

INTRODUCTION TO HTML:

- HTML stands for **Hyper Text Markup Language**.
- HTML is a **method of describing the format** of web documents
- It is used to **display the document** in the web browsers.
- HTML was **developed by Tim Berners-Lee**. HTML standards are created by a group of interested organizations called **W3C (World Wide Web consortium)**.

HTML Tags:

- In HTML, formatting is specified by using tags.
- A tag is a format name surrounded by angle brackets.
- End tags which switch a format off also contain a forward slash.

Points to be remembered for HTML tags:

- They are **not case sensitive** i.e., <head>, <HEAD> and <Head> is equivalent.
- If a browser does not understand a tag it will usually ignore it.
- White spaces, tabs and newlines are ignored by the browser.

STRUCTURE OF A HTML DOCUMENT:

- HTML document consists of 2 sections.

1. Head Section

2. Body Section

The basic document is shown below.

```
<html>

    <head>

        <!-- Head Section -->

    </head>

    <body>

        <!-- Body Section -->
```

</body>

</html>

HTML ELEMENTS:

An HTML element is everything from the start tag to the end tag

<p> This is a Paragraph </p>

Start Tag Element Content End Tag

HTML ATTRIBUTES:

HTML Elements can have Attributes. Attribute provide additional information about an element and are always specified in the start tag.

Syntax:

<tag attributename="value" > Content </tag>

Sample.html

<html>

<head>

<title> Basic HTML document </title>

</head>

<body>

<h1> Welcome to the world of Web Technologies</h1>

<p> A sample HTML program </p>

</body>

</html>

BASIC HTML TAGS:

1. <html> :

- The <html> tag tells the browser that this is an HTML document.
- The <html> tag represents the root of an HTML document.
- The <html> tag is the container for all other HTML elements.

2. <title>:

- defines a title in the browser toolbar
- provides a title for the page when it is added to favorites
- displays a title for the page in search-engine results

3. <body>:

- The <body> tag defines the document's body.
- The <body> element contains all the contents of an

HTML document, such as text, hyperlinks, images, tables, lists, etc.

Attribute	Value Type	Meaning
background	URL	Specifies a background image for a document
bgcolor	Color	Specifies the background color of a document
text	Color	Specifies the color of the text in a document

4. <!-- --> Comment Tag:

- The comment tag is used to insert comments in the source code. Comments are not displayed in the browsers.

5. Heading Tags:

- There are 6 heading tags.
- The <h1> to <h6> tags are used to define HTML headings.
- <h1> defines the most important heading. <h6> defines the least important heading.

Attribute	Value	Meaning
align	left	Aligns the heading to the left
align	right	Aligns the heading to the right
align	center	Aligns the heading to the center

Example: Headings.html

```
<html>

  <head>

    <title>Heading Tage</title>

  </head>

  <body bgcolor=yellow text=blue>

    <! - - This is a Comment - - >

    <h1 align="left">This is Heading 1</h1>

    <h2 align="center">This is Heading 2</h2>

    <h3 align="right">This is Heading 3</h3>

    <h4>This is Heading 4</h4>

    <h5>This is Heading 5</h5>

    <h6 align="right">This is Heading 6</h6>

  </body>

</html>
```

6. <p>: paragraph Tag

- Browser automatically add some space before and after each <p> element

Attribute	Value	Meaning
align	left	Aligns the paragraph text to the left
align	right	Aligns the paragraph text to the right
align	center	Aligns the paragraph text to the center
align	justify	Stretches the lines so that each line has equal width

7. :

The tag specifies the font face, font size, and color of text.

Attribute	Value	Meaning
color	rgb(x,x,x)	Specifies the color of text using RGB values
color	#xxxxxx	Specifies the color of text using HEX code
color	colorname	Specifies the color of text using a color name (e.g., red, blue)
face	font_family	Specifies the font of the text (e.g., Arial, Verdana)
size	number	Specifies the size of the text (usually 1–7 in HTML font tag)

8. <link>:

- The <link> tag defines a link between a document and an external resource.
- The <link> tag is used to link to external style sheets.

Attribute	Value	Meaning
href	URL	Specifies the location of the linked document
target	_blank	Opens the linked document in a new window or tab
	_self	Opens the linked document in the same frame as it was clicked (default)
	_parent	Opens the linked document in the parent frame
	_top	Opens the linked document in the full body of the window
	framename	Opens the linked document in a named frame
rel	stylesheet	Specifies the relationship between the current document and the linked one

9. <div>:

- The <div> tag defines a division or a section in an HTML document.
- The <div> tag is used to group block-elements to format them with CSS.

Attribute	Value	Meaning
align	left	Aligns the heading to the left
	right	Aligns the heading to the right
	center	Aligns the heading to the center
	justify (rarely used)	Justifies the heading (if supported)

10.
:

- The
 tag inserts a single line break.
- The
 tag is an empty tag which means that it has no end tag.

11.<marquee>:

It is used for Scrolling images and text in the web page.

Attribute	Value	Meaning
behavior	scroll, slide, alternate	Defines the type of scrolling behavior.
bgcolor	rgb(x,x,x), #xxxxxx, colname	(Deprecated) Specifies background color of the marquee.
direction	up, down, left, right	Defines the direction in which the content scrolls.
loop	Number (1, 2, ..., INFINITE)	Specifies how many times to loop. Default is INFINITE.
scrolldelay	Time in milliseconds	Defines how long to delay between each jump (lower = faster).
scrollamount	Number (pixels)	Defines how far to jump in pixels with each movement (higher = faster).

Text

The following HTML tags are used for format the appearance of the text on your web page.

(a). Headings – <h1> to <h6>

(b). Bold - or

The text in between the tags will be displayed in bold

(c). Italic - <i> </i>

Renders the text in italics i.e displays the text at a slight angle.

(d). Underline - <u> </u>

Underlines the text written in between the tags

(e). Strike out - <strike> </strike>

Defines strike through text, puts a line right through the center of the text, crossing it out.

(f).Preformatted text - <pre> </pre>

Text in <pre> element is displayed in fixed width font, and it preserves both spaces and line breaks.

(g). Typewriter Text - <tt> </tt>

The text appears to have been typed by a type writer\

(h). **<big> </big>** - Defines bigger text

(i). **<small> </small>** - Defines smaller text

(j). **** - Defines a subscript text. Subscript that appears half a character below the baseline.

(k). **** - Defines a superscript text. Superscript that appears half a character above the baseline.

(l). **<center></center>** - It align the text to the center of the page

Example: TextFormattingTags.html

```
<html>

  <body>

    <h1>This is Heading 1</h1>

    <b>This text is in bold</b><br>

    <i>This text is in Italics</i><br>

    <u>This text is in Underlined</u><br>

    <del>This text is Striked</del><br>

    <em>This text is Emphasized</em><br>

    <tt>This text is Type Writer Text</tt><br>

    <big>This text is Bigger</big><br>

    <small>This text is Smaller</small><br>

    H<sub>2</sub>O<br>

    (a+b)<sup>2</sup>=a<sup>2</sup>+2ab+b<sup>2</sup><br>

    <center>This Text is aligned to Center</center><br>

  </body>

</html>
```

Link

<a>: Anchor Tag

- The <a> tag defines a hyperlink, which is used to link from one page to another.
- The most important attribute of the <a> element is the href attribute, which indicates the link's destination.
- By default, links will appear as follows in all browsers:
 - An unvisited link is underlined and blue
 - A visited link is underlined and purple
 - An active link is underlined and red

Attribute Value

Meaning

href URL

Specifies the destination of the link (the address to navigate to).

target _blank, _self, _parent, _top, frameName

Specifies where to open the linked document:

- _blank – new tab/window
- _self – same tab (default)
- _parent – parent frame
- _top – full body of the window
- frameName – named iframe or frame

Example: Link.html

```
<html>

  <body>

    <a href="http://www.google.com" target="_self">GOOGLE</a>

    <br>

    <a href="http://www.yahoo.com" target="_blank">YAHOO</a>

    <br>

    <a href="Headings.html" target="_parent"> My Page</a>

  </body>

</html>
```


TABLES:

- For Systematic arrangement of information we often require Tabular Structure.
- The biggest advantage of using tables on the web page is that the information gets arranged systematically.
- The <table> tag defines an HTML table.
- An HTML table consists of the <table> element and one or more <tr>, <th>, and <td> elements.
- The <tr> element defines a table row, the <th> element defines a table header, and the <td> element defines a table cell.
- An HTML table has two kinds of cells:
 - **Header cells** - contains header information (created with the <th> element)
 - **Standard cells** - contains data (created with the <td> element)
- The text in <th> elements are bold and centered by default.
- The text in <td> elements are regular and left-aligned by default.

Attributes of <table> tag:

Name	Value	Meaning
align	left, right, center	Specifies the alignment of a table relative to surrounding text.
bgcolor	rgb(x,x,x), #xxxxxx, colorname	Specifies the background color for a table.
border	0, 1	Specifies whether the table has a border.
cellpadding	pixels	Specifies the space between the cell wall and the cell content.
cellspacing	pixels	Specifies the space between cells in the table.
width	pixels, %	Specifies the width of a table.

Attributes of <tr> tag:

Name	Value	Meaning
align	left, right, center, justify	Aligns the content in a table row.
bgcolor	rgb(x,x,x), #xxxxxx, colorname	Specifies a background color for a table row.
valign	top, middle, bottom, baseline	Vertically aligns the content in a table row.

Attributes of <th> and <td> tags:

Name	Value	Meaning
align	left, right, center, justify	Aligns the content in a cell.
bgcolor	rgb(x,x,x), #xxxxxx, colorname	Specifies the background color of a cell.
rowspan	number	Specifies the number of rows a cell should span.
colspan	number	Specifies the number of columns a cell should span.
valign	top, middle, bottom, baseline	Vertically aligns the content in a cell.
width	pixels, %	Specifies the width of a cell.

Example:

```
<html>
```

```
<body>
```

```
<table bgcolor="yellow" border="1" cellspacing="0" cellpadding="10"
bordercolor="green" align="center">
```

```
<tr>
```

```
<th rowspan="2">Header1</th>
```

```
<th colspan="3">Header2</th>
```

```
</tr>
```

```
<tr>
```

```
<td>r1,c1</td>
```

```
<td>r1,c2</td>
```

```
<td>r1,c3</td>
```

```
</tr>
```

```
<tr>
```

```
<td colspan="2">r2,c1</td>
```

```
<td>r2,c2</td>
```

```
<td>r2,c3</td>
```

```
</tr>
```

```

        <tr>
            <td>r3,c1</td>
            <td>r3,c2</td>
            <td colspan="2">
                <table border="1" bgcolor="cyan" cellspacing="0" bordercolor="red"><tr>
                    <th colspan="2">Nested Table</th>
                </tr>
                <tr>
                    <td>One</td>
                    <td>Two</td>
                </tr>
                <tr>
                    <td>Three</td>
                    <td>Four</td>
                </tr>
            </table>
        </td>
    </tr>
</table>
</body>
</html>

```

IMAGE:

- Images increase the visual appearance of web pages and make your web pages more attractive.
- The tag defines an image in an HTML page.
- The tag has two required attributes: src and alt.

Attributes of tag:

Name	Value	Meaning
src	URL	Specifies the URL of an image.
align	top, bottom, middle, left, right	Specifies the alignment of an image according to surrounding elements.
alt	text	Specifies an alternate text for an image.
border	pixels	Specifies the width of the border around an image.
width	pixels	Specifies the width of an image.
height	pixels	Specifies the height of an image.
hspace	pixels	Specifies the whitespace on the left and right side of an image.
vspace	pixels	Specifies the whitespace on the top and bottom of an image.
ismap	ismap	Specifies the image as a server-side image map.
usemap	#mapname	Specifies the image as a client-side image map, referencing a <map> tag.

Example:

```
<html>

  <body>

    <br>

    

    

  </body>

</html>
```

FORMS:

- Form is a typical layout on the web page by which a user can interact with the web page.
- The <form> tag is used to create an HTML form for user input.
- The <form> element can contain one or more of the following form elements:

<input> <textarea> <select> <option> <label>

Attributes of <form> tag:

Name	Value	Meaning
action	URL	Specifies where to send the form-data when the form is submitted.
method	get, post	Specifies the HTTP method to use when sending form-data.
name	text	Specifies the name of the form.
target	_blank, _self, _parent, _top	Specifies where to display the response after submitting the form.

<input>:

- The <input> tag specifies an input field where the user can enter data.
- <input> elements are used within a <form> element to declare input controls that allow users to input data.
- An input field can vary in many ways, depending on the type attribute.

Attributes of <input > tag:

Name	Value	Meaning
type	button, checkbox, date, file, hidden, image, month, number, password, radio, reset, submit, text	Specifies the type of <input> element to display.
name	text	Specifies the name of an <input> element.
checked	checked	Specifies that an <input> element (type="checkbox" or "radio") should be pre-selected on page load.
value	text	Specifies the value of an <input> element.

<textarea>:

- The <textarea> tag defines a multi-line text input control.
- A text area can hold an unlimited number of characters, and the text renders in a fixed-width font (usually Courier).
- The size of a text area can be specified by the cols and rows attributes

Attributes of <textarea > tag:

Name	Value	Meaning
name	text	Specifies a name for a <textarea>.
rows	number	Specifies the visible number of lines in a <textarea>.
cols	number	Specifies the visible width (in characters) of a <textarea>.

<select>:

- The <select> element is used to create a drop-down list.
- The <option> tags inside the <select> element define the available options in the list.

Attributes of <select > tag:

Name	Value	Meaning
------	-------	---------

name	name	Defines a name for the drop-down list.
------	------	--

multiple	multiple	Specifies that multiple options can be selected at once.
----------	----------	--

size	number	Defines the number of visible options in a drop-down list.
------	--------	--

<label>:

The <label> tag defines a label for an <input>element.

Example: Login.html

```
<html>

  <body>

    <form name="f1" method="post" action="">

      <table align="center" cellspacing="10">

        <tr>

          <td><label> Username: </label></td>

          <td><input type="text" name="t1"></td>

        </tr>

        <tr>

          <td><label> Password: </label></td>

          <td><input type="password" name="t2"></td>

        </tr>

        <tr>

          <td><input type="submit" value="SUBMIT"></td>

          <td><input type="reset" value="RESET"></td>
```

```

                </tr>
            </table>
        </form>
    </body>
</html>

```

WORKING WITH LISTS:

- Lists are used to collect a group of items.
- There are 3 types of Lists in HTML

1. Ordered List
2. Unordered List
3. Definition List

1. ORDERED LIST:

- These are those in which the items are arranged in some specific order.
- This list can be numerical or alphabetic.
- tag: The tag defines an ordered list.

Attributes:

Name	Value	Meaning
type	1, A, a, I, i	Specifies the kind of marker to use in the list (numbers, letters, Roman numerals)
start	number	Specifies the starting value of an ordered list
reversed	reversed	Specifies that the list order should be in descending order

** tag:** defines a list item.

Example:

```

<html>
    <body>
        <ol>

```

```

        <li>Red</li>

        <li>Green</li>

        <li>Blue</li>

    </ol>

    <ol type="A">

        <li>Red</li>

        <li>Green</li>

        <li>Blue</li>

    </ol>

    <ol start=3 type="i">

        <li>Red</li>

        <li>Green</li>

        <li>Blue</li>

    </ol>

</body>

</html>

```

2. UNORDERED LIST:

- The Unordered lists are those in which the items are not arranged in any order.
- This defines a Bulleted List.
- tag: defines an unordered (bulleted) list.

Attributes:

Name	Value	Meaning
type	disc, square, circle	Specifies the kind of marker to use in the unordered list

** tag: defines a list item.**

Example:

```
<html>

  <body>

    <ul>

      <li>Red</li>

      <li>Black</li>

      <li>White</li>

    </ul>

    <ul type="circle">

      <li>Red</li>

      <li>Black</li>

      <li>White</li>

    </ul>

    <ul type="square">

      <li>Red</li>

      <li>Black</li>

      <li>White</li>

    </ul>

  </body>

</html>
```

3. DEFINITION LIST

- These are lists of items that have 2 parts, a term to be defined and the definition.
- This create lists similar to a dictionary.
 - <dl> tag: defines a definition list. It is used in conjunction with <dt> and <dd>
 - <dt> tag: defines a term/name in a definition list.

- `<dd>` tag: used to describe a term/name in a definition list.

Example:

```
<html>

  <body>

    <dl>

      <dt>HTML:</dt>

      <dd>Hyper Text Markup Language</dd>

      <dt>CSS:</dt>

      <dd>Cascading Style Sheets</dd>

    </dl>

  </body>

</html>
```

FRAMES:

- HTML Frames divide a browser window into several pieces or panes, each pane containing a separate HTML page.
- Each portion is called as a Frame.
- A Collection of Frames in the browser window is known as a Frameset.
- HTML Frames allow authors to present documents in multiple views, which may be independent windows or sub windows.
- One of the Key advantages that frames offer is that you can load and reload single frames without having to reload the entire contents of the browser window.
- **<frameset>:**
 - The `<frameset>` tag defines a frameset.
 - The `<frameset>` element holds one or more `<frame>` elements. Each `<frame>` element can hold a separate document.

- The <frameset> element specifies how many columns or rows there will be in the frameset, and how much percentage/pixels of space will occupy each of them.

Attributes of <frameset> tag:

Name	Value	Meaning
cols	Pixels, %, *	Specifies the number and size of columns in a frameset
rows	Pixels, %, *	Specifies the number and size of rows in a frameset

<frame>:

- The <frame> tag defines one particular window (frame) within a <frameset>.
- Each <frame> in a <frameset> can have different attributes, such as border, scrolling, the ability to resize, etc.

Attributes of <frame> tag:

Name	Value	Meaning
src	URL	Specifies the URL of the document to show in a frame
frameborder	0, 1	Specifies whether or not to display a border around a frame
name	text	Specifies the name of a frame
noresize	noresize	Specifies that a frame is not resizable
scrolling	yes, no, auto	Specifies whether or not to display scrollbars in a frame

Example:

Frames.html:

```
<html>

  <frameset cols="25%,*,25%">

    <frame src="http://www.bing.com" name="f1" noresize>

    <frame src="http://www.w3schools.com" name="f2" noresize>

    <frame src="Mypage.html" name="f3" noresize>

  </frameset>

</html>
```