# Module 3 Html Assigment

* No ,html tags and element are no exactlythe same thing,although they are closely related. Html tags are the basic building blocks of an Html document.They are used to define different parts of the content and structure of the document.Tags are enclosed in angele barckets ‘<>’ and typically comes in pair : an opening tag an a closing tag. For example:
* <p> This is paragraph .</p>

In this example ’<p>’ is the opening tag and ‘</p>’is the c;osing tag.

HTML elements , on the other hand , consist of an opening tag.content nd a closing tag.An HTML element encompassesses everything between its opening and closing tags, including other nested elements and text contents. For example, in the ‘<p>’ element shown above, ”This is paragraph.” Is content of the paragraph element.

* In html, tags and attributes are fundamental components used to define structure ,content and behaviour of web documents.
  + Tags: Tags are the basic building blocks of html. They are enclosed in angle brackets ‘<>’ and define different parts of the document’s structure and content.
    - Example : <p> This is a paragraph.</p>

Attributes : Attributes provide additional information about HTML elements.They are placed within the opening tag and consist of a name ane a value,separated by an equal sign.

* Example : <a href=<https://www.example.com>>Visit Example</a>
* Void elements, also known as empty elements or self-closing elements, are HTML elements that do not have any content or closing tag.They are standalone elements and do not require a closing tag because they cannot contain any content between an opening and closing tag.
  + Example :
    - <input>
    - <img src=”example.jpg” alt=”Example Image”>
    - <br>
* Html entities are special sequences of caharactrer used to represent charcter have special meaning in HTML or cannot be easily represented directly in html code.
  + EXAMPLE:
    - &lt;p&gt;This is a paragraph&lt;/p&gt;
* In html there are three main types of list :
  + Ordered List(<ol>):
    - Ordered lists are used to present information in a sequential order, typically with number or letters as markers.
      * EXAMPLE:
        + <ol>

<li>First Items</li>

<li> Second Items </li>

<li> Third Items </li>

</ol>

* + Unordered LIST(‘<ul>’):
    - Unordered List are used to represent information in bulleted or unordered fashion
      * EXAMPLE:

<ul>

<li>Apples</li>

<li>Oranges</li>

<li>Bananas</li>

</ul>

* + **Definition Lists (<dl>)**:
    - Definition lists are used to display a list of terms and their corresponding definitions.
      * EXAMPLE

<dl>

<dt>HTML</dt>

<dd>HyperText Markup Language</dd>

<dt>CSS</dt>

<dd>Cascading Style Sheets</dd>

<dt>JS</dt>

<dd>JavaScript</dd>

</dl>

* In html , the ‘class’ attribute is used to specify one or more class name for an html an element.Classes are used to apply CSS style or Java script behaviour to one or more elements on a web page.
  + Example:

<!DOCTYPE html>

<html>

<head>

<style>

.highlight{

background-color:yellow;

}

.underline{

Text-decoration : underline;

}

</style>

</head>

<body>

<p class=”highlight”>This paragraph has a yellow background.</p>

<p class=”underline”> This paragraph is underlined.</p>

<p class = “highlight underline”> This paragraph has both a yellow background and underline</p>

</body>

</html>

* In HTML, both ‘id ’ attribute and the ‘class’ attribute are used to identify and targets specific elements but they serve different purpose.
  1. ‘id’ Attribute:
     + The ‘id ’ attribute is uniquely identify an element with a document.
     + Each ‘id’ value must be unique the entire HTML document.
       - Example:
         * <div id = “header”>

<h1> Welcome to my website </h1>

</div>

* 1. ‘class’ Attribute:
     + The ‘class’ attribute is used to categorize elemnts and apply styling or scripting to multiple element at once.
     + Multiple elements can have the same ‘class’ value.
       - Example:

<ul>

<li class= ”item”>Item1</li>

<li class=”item”> Item2</li>.

<li class=”item”> Item3</li>

</ul>

* The various formatting tag in HTML are following:
  1. <b> : Bold Text
  2. <i> : Italic text
  3. <u> : Undeline text
  4. <strong> : Emphasized text,typically rendered as bold
  5. <em> : Emphasized text,typically renderd as italic
  6. <sub> : Subscript text
  7. <sup> : Superscript text
  8. <ins> : Inserted text(often render with an underline)
  9. <del> : Deleted text(often render with a strikethrough)
  10. <mark> : Higlighted or marked text
  11. <small> : Smalller text
  12. <big> : Bigger text(deprecated in html5, use css instead).
  13. <cite> : Citation
  14. <code> : Inline code
  15. <pre> : Performatted text
  16. <samp> : Sample output from a computer program
  17. <kbd> : Keyboard input
  18. <var> : variable
  19. <blockquote> : Block quotation
  20. <q> : Inline quotation
  21. <abbr> : Abbrevation or acronym
* In html tables, both cell padding and cell spacing are attributes used to control the spacing around and between cells,respectively.
  1. Cell padding:
     + Cell padding refers to the space between the content of a table cell and the border surrounding it.
     + It is specified using the ‘cellpadding’ attribute in the <table> tag.
     + Cell padding is used to add space inside each cell to separate the content from the cell’s border.
     + Example:

<table cellpadding=”10”>

<tr>

<td>Cell1</td>

<td>Cell2</td>

</tr>

<tr>

<td>Cell3</td>

<td>Cell4</td>

</tr>

</table>

2.Cell Spacin:

* + - * 1. Cell spacing refer to the space between adjacent cells in a table.
        2. It is specified using the ‘cellspacing’ attribute in the <table> tag.
        3. Cell spacing is used to control the distance between the borders of neighbouring cells.

Example:

<table cellspacing="5">

<tr>

<td>Cell 1</td>

<td>Cell 2</td>

</tr>

<tr>

<td>Cell 3</td>

<td>Cell 4</td>

</tr>

</table>

* In html tables , you can merge multiple rows or column into a single row or columns using the ’rowspan’ and ‘colspan’ attributes respectively.

1. Megin Rows(row span):
   1. The ‘rowspan’ attribute is used to specify the number of rows a cell should span vertically.
   2. It allows you to merge multiple rows into a single row.
   3. This attribute is applied to the cell

Example:

<table border=”1”>

<tr>

<td rowspan=”2”>Row1, Column1</td>

<td>Row1, Column2</td>

<td> Row1, column3</td>

</tr>

<tr>

<td>Row2, Column2</td>

<td>Row2, Column3</td>

</tr>

</table>

1. Merging Columns(colspan):
   1. The ‘colspan’ attribute is used to specify the number of columns a cell should span horizontally.
   2. It allow you to merge multiple columns into a single column.
   3. This attribute is also applied to the cell (‘<td> or <th>’).

Example:

<table border=”1”>

<tr>

<td colspan=”2”>Row1,Cloumn 1&2</td>

<td>Row1, Column3</td>

</tr>

<tr>

<td>Row2, Column1</td>

<td>Row2 , Column2</td>

<td>Row2,Column3</td>

</tr>

</table>

* The key difference between block-level and inline element are:
  + Block-level elements create “blocks” of content with full width,while inline elements flow within text.
  + Block-level elements start on a new line, while inline elements do not.
  + Block-level elements can contain other block-level and inline elements, while inline elements cannot contain block-level elements.
  + Block-level elements are often used for larger section of content,such as paragraphs or divisions, while inline elements are often used for smaller elements within text or style specific part of text.
* In HTML , you can create a hyperlink using the <a> (anchor) element. The ‘<a>’ element is used to define a hyperlink to another webpage or resource.
  + <a href = “URL”>Link Text</a>
  + The “href” attribute specifies the URL(Uniform Resource Locator) of the destination webpage or resource.
  + The text between the opening and closing ’<a>’ tags is the visible link etxt that users click on.

Example:

<!DOCTYPE html>

<html lang= ”eng”>

<head>

<meat charset= “UTF-8”>

<meta name = “viewport” content= ”width=device-width,initial-scale=1.0”>

<title>Hyperlink Example</title>

</head>

<body>

<a href=[www.google.com](http://www.google.com)>Visit Google</a>

</body>

</html>

* The ‘<iframe>’ tag in HTML is used to embed another HTML document within the current HTML document.This allows you to display contenty from another source(such as a different website) within your own webpage.It’s commonly used for embedding videos,maps,form or any other external content.
  + Example:

<!DOCTYPE html>

<html lang=”eng”>

<head>

<meta charset = “UTF-8”>

<meta name=”viewport” content=”width=width-device , initial-scale=1.0 ”>

<title>Embedding Example</title>

</head>

</html>

<body>

<h1>Embedding an external Page</h1>

<p>Below is embedded Google Map:</p>

<iframe src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d387048.8883497425!2d-74.11808652908313!3d40.70582563077726!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x89c24fa5d33f083b%3A0xc80b8f06e177fe62!2sNew%20York%2C%20NY%2C%20USA!5e0!3m2!1sen!2sin!4v1615581075234!5m2!1sen!2sin" width="600" height="450" style="border:0;" allowfullscreen="" loading="lazy"></iframe>

</body>

* The **<span>** tag in HTML is a generic inline container used to group elements for styling purposes or applying JavaScript functionality without implying any structural meaning. It is often used to apply styles or to manipulate content using CSS or JavaScript.

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Span Example</title>

<style>

.highlight {

color: red;

font-weight: bold;

}

</style>

</head>

<body>

<h1>Span Example</h1>

<p>This is a <span class="highlight">highlighted</span> text.</p>

<p>You can also use <span style="color: blue;">inline styles</span> with spans.</p>

<p>This is a <span onclick="alert('Span clicked!')">clickable</span> span.</p>

</body>

</html>

* To insert a picture into the background image of a web page, you can see css to set the background image property of an HTML element,such as the body or a specific div.Here’s an example of how you can achieve this:
  + Example:

<!DOCTYPE html>

<html>

<head>

<meta charset=”UTF-8”>

<meta name=”veiwport” content=”width:width-device, initial-sacle=1.0”>

<title>Background Image with Picture</title>

<style>

body{

background-image:url(‘background.jpg’);

background-size:cover;

background-position:center;

background-repeat:no-repeat;

color:white;

font-family:Arial,sans-serif;

}

.content{

Padding:20px;

}

</style>

</head>

<body>

<div class=”content”>

<h1>Background Image with Picture</h1>

<p>This is an example how to insert a picture into the background image of webpage.</p>

</div>

</body>

</html>

* Active links and normal links refer to the state of hyperlinks on webpage based on user interaction. The key difference lies in their appearance and behaviour:
  + Normal Links (or Unvisited Links):
    - Normal links are the default appearance of hyperlinks before any interaction .
    - They are typically displayed as underline text with default color defined by the browser or custom styles.
    - When clicked, they usually change their appearance to reflect that they have been visited, which is often indicated by a change in color.
  + Active Links:
    - Active links represent hyperlinks that are currently being interacted with by the user, such as when they are being clicked.
    - These links may change their appearance momentarily during the click action to provide visual feedback to the user that the link has been activated.
    - The change in appearance is often subtle and may include alteration in color, background color por text decoration to indicate the link’s active state.
    - After the user releases the mouse button, the active link typically reverts to its normal or visited state.
* In HTML the primary tags used to separate section text are:
  + <div> : This tag is a generic container used to group elements and apply styles or scripting.
  + <span> : Similar <div> but its an inline element typically used to apply styles or scripting to small piece of text within a larger block of content.
  + <p> : This tag represents a paragraph of text and it automatically add space before and after paragraph.
  + <h1>,<h2>,<h3>,<h4>,<h5>,<h6> : These tags represent headings of different levels, with <h1> being the highest level and <h6> being the lowest level.
  + <section> : This tag represents a thematic grouping of content, typically with heading.
  + <article> : This tag represents a self-contained piece of content, such as a blog post or a news article.
  + <header> : This tag represents introductory content at the beginning of a section or a page.
  + <footer> : This tag represents closing content at the end of a section or a page.
  + <main> : This tag represents main content at the end of a section or a page.
  + <aside> : This tag represents content tangentially related to the content around it such as a sidebars.
  + <blockquote> : This tag represents a block of quote text.
  + <pre> : This tag represents performatted text, typically preserving spaces and line breaks.
* SVG stands for Scalable Vector Graphics . It is an xml-based vector image format for two-dimensional graphics with support for interactivity and animation.
* Difference between HTML and XHTML:
  + HTML : - HTML has a more forgiving syntax.
    - The document structure is more lenient.
    - HTML parses are generally more giving syntax error.
    - HTML document are served with the MIME type ”text/html”

2.XHTML : - XHTML is casesensitive.

XHTML follows stricter document structure rules consistent with XML

XHTML parsers strictly adhere to XML rules, so any syntax errors will cause parsing errors, making XHTML less forgiving than HTML.

XHTML documents are served with the MIME type **application/xhtml+xml**..

* Semantic Tag : Semantic tags are elements in HTML that convey meaning about the content they enclose.
  + Presentational Tags : Presentational tags sometime refferred to as “physical tags” are elements in html that are used primarily for styling and formatting content.