>: Represents a self contained composition in a document, page, application or site.

  <nav>:   Represents a section of navigation links.

  <section>:Represents a section of a document or application.

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

  <main>:   Represents the main content of the document.

Physical Tags:

- They are also known as presentational tags.
- These tags specify how the content should be presented visually.

- They describe how the content should look or behave on the screen rather than its meaning or structure.
- ***Examples:***

<font>:	Used to specify font attributes such as color, size, style, etc.
<b>,<i>,<u>:	Used to apply bold, italics and underline styles, respectively.
<center>:	Used to center-align the content horizontally.
<strike>,<s>,<del>:	Used to apply strikethrough formatting to the content.