Front-end Assignment

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Course: Front End Development

Assignment-1 Web Designing (Module-Html)

1) Are the HTML tags and elements the same thing?

Ans) Tags and Elements are not the same.

- **Tags:** Tags are the starting and ending parts of an HTML element. They begin with < symbol and end with > symbol. Whatever written inside < and > are called tags.
    - Ex:
- **Elements:** Elements enclose the contents in between the tags. They consist of some kind of structure or expression. It generally consists of a start tag, content and an end tag.

  Ex: This is content of paragraph element

2) What are tags and attributes in HTML?

Ans)

- Tags and attributes are the basis of HTML.
- They work together but perform different functions – it is worth investing 2 minutes in differentiating the two.
- Tags are used to mark up the start of an HTML element and they are usually enclosed in angle brackets. An example of a tag is: <h1>.
- Most tags must be opened <h1> and closed </h1> in order to function.
- Attributes contain additional pieces of information. Attributes take the form of an opening tag and additional info is placed inside.
- An example of an attribute is:
- <img src="mydog.jpg" alt="A photo of my dog.">
- In this instance, the image source (src) and the alt text (alt) are attributes of the <img> tag.

3) What are void elements in HTML?

Ans)

- Most of the HTML elements are surrounded by start and end tags to specify the starting and end of the element.
- There is a special group of elements that only have start tags and does not contain any content within it, these elements are called void elements.
- Void elements doesn’t have ending tags and can only have attributes but do not contain any kind of content.
- These elements can have backslash before ending of start tag but that is completely optional.

- Exmples:
, <hr>, <img>, <input>, <link>, <base>, <meta>, <param>, <area>, <embed>, <col>, <track>, <source> etc.

4) What are HTML Entities?

Ans)

- An HTML **entity** is a piece of text ("string") that begins with an ampersand (&) and ends with a semicolon (;). Entities are frequently used to display reserved characters (which would otherwise be interpreted as HTML code), and invisible characters (like non-breaking spaces). You can also use them in place of other characters that are difficult to type with a standard keyboard
- Some special characters are reserved for use in HTML, meaning that your browser will parse them as HTML code. For example, if you use the less-than (<) sign, the browser interprets any text that follows as a tag.
- To display these characters as text, replace them with their corresponding character entities, as shown in the following table.

Character	Entity	Note
&	&amp;	Interpreted as the beginning of an entity or character reference.
<	&lt;	Interpreted as the beginning of a tag
>	&gt;	Interpreted as the ending of a tag
"	&quot;	Interpreted as the beginning and end of an attribute's value.

5) What are different types of lists in HTML?

Ans)

HTML lists allow the content to follow a proper semantic structure. All the tags in the list require opening and closing tags. There are 3 types of lists in HTML, namely:

- Unordered List
- Ordered List
- Description List

Unordered List: An Unordered list is used to create a list of related items, in bulleted or unordered format. It starts with the <ul> tag, followed by the <li> tag to show list items inside <ul> tag.

Syntax:

```
<ul>
  <li>Item1</li>
  ...
</ul>
```

Attributes:

- **circle**: It gives a circle list item marker.
- **square**: It gives square as list item marker.
- **disc**: This is the default filled circular bullet item marker.
- **none**: This is used to unmark list items.

```
<!DOCTYPE html>
<html>

<head>
    <title>HTML Lists</title>
</head>

<body>
    <h4>HTML Unordered List</h4>
    <h4>Coding Language</h4>
    <ul>
        <li>C</li>
        <li>C++</li>
        <li>Core-Java</li>
        <li>Python</li>
        <li>Javascript</li>
    </ul>
</body>

</html>
```

Ordered Lists: The Ordered lists have an order which is either numerical or alphabetical. The <ol> tag is used to create ordered lists in HTML and just like unordered list, we use <li> tag to define or show lists inside <ol> tag.

Syntax:

```
<ol>
  <li>Item1</li>
  <li>Item2</li>
  <li>Item3</li>
</ol>
```

The ordered list has a type operator which defines what type of order the list will have, like whether the list will start with a numerical value or an alphabetical value. The various ways to use the ordered list, are given below:

- **type = "1"**: List will start from 1.
- **type = "A"**: Here the list will start from A.
- **type = "a"**: Here the list will start from lowercase a.
- **type = "I"**: The list will start from Roman numbers.

- **type = "i"**: TheList will start form lowercase Roman numbers

```
<!DOCTYPE html>
<html>

<head>
        <title>HTML Lists</title>
</head>

<body>
        <h4>HTML Ordered List</h4>
        <h4>Coding Language</h4>
        <ol>
                <li>C</li>
                <li>C++</li>
                <li>Core-Java</li>
                <li>Python</li>
                <li>Javascript</li>
        </ol>
</body>

</html>
```

Description List: A description list is a type of list where each item has a description. It is also known as a definition list. The <dl> tag is used to create description list, the <dt> tag defines the item, and the <dd> tag describes each item in list.

Syntax:

<dl> Contents... </dl>

The HTML definition list contains following 3 tags:

- **<dl>**: It defines the start of the list.
- **<dt>**: It defines a item.
- **<dd>:** It defines the description of each item.

```
<!DOCTYPE html>
<html>

<head>
        <title>HTML Lists</title>
</head>

<body>
        <h4>Description List</h4>
        <strong>Developers Life</strong>
        <dl> <dt>Code</dt>
                <dd>- Code all day!</dd>
                        <dt>Eat</dt>
                <dd>- Eat healthy food</dd>
```

```
                    <dt>Sleep</dt>
                <dd>- Sleep soundly!</dd>
            </dl>
        </body>
        </html>
```

6) What is the ‘class’ attribute in HTML?

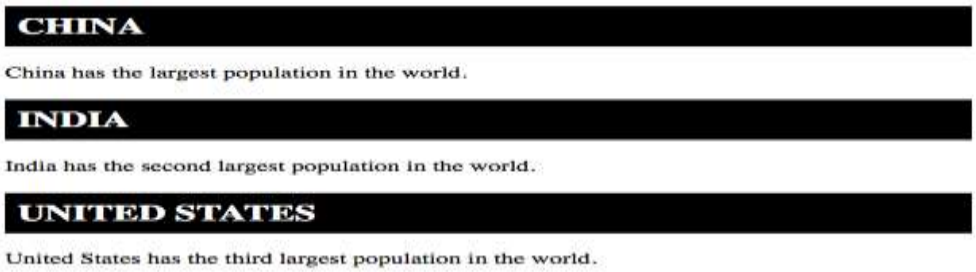
Ans)

- The class is an attribute which specifies one or more class names for an HTML element.
- The class attribute can be used on any HTML element.
- The class name can be used by CSS and JavaScript to perform certain tasks for elements with the specified class name.

Ex:

```
<!DOCTYPE html>
<html>
<head>
   <style>
        .country {

            background-color: black;
            color: white;
            padding: 8px;
        }
   </style>
</head>
<body>
   <h2 class="country">CHINA</h2>

<p>China has the largest population
   in the world.</p>

   <h2 class="country">INDIA</h2>

<p>India has the second largest
   population in the world.</p>

   <h2 class="country">UNITED STATES</h2>

<p>United States has the third largest
   population in the world.</p>
```

```
</body>
</html>
```



7) What is the difference between the 'id' attribute and the 'class' attribute of HTML elements?

Ans)

- In Html DOM both id and class are the element selector and are used to identify an element based on the name assign to these parameters.
- The following are the important differences between Id and Class.

Class	Id
We can apply a class to various elements so that it could be numerous times on a single page.	The Id is unique in a page, and we can only apply it to one specific element.
The class is assigned to an element and its name starts with "." followed by the name of the class.	The name of the Id starts with the "#" symbol followed by a unique id name.
We can attach multiple class selectors to an element.	We can attach only one ID selector to an element.

Syntax:
.class{
// declarations of CSS
}
	Syntax:
	#id{
	// declarations of CSS
	}

8) What are the various formatting tags in HTML?

Ans)

- HTML provides many predefined elements that are used to change the formatting of text. The formatting can be used to set the text styles (like – bold, italic, or emphasized, etc.), highlighting the text, making text superscript and subscript, etc.

1. <b> **and** **Tags:** Both tags are used to make the text bold. The text content of the tag is shown as important information on the webpage.

Syntax:

```
<b> ... </b>
```

 ...

2. **and** **Tags:** Both tags are used to make the text italic and emphasized. Both the element have opening and closing tags.
Syntax:
 ...

 ...

3. <small> **and** <big> **Tags:** The <small> tag is used to set small font-size where as <big> tag is used to set big font-size.
Syntax:
<small> ... </small>

<big> ... </big>

4. <sup> **and** <sub> **Tags:** The <sup> tag is used to superscript a text whereas <sub> tag is used to subscript a text.
Syntax:
^{...}

_{...}

5. <ins> **and** <del> **Tag:** The <ins> tag is used to underline a text marking the part as inserted or added. It also has an opening and a closing tag. This tag is mainly used in text in place of deleted text whereas <del> tag is used to delete the text it adds a strike line on the text.
Syntax:
<ins> ... </ins>

<del> ... </del>

6. HTML <mark> Tag**:** The <mark> tag is used to highlighting a text. It has an opening and closing tag.
Syntax:
<mark> ... </mark>

9) How is Cell Padding different from Cell Spacing?

Ans)

- **Cell padding**:
  Cell padding specifies the space between the border of a table cell and its contents (i.e) it defines the whitespace between the cell edge and the content of the cell.

  Syntax:
  <table cell padding="value" >.....</table>
  where, value determines the padding
  (space between the border of a table and its content)

- **Cell spacing:**
  Cell spacing specifies the space between cells (i.e) it defines the whitespace between the edges of the adjacent cells.

  Syntax:
  <table cellspacing="value" >.....</table>
  where, value determines the padding
  (space between adjacent cells)

Difference:

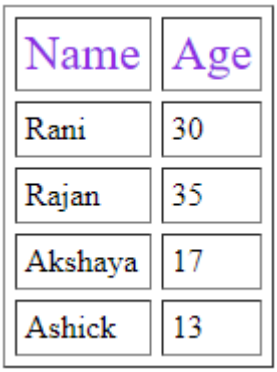
Cell padding	**Cell spacing**
It specifies the space between the border of a table cell and its contents.	It specifies the space between adjacent cells.
It is created by using HTML <table> tag but type attribute is set to cell padding.	It is also created by using HTML <table> tag but type attribute is set to cell spacing.
It is mainly meant for a single cell.	Cell spacing can get subjected to more than one cell.
The default cell padding value is 1	Whereas, the default cell spacing value is 2
Cell padding is widely used and considered to be an effective mean	Cell spacing is less effective than Cell padding.
Cell padding is an attribute	Cell spacing is also an attribute.

Ex:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport"
        content="width=device-width,
                initial-scale=1.0">
```

```
        <title>Document</title>
        <style>
            span{
            text-decoration-style: solid;
            width: 25px;
            font-size: x-large;
            color: blueviolet;
            }
        </style>
</head>
<body>
<table border="1"
        cellpadding="4"
        cellspacing="5">
<thead>
<td><span>Name</span></td>
<td><span>Age</span></td>
</thead>
<tbody>
<tr>
        <td>Rani</td>
        <td>30</td>
</tr>
<tr>
        <td>Rajan</td>
        <td>35</td>
</tr>
<tr>
        <td>Akshaya</td>
        <td>17</td>
</tr>
<tr>
        <td>Ashick</td>
        <td>13</td>
</tr>
</tbody>
</table>
</body>
</html>
```

Output:



Name	Age
Rani	30
Rajan	35
Akshaya	17
Ashick	13

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

Ans)

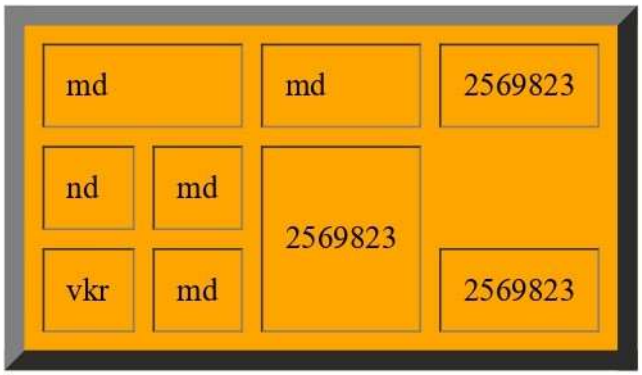
- It can be done by using the **rowspan** and c**olspan** attribute in HTML.
- The rowspan is used to merge or combine the number of cells in a row whereas the colspan is used to merge column cells in a table.
- The purpose of this article is to merge table cells in HTML.

Ex:

```
<!DOCTYPE html>
<html>
<head>

        <title>table tags</title>
</head>
<body>
<table border="10" cellspacing="9px" cellpadding="11px" bgcolor="orange">
                        <tr>
                                <td colspan="2">md</td>
                                <td>md</td>
                                <td>2569823</td>
                        </tr>

                        <tr>
                                <td>nd</td>
                                <td>md</td>
                                <td rowspan="2">2569823</td>
                        </tr>
```

```
                    <tr>
                        <td>vkr</td>
                        <td>md</td>
                        <td>2569823</td>
                    </tr>

                </table>
    </body>
    </html>
```

11/6/22, 3:01 PM



>

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

Ans)

- The inline and block elements of HTML are one of the important areas where web developers often get confused because they were unable to know which are inline and block elements which may cause clumsiness in a webpage in case he assumes some element to be a block but it is an inline element which causes next element comes next to it.
- So let us see the differences between the inline and block elements in HTML and the different frequently used inline and block HTML elements.

Block elements: They consume the entire width available irrespective of their sufficiency. They always start in a new line and have top and bottom margins. It does not contain any other elements next to it.

Examples of Block elements:

- **<h1>-<h6> :** This element is used for including headings of different sizes ranging from 1 to 6.
- ** :** This is a container tag and is used to make separate divisions of content on the web page.
- **<hr>:** This is an empty tag and is used for separating content by horizontal lines.
- **<li>:** This tag is used for including list items of an ordered or unordered list.
- **<ul>:** This tag is used to make an unordered list.
- **<ol>:** This tag is used to make an ordered list.
- **<p>:** This tag is used to include paragraphs of content in the webpage.
- **<table>:** This tag is used for including the tables in the webpage when there is a need for tabular data.

HTML 5 Semantic block elements:

- **<header>:** This tag is used for including all the main things of the webpage like navbar, logos, and heading of the webpage.
- **<nav>:** This tag helps to navigate through different sections by including different blocks of hyperlinks in the webpage.
- **<footer>:** This contains all information about the authorization, contact, and copyright details of the webpage.
- **<main>:** The main content of the webpage resides in this tag.
- **<section> :** This is used separate different sections in the webpage.
- **<article>:** This tag is used to include different independent articles on the webpage.
- **<aside>:** This tag is used to mention details of the main content aside.

Inline elements: Inline elements occupy only enough width that is sufficient to it and allows other elements next to it which are inline. Inline elements don't start from a new line and don't have top and bottom margins as block elements have.
Examples of **Inline elements**:

- **<a>:** This tag is used for including hyperlinks in the webpage.
- **
:** This tag is used for mentioning line breaks in the webpage wherever needed.
- **<script> :** This tag is used for including external and internal JavaScript codes.
- **<input>:** This tag is used for taking input from the users and is mainly used in forms.
- **<img>:** This tag is used for including different images in the webpage to add beauty to the webpage.
- **:** This is an inline container that takes necessary space only.
- **<b>:** This tag is used in places where bold text is needed.
- **<label>:** The tag in HTML is used to provide a usability improvement for mouse users i.e, if a user clicks on the text within the <label> element, it toggles the control.

Inline Elements	Block Elements
Inline elements occupy only sufficient width required.	Block Elements occupy the full width irrespective of their sufficiency.
Inline elements don't start in a new line.	Block elements always start in a line.
Inline elements allow other inline elements to sit behind.	Block elements doesn't allow other elements to sit behind
Inline elements don't have top and bottom margin	Block elements have top and bottom margin.

12) How to create a Hyperlink in HTML?

Ans)

- HTML links are hyperlinks. You can click on a link and jump to another document. When you move the mouse over a link, the mouse arrow will turn into a little hand.
- The HTML <a> tag defines a hyperlink. It has the following syntax:
  Syntax: link text
  The most important attribute of the <a> element is the href attribute, which indicates the link's destination.

  Ex:

```
<!DOCTYPE html>
<html>
<body>

<h1>HTML Links</h1>

<p><a href="https://www.tops-int.com/">Visit Tops!</a></p>

</body>
</html>
```

Output:

13) What is the use of an iframe tag?

Ans)

- The iframe in HTML stands for **Inline Frame**. The ” iframe ” tag defines a rectangular region within the document in which the browser can display a separate document, including scrollbars and borders.
- An inline frame is used to embed another document within the current HTML document. The HTML iframe name attribute is used to specify a reference for an <Iframe> element.
- The name attribute is also used as a reference to the elements in JavaScript. The iframe is basically used to show a webpage inside the current web page. The ‘ **src** ‘ attribute is used to specify the URL of the document that occupies the iframe.

Syntax:

<iframe src="URL" title="description"></iframe>

Attributes value: It contains a single value URL that specifies the URL of the document that is embedded in the iframe.

There are two types of URL links which are listed below:

- **Absolute URL:** It points to another webpage.
- **Relative URL:** It points to other files of the same web page.

Attributes :

Height and Width: The height and width attributes are used to specify the size of the iframe. The attribute values are specified in pixels by default, but they can also be specified in percentages like ” 80% “.

Removing Border: By default, iframe has a border around it. To remove the border, we must use the style attribute and use the CSS border property.

Border Style: Changing the size, style, and color of the Iframe’s border.

Link: An iframe can be used as the target frame for a link. The target attribute of the link must refer to the name attribute of the iframe.

Ex:

```
<html>
<head>
<title>HTML Iframes</title>
</head>
<body>
<p>Document content goes here...</p>
<iframe src = "/html/menu.htm" width = "555" height = "200">
Sorry your browser does not support inline frames.
</iframe>
<p>Document content also go here...</p>
</body>
</html>
```

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

Ans)

- The **HTML span** element is a generic inline container for inline elements and content. It is used to group elements for styling purposes (by using the class or id attributes), A better way to use it when no other semantic element is available.
- The **span tag** is a paired tag means it has both open(<) and closing (>) tags, and it is mandatory to close the tag. The span tag is used for the grouping of inline elements & this tag does not make any visual change by itself. span is very similar to the div tag, but div is a **block-level** tag and span is an **inline tag**.

Syntax:

```
<span class="">Some Text</span>
```

Attribute: This tag accept all the Global attribute and Event Attributes

Ex:

```
<!DOCTYPE html>
<html>

<body>
        <h2>Welcome To Tops Technology</h2>


<p>TOPS is a
                <span style="color:red;font-weight:bolder">
                        IT learning</span> platform for
                <span style="background-color: lightgreen;">Students</span>.
        </p>


</body>

</html>
```

Output:

15) How to insert a picture into a background image of a web page?

Ans)

- Background images are used to make a website more interactive and attractive. It can be applied in many stylings.

Approach:

- In the body tag, specify a background image in the background attribute by passing the URL of the image or location path.
- Adding CSS styling properties.

Syntax:

<body background = "URL or path" > Website Body </body>

Ex:

```
<!DOCTYPE html>
<html >

<head>
        <title>Website</title>
</head>

<body background=
" https://cdn.pixabay.com/photo/2015/04/23/22/00/tree-736885__480.jpg">
                <h2>Background Image</h2>
</body>

</html>
```

16) How are active links different from normal links?

Ans)

- Websites are designed to point you to different resources. You can move from one website to another through links. Links help you to get information from different resources. Links are established in simple HTML web pages through <a> tag.
- Links are categorized into three types. Typically a Link is displayed in three different colors based on the usage.
  - Normal links (Unvisited links)
  - Visited links
  - Active links

Normal links are links which are there on the page and have not been clicked yet. Active links are those links, which have just been clicked at that instant.

Ex:

Normal link: (It is displayed, underlined and blue.)

```
<html>
<body>
<h2>This is a Link</h2>
<h1>
Welcome to
<a href="https://www.tops-int.com/"> Welcome to Tops</a>
</h1>
</body>
</html>
```

Ex:

Active Link: (It is displayed, underlined and red.) If you left or right-click any one of the links Visited or Unvisited, it will turn into Red and Underline. Active Links shows that the browser is in the process to load a new resource.

17) What are the different tags to separate sections of text?

Ans)

- There are three tags that can be used to separate the texts:
- **
 tag** – Usually <br> tag is used to separate the line of text. It breaks the current line and conveys the flow to the next line
- **<p> tag** – This contains the text in the form of a new paragraph.
- **<blockquote> tag** – It is used to define a large quoted section. If you have a large quotation, then put the entire text within <blockquote>….</blockquote> tag.

18) What is SVG?

Ans)

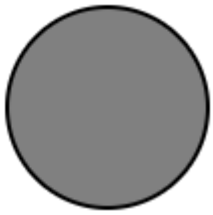
- **SVG** stands for Scalable Vector Graphic.
- It can be used to make graphics and animations like in HTML canvas.
- It is a type of vector graphic that may be scaled up or down.
- SVG is a web standard for vector-based graphics.
- It basically defines vector-based graphics in XML format.
- SVG graphics do NOT lose any quality if they are zoomed or resized.

Ex:

```
<!DOCTYPE html>
<html>

<body>

  <!-- svg tag is used here -->
  <svg width="200" height="200">
```

```
        <circle cx="80" cy="80" r="50"
           stroke="black"
           stroke-width="2"
           fill="grey" />
    </svg>
</body>

</html>
```

Output:



19) What is difference between HTML and XHTML?

Ans)

- **XHTML:**
  XHTML stands for Extensible Hypertext Markup Language. It can be considered as a part of the XML markup language this is because of XHTML have features of both XML and HTML. XHTML is extended from XML and HTML. XHTML can be considered as a better version of HTML.
- **HTML:**
  HTML is the Hypertext Markup Language which is the most widely used language over the internet. HTML is used to create web pages and link them from one to another. Please note HTML is not a programming language, it is a markup language. We can use different other technologies as like CSS and java Script to give a new look to the pages developed by HTML.

Difference:

HTML	XHTML
HTML stands for Hypertext Markup Language.	XHTML stands for Extensible Hypertext Markup Language.
It was developed by Tim Berners-Lee.	It was developed by W3C i.e World Wide Web Consortium.
It was developed in 1991.	It was released in 2000.
It is extended from SGML.	It is extended from XML and HTML.
The format is a document file format.	The format is a markup language.

All tags and attributes are not necessarily to be in lower or upper case.	In this, every tag and attribute should be in lower case.
Doctype is not necessary to write at the top.	Doctype is very necessary to write at the top of the file.
It is not necessary to close the tags in the order they are opened.	It is necessary to close the tags in the order they are opened.
While using the attributes it is not necessary to mention quotes. For e.g. <Geeks>.	While using the attributes it is mandatory to mention quotes. For e.g. <Geeks=”GFG”>.
Filename extension used are .html, .htm.	Filename extension are .xhtml, .xht, .xml.

20) What are logical and physical tags in HTML?

Ans)

Physical and Logical tags are used in HTML for better visibility and understanding of the text by the user on the web page. However, both tags differ from each other as suggested by their names.

- **Logical Tags**

Logical Tags are used in HTML to display the text according to the logical styles. Following are the Logical tags commonly used in HTML.

Tag	Description
<abbr>	Defines an abbreviation
<acronym>	Defines an acronym
<address>	Defines an address element
<cite>	Defines citation
<code>	Defines computer code text
<blockquote>	Defines a long quotation
<del>	Defines text
<dfn>	Defines a definition term
<ins>	Defines inserted text
<kbd>	Defines keyboard text
<pre>	Defines preformatted text
<q>	Defines short quotation
<samp>	Defines sample computer code
	Defines strong text
<var>	Defines a variable

- **Physical Tags**

Physical Tags are used in HTML to provide actual physical formatting to the text. Following are the Physical tags commonly used in HTML.

Tag	Description
<b>	Defines **bold** text
<big>	Defines big text
<i>	Defines *italic* text
<small>	Defines small text
<sup>	Defines superscripted text
<sub>	Defines subscripted text
<tt>	Defines teletype text
<u>	Deprecated. Use styles instead