HTML

Hypertext Markup Language

What is HTML?

- HTML is a language for describing web pages.

- HTML stands for Hyper Text Markup Language

- HTML is not a programming language, it is a markup language

- A markup language is a set of markup tags

- HTML uses markup tags to describe web pages

HTML Tools

- There are two tools of HTML.

  a)   HTML Editor: it is the program that one uses to create and save HTML documents.

  b)   Web Browser: it is the program that one uses to view and test the HTML documents.

HTML Terminology

- **Tag:** Tags are always written within angles brackets. it is a piece of text is used to identify an element so that the browser realizes how to display its contents. e.g.<HTML> tag indicates the start of an HTML document .

- HTML tag can be two types. They are:-
  - **Paired Tags**: A tag is said to be a paired tag if text is placed between a tag and its companions tag. In paired tag ,the first tag is referred to as opening tag and the second tag is referred to as closing tag.
  - **Unpaired Tags**: An unpaired tag does not have a companion tag .unpaired tag also known as singular or Stand-Alone tags. e.g:
,<hr> etc.

HTML Terminology

- **Attribute:** Attribute is the property of an tag that specified in the opening angle brackets. It supplies additional information like color, size, home font-style etc to the browser about a tag.

- **DTD:** Document Type Definition is a collection of rules written in standard Generalized Markup Language(SGML).HTML is define in terms of its DTDS. All the details of HTML tags, entities and related document structure are defined in the DTDS.

- **ELEMENT:** Element is the component of a document's structure such as a title, a paragraph or a list. It can include an opening and a closing tag and the contents within it.

How to create an HTML document?

● The essential tags that are required to create a HTML document are:

- ● <HTML>…………</HTML>
- ● <HEAD>…………</HEAD>
- ● <BODY>…………</BODY>

Structure of HTML

```
<HTML>
     <HEAD>

          ............

          ............
     </HEAD>
     <BODY>

          ............

          ............
     </BODY>
</HTML>
```

First Example

- Step-1: Open a text editor Notepad
- Step-2: Enter the following lines of code:

```
<HTML>
 <HEAD>
  <TITLE>
      My first Page
  </TITLE>
 </HEAD>
 <BODY>
    Welcome to my first web page.
 </BODY>
</HTML>
```

First Example

- Step-3: Save the file as myfirstpage.html (go to File-Save As give File name: myfirstpage.html-choose save as type: All Files-click save)

- Step-4: Viewing document in web browser (open Internet Explorer-click on File-Open-Browse-select the file myfirstpage.html-click open-click ok

HTML Tags

HTML Tags

- HTML tags are the fundamental elements of HTML used for defining the structure of the document. These are letters or words enclosed by angle brackets (< and >).

- Usually, most HTML tags come in pairs, consisting of an opening tag and a closing tag.

- The opening tag marks the beginning of an element, while the closing tag, which includes a forward slash before the tag name, indicates the end of that element.

HTML Tags

- Each tag has a different meaning and the browser reads the tags and displays the contents enclosed by it accordingly.

- For example, if we wrap any text with in the paragraph (<p></p>) tag browser displays it as a separate paragraph.

HTML Tags

HTML Basic Tags

HTML Basic Tags

- <p> => Paragraph Tag

- <u> => Underline Tag

- <b> => Bold Tag

- <i> => Italic Tag

-
 => Line Break Tag

HTML Basic Tags

```html
<html>

<head>
    <title>My First Web Page</title>
</head>

<body>
    <h1>My First Web Page</h1>
    <p><b>Hello World Wide Web!</b></p>
    <p><i>Hello World Wide Web!</i></p>
    <p><u>Hello World Wide Web!</u></p>
    <p>This is my first web page.</p>
    <p>HTML tags can give <b><i>various</i></b>
    <u>looks and format</u> to the content of this web page.</p>
</body>

</html>
```

HTML Heading Tags

HTML Heading Tags

- Heading tags are used to define headings of documents.

- You can use different sizes for your headings.

- HTML also has six levels of headings, which use the elements <h1>, <h2>, <h3>, <h4>, <h5>, and <h6>.

- While displaying any heading, browser adds one line before and one line after that heading.

HTML Heading Tags

```html
<!DOCTYPE html>
<html>
<head>
    <title> My First Page </title>
</head>
<body>
    <p> Welcome to Simplilearn!! </p>
    <h1>This is heading 1</h1>
    <h2>This is heading 2</h2>
    <h3>This is heading 3</h3>
    <h4>This is heading 4</h4>
    <h5>This is heading 5</h5>
    <h6>This is heading 6</h6>

</body>
</html>
```
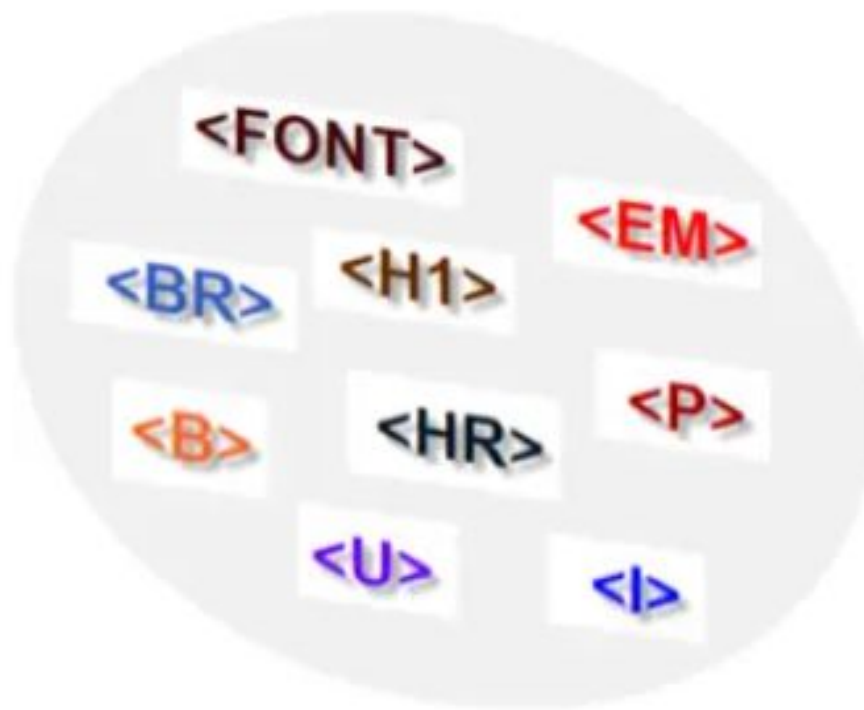
HTML Formating Tags

HTML Formating Tags

- HTML Formatting is a process of formatting text for better look and feel.

- HTML provides us ability to format text without using CSS. There are many formatting tags in HTML.

- These tags are used to make text bold, italicized, or underlined.

- There are almost 14 options available that how text appears in HTML and XHTML.

HTML Formatting Tags

HTML Image Tag

HTML Image Tag

- HTML img tag is used to display image on the web page.

- HTML img tag is an empty tag that contains attributes only, closing tags are not used in HTML image element.

Attributes of HTML Image Tag

- **src**
  - It is a necessary attribute that describes the source or path of the image. It instructs the browser where to look for the image on the server.
  - The location of image may be on the same directory or another server.

- **alt**
  - The alt attribute defines an alternate text for the image, if it can't be displayed. The value of the alt attribute describe the image in words. The alt attribute is considered good for SEO prospective.

Attributes of HTML Image Tag

- **width**
  - It is an optional attribute which is used to specify the width to display the image. It is not recommended now. You should apply CSS in place of width attribute.

- **height**
  - It h3 the height of the image. The HTML height attribute also supports iframe, image and object elements. It is not recommended now. You should apply CSS in place of height attribute.

HTML Image Tag

```
<!DOCTYPE html>
<html>
<head>
   <base href="https://www.example.com/" target="_blank">
</head>
<body>
   <a href="page.html">Relative Link</a>
   <img src="images/image.jpg" alt="Image">
</body>
</html>
```

HTML Table Tag

HTML Table Tag

- HTML table tag is used to display data in tabular form (row * column). There can be many columns in a row.

- We can create a table to display data in tabular form, using <table> element, with the help of <tr> , <td>, and <th> elements.

- In Each table, table row is defined by <tr> tag, table header is defined by <th>, and table data is defined by <td> tags.

HTML Table Tag

Tag	Description
<table>	It defines a table.
<tr>	It defines a row in a table.
<th>	It defines a header cell in a table.
<td>	It defines a cell in a table.

HTML Table Tag

```html
<table>
    <tr align = "center">
        <th>Name</th>
        <th>Cups</th>
        <th>Types of coffee</th>
        <th>Sugar?</th>
    </tr>
    <tr>
        <td align = "left">Jame</td>
        <td align = "left">10</td>
        <td align = "left">Espresso</td>
        <td align = "left">No</td>
    </tr>
</table>
```

HTML Lists

HTML Lists

- HTML Lists are used to specify lists of information.

- All lists may contain one or more list elements.

- There are three different types of HTML lists:
  - Ordered List or Numbered List (ol)
  - Unordered List or Bulleted List (ul)
  - Description List or Definition List (dl)

HTML Lists

An HTML list is a record of related information used to display the data or any information on web pages in the ordered or unordered form.

```html
<h5>List of available courses</h5>
<ul>
    <li>Data Structures & Algorithm</li>
    <li>Web Technology</li>
    <li>Aptitude & Logical Reasoning</li>
    <li>Programming Languages</li>
</ul>
<h5>Data Structures topics</h5>
<ol>
    <li>Array</li>
    <li>Linked List</li>
    <li>Stacks</li>
    <li>Queues</li>
    <li>Trees</li>
    <li>Graphs</li>
</ol>
```

HTML Form

HTML Form

- An HTML form is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.

- An HTML form facilitates the user to enter data that is to be sent to the server for processing such as name, email address, password, phone number, etc. .

Why HTML Forms?

- HTML forms are required if you want to collect some data from of the site visitor.

- For example: If a user want to purchase some items on internet, he/she must fill the form such as shipping address and credit/debit card details so that item can be sent to the given address.

HTML Form Tags

Tag	Description
<form>	It defines an HTML form to enter inputs by the used side.
<input>	It defines an input control.
<textarea>	It defines a multi-line input control.
<label>	It defines a label for an input element.
<fieldset>	It groups the related element in a form.
<legend>	It defines a caption for a <fieldset> element.
<select>	It defines a drop-down list.
<optgroup>	It defines a group of related options in a drop-down list.
<option>	It defines an option in a drop-down list.
<button>	It defines a clickable button.

HTML Form Tags

```html
<form>
  <fieldset>
    <legend>User Registration Page</legend>
    <label>Enter your full name</label><br>
    <input type="text" name="name"><br>
    <label>Enter your email</label><br>
    <input type="email" name="email"><br>
    <label>Enter your password</label><br>
    <input type="password" name="pass"><br>
    <label>confirm your password</label><br>
    <input type="password" name="pass"><br>
    <br><label>Enter your gender</label><br>
    <input type="radio" id="gender" name="gender" value="male"/>Male  <br>
    <input type="radio" id="gender" name="gender" value="female"/>Female <br/>
    <input type="radio" id="gender" name="gender" value="others"/>others <br/>
    <br>Enter your Address:<br>
    <textarea></textarea><br>
    <input type="submit" value="sign-up">
  </fieldset>
</form>
```

User Registration Page

Enter your full name

Enter your email

Enter your password

Confirm your password

Enter your gender
○ Male
○ Female
○ others

Enter your Address:

sign-up

Advantages of HTML

- Easy to use
- Loose syntax (although, being too flexible will not comply with standards).
- Supported on almost every browser, if not all browsers.
- Widely used; established on almost every website, if not all websites.
- Very similar to XML syntax, which is increasingly used for data storage.
- Free - You need not buy any software.
- Easy to learn & code even for novice programmers.

Disadvantages of HTML

- It cannot produce dynamic output alone, since it is a static language
- Sometimes, the structuring of HTML documents is hard to grasp
- You have to keep up with deprecated tags, and make sure not to use them
- Deprecated tags appear because another language that works with HTML has replaced the original work of the tag; thus the other language needs to be learned (most of the time, it is CSS)
- Security features offered by HTML are limited

Thank You

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