

# HTML

# Overview of HTML

- HTML stands for Hypertext Markup Language.
- HTML is the standard markup language for creating web pages and web applications.
- HTML is invented in 1990 by a scientist called Tim Berners-Lee.
- HTML is World Wide Web's core markup language used write web pages.

## Features of HTML:

1. **Easy and Simple language**
2. **Markup language:** It provides a flexible way to design web pages along with the text.
3. **Platform Independent :** It can display on any platform like Window, Linux etc.
4. **Attractive and interactive:** It facilitates the programmers to add Graphics, Videos and sound to the web pages.
5. **Effective Presentation :** It has a lot of formatting tags for effective presentation.
6. **Support to Scripting language:** It support scripting languages to create dynamic web applications.

# HTML Page Structure

HTML web page is divided into three parts:

1. **Comment Section (optional)** : This section contains comments about the web page.
2. **Head Section (optional)** : The head section is defined with a starting <head> tag and closing </head> tag. This section usually contains a title for the web page.
3. **Body section** : The body section comes after the head section. The body section contains the entire information about the web page and its behavior.

## Example:

```
<!-- First HTML Program -- >
```

```
<html>
```

```
<head><title> Introduction to HTML </title></head>
```

```
<body>
```

HTML stands for Hypertext Markup Language

```
</body>
```

```
</html>
```

# Elements of HTML

- HTML elements are the building blocks of HTML pages.
- HTML uses elements to specify a document's structure, to provide information and to format its contents.
- HTML elements are defined or represented by using HTML tags.
- HTML element consists of a start tag, its contents and end tag.

Syntax is :

<element name> element contents </element name>

## **Basic elements of an HTML page are :**

1. Text header elements : <h1>, <h2>, <h3>, <h4>, <h5>, <h6>
2. Paragraph element :<p>
3. Horizontal ruler element : <hr>
4. Link element : <a>
5. List elements : <ul>,<ol>,<li>
6. Image element : <img>
7. Divider element : <div>

# HTML Tags

HTML documents are simply a text made up of HTML elements and these elements are defined using HTML tags.

Tags contain elements which provide instructions for how information will be processed or displayed on a web page.

The tag is an HTML command that shows the layout or displays the desired output of a whole or part of the web page.

HTML tags can be of two types:

1. **Paired Tags:** In paired tag, first tag is called the opening tag<> and second tag is called closing tag </>. Paired tag is also called as container tag. E.g. <html>,<head>,<body> etc.
2. **Singular tags/ Stand alone tags:** Singular tag is also called as stand alone tag or empty tag. The stand alone tag does not have closing tag. E.g. <br>

# Text Formatting Tags

1. `<b>` : It is used to define bold text. **Syntax:** `<b>.....</b>`
2. `<i>` : It is used to define italic text. **Syntax:** `<i>.....</i>`
3. `<em>`:It is used for indicating emphasis(like Italic). **Syntax:** `<em>.....</em>`
4. `<u>` : It is used for underline the text. **Syntax:** `<u>.....</u>`
5. `<small>` : The content of `<small>` element is displayed one font size smaller than the rest of the text surrounding it. **Syntax:** `<small>.....</small>`
6. `<big>` : The content of `<big>` element is displayed one font size larger than the rest of the text surrounding it. **Syntax:** `<big>.....</big>`
7. `<strong>` : It is used for strong(like bold) effect on text. **Syntax:** `<strong>.....</strong>`
8. `<ins>` : It defines a text that has been inserted into a document.(underline) **Syntax:** `<ins>.....</ins>`
9. `<del>` : It defines a text that has been deleted from a document.(strike) **Syntax:** `<del>...</del>`
10. `<strike>` : It is used for strikethrough effect on a text. **Syntax:** `<strike>.....</strike>`
11. `<sup>` : It is used to define superscript text. **Syntax:** `<sup>.....</sup>`
12. `<sub>` : It is used to define subscript text. **Syntax:** `<sub>.....</sub>`

# Quotation and Definition Tags

1. `<q>` : It is used for short quotation. **Syntax:** `<q>.....</q>`
2. `<blockquote>` : It is used for indicating long quotation (i.e. quotations that span multiple lines)  
**Syntax:** `<blockquote>.....</blockquote>`
3. `<abbr>` : It is used for indicating an abbreviation like WWW. **Syntax:** `<abbr>.....</abbr>`
4. `<address>` : It is used to define contact information for author / owner of a document.  
**Syntax:** `<address>.....</address>`
5. `<dfn>` : This tag is used for indication a definition. **Syntax:** `<dfn>.....</dfn>`
6. `<cite>` : It is used for indicating a citation. **Syntax:** `<cite>.....</cite>`
7. `<bdo>` : It is used to define text direction. **Syntax:** `<bdo dir="ltr">.....</bdo>`

Attribute	value
dir	ltr, rtl

# Block Level Tags

**1. Heading Tags :** <h1> to <h6> are the heading tags, where <h1> gives largest font size and <h6> gives smallest font size. **Syntax:** <h1>.....</h1>

Attribute	value
align	left, right, center, justify

**2. <p> Tag :** It is used for defining a paragraph. **Syntax:** <p>.....</p>

Attribute	value
align	left, right, center, justify

**3. <br> Tag :** It is used for specifying a line break. The <br> tag is an empty tag. **Syntax:** <br>

**4. <center> Tag :** It is used to center align text. **Syntax:** <center>.....</center>

**5. &nbsp; : Non breaking spaces** used to set more than one spaces between two words.

**6. <div> :** It defines a division or a section in a HTML document. It is used to group block elements to format them with CSS. **Syntax:** <div>.....</div>

Attribute	value
align	left, right, center, justify



**7. <hr> Tag :** It is used for specifying a horizontal rule in an HTML document. It is also used to separate content in a HTML page. **Syntax:** <hr>

Attribute	value	Description
align	left, right, center	Specifies the alignment of a <hr> element
size	pixels	Height of a <hr> element
width	pixels %	Width of a<hr> element
noshade	noshade	It display in one solid color instead of a shaded color
Color	color_name	Set color for <hr>

**8. <font> Tag :** It specifies the font face, font size and font color of a text. **Syntax:** <font>...</font>

Attribute	value	Description
color	color name	Specifies the color of a text
face	font family	Specifies the font of a text
size	number	Specifies the size of a text

# Anchor Tag <a>

<a> tag is used for creating a hyperlink to another web page. The <a> tag can be used in two ways:

1. To create a link to another document, by using href attribute
2. To create a bookmark inside a document, by using the name attribute.

**Syntax:** <a href = “URL”>.....</a>

Attribute	value	Description
href	URL	Specifies the URL of the page the link goes to
name	section_name	Specifies the name of an anchor
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 (this is default)
	framename	Opens the linked document in a named frame

# Image Tag <img>

<img> tag is used to add image in web page. **Syntax:** .....</img>

Attribute	value	Description
alt	text	Specifies an alternate text for a image
src	URL	Specifies the URL of an image
align	top, bottom, middle, left, right	Specifies alignment of an image
border	pixel	Specifies the width of the border around an image
height	pixel	Specifies height of an image
width	pixel	Specifies width of an image
hspace	pixel	Specifies whitespace on left and right side of an image
vspace	pixel	Specifies whitespace on top and bottom of an image

# List

HTML gives us three different types of lists :

1. **Unordered Lists** : It is a collection of related items that have no special order or sequence. Each item in the list is marked with a **bullet**.
2. **Ordered Lists** : The contents of an ordered list just like an unordered list, except that the items are **numbered** instead of bullets.
3. **Definition Lists** : Definition List is used to present a glossary, list of terms or other name/value list.

**<li> Tag:** It defines a list item. It is used in ordered and unordered lists. **Syntax:** <li>.....</li>

Attribute	Value	Description
type	1,A,a,I,i, disc, square, circle	Specifies which kind of bullet point will be used.
value	number	Specifies the value of a list item.

**<ul> Tag:** An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

**Syntax:** <ul>.....</ul>

Attribute	Value	Description
type	disc, square, circle	Specifies the kind of marker to use in the list [Default value is disc]

**<ol> Tag:** An ordered list starts with the <ol> tag. Each list item starts with the <li> tag. Each item in the list is marked with a number. **Syntax:** <ol>.....</ol>

Attribute	Value	Description
reversed	reversed	Specifies that the list order should be descending like 9,8,7,...
start	number	Specifies start value of an ordered list
type	1, A, a, I, i	Specifies the kind of marker to use in the list [Default value is 1]

**<dl> Tag:** It defines definition list. A definition list is a list of items, with description of each item.

**Syntax :** <dl>...</dl>

**<dt> Tag :** It is used for definition term. **Syntax:** <dt>....</dt>

**<dd> Tag :** It is used for definition description. **Syntax:** <dd>....</dd>

# Table

**<table> tag:** The <table> tag defines an HTML table. **Syntax:** <table>....</table>

Attribute	Value	Description
align	left, right, center	Specifies alignment of a table
bgcolor	colorname	Specifies background color for a table
border	pixels	Specifies width of the borders around a table
width	pixels %	Specifies the width of a table
cellpadding	pixels	Specifies the space between the cell wall and the cell content
cellspacing	pixels	Specifies the space between cells

**<th> Tag:** <th> tag defines a header cell in an HTML table.

**Syntax:** <th>.....</th>

Attribute	Value	Description
abbr	text	Specifies an abbreviated version of the content in a cell.
align	left, right, center justify	Aligns the content in a cell
valign	top, middle, bottom	Specifies vertical align the contents in a cell
bgcolor	colorname	Specifies the background color of a cell.
colspan	number	Sets the number of columns a cell should span
rowspan	number	Sets the number of rows a cell should span
height	pixels %	Sets the height of a cell
width	pixels %	Sets the width of a cell
nowrap	nowrap	Specifies that the content inside a cell should not wrap

**<tr> Tag:** <tr> tag defines a row in an HTML table. A <tr> element contains one or more <th> or <td> elements.

**Syntax:** <tr>.....</tr>

Attribute	Value	Description
align	left, right, center justify	Aligns the content in a table row
valign	top, middle, bottom	Specifies vertical align the contents in a table row
bgcolor	colorname	Specifies the background color of a table row

**<caption> Tag :** The <caption> tag defines a table caption. This can either appear above or below the table.

**Syntax:** <caption>.....</caption>

Attribute	Value	Description
align	left, right, top bottom	It defines the alignment of a caption



**<td> Tag:** <td> tag defines a standard cell in an HTML table. The <td> tag is used to mark up individual cells inside a table row.

**Syntax:** <td>.....</td>

Attribute	Value	Description
abbr	text	Specifies an abbreviated version of the content in a cell.
align	left, right, center justify	Aligns the content in a cell
valign	top, middle, bottom	Specifies vertical align the contents in a cell
bgcolor	colorname	Specifies the background color of a cell.
colspan	number	Sets the number of columns a cell should span
rowspan	number	Sets the number of rows a cell should span
height	pixels %	Sets the height of a cell
width	pixels %	Sets the width of a cell
nowrap	nowrap	Specifies that the content inside a cell should not wrap

**Cellpadding and Cellspacing in a table:** These two attributes used to adjust the white space in table cell. cellpadding defines the width of the border, while cellpadding represents the distance between cell borders and the content within.

**Colspan and rowspan attributes in a table :** Colspan is used to merge two or more columns into a single column and rowspan is used to merge two or more rows.

**Nested Table :** One table inside another table is called as nesting of tables.

# Frames

- Frame is a technique to display **multiple documents** at once.
- Frames allow us **to split the browser window into multiple window** that can display different pages.
- With frames, we can display more than one HTML document in the same **browser window**. Each HTML document is called a **frame**.
- A collection of frames in the browser window is known as a **frameset**.
- Frames are defined in <frameset>, and inside it we have <frame> which defines the location of the web page to load into the frame.
- **<frameset> Tag** : <frameset> tag holds one or more frame elements. It defines how to divide the window into frames.

**Syntax** : <frameset rows/cols=".....">

<frame src=".....">

</frameset>

Attribute	Value	Decription
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> Tag :** This tag indicates what goes in each frame of the frameset.

It is empty element therefore should not have any content.

<frame> element should always carry one attribute src, to indicate the page that should represent that frame.

**Syntax:** <frame>.....</frame>

Attribute	Value	Description
src	URL	Specifies the URL of the document to show in a frame.
name	name	Specifies the name of a frame.
frameborder	0,1	Specifies whether or not to display a border around a frame.
marginheight	pixels	Specifies the top and bottom margins of a frame.
marginwidth	pixels	Specifies the left and right margins of a frame.
noresize	noresize	Specifies that a frame cannot be resized.

**<noframes> Tag :** If a user is using any old browser or any browser which does not support frames the <noframes> element should be displayed to the user.

It is typically used in a frameset document to provide alternate content for browser that do not support frames or have frames disabled.

**Syntax:** < noframes >.....</noframes>

**<iframe> Tag :** The <iframe> tag specifies an inline frame.

An inline frame is used to embed another document within the current HTML document.

**Syntax:** < iframe >.....</iframe>

Attribute	Value	Description
name	text	Specifies the name of a frame
src	URL	Specifies the address of the document to embed in the frame
height	pixels	Specifies the height of a frame
width	pixels	Specifies the width of a frame

# Working with forms and Form Controls

HTML forms are one of the main point of interaction between a user and a website. They allow users to send data to the website.

A form is a group of controls that the user interacts with and sends the result to specific files as designed by an application developer.

**Syntax:** <form>....</form>

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

**<input> Tag :** <input> tag defines an input control used to select user information. <input> tag are used within a <form> element to declare input controls that allow users to input data.

**Syntax:** < input type=“...”>

Attribute	Value
align	left, right, top, middle, bottom
alt	text
checked	checked
disabled	disabled
maxlength	number
name	text
readonly	readonly
size	number
src	URL
value	text
type	button, checkbox, file, hidden, image, password, radio, reset, submit, text

**Text Field :** It is one line areas that allow the user to input text.

**Syntax:** <input type="text">

**Attributes:** type, name, value, size, maxlength

**Password Field:** It is similar to text fields. The difference is that what is entered into a password field shows up a dots on the screen.

**Syntax:** <input type="password">

**Attributes:** size, maxlength, name, value, align

**<fieldset> Tag:** The <fieldset> tag is used to group related elements in a form. It draws a box around the related elements.

Attribute	Value
disabled	disabled
name	text



**Hidden Field :** Hidden fields are similar to text fields. The difference is that the hidden field does not show on the page. Therefore the visitor cannot type anything into a hidden field, which leads to the purpose of the field.

**Syntax:** <input type="hidden">

**Attributes:** type, name, value

**<textarea> tag:** It defines a multi-line text input control. Textarea are text fields that can span several lines. A textarea can hold an unlimited number of characters, and the text renders in a fixed width font.

**Syntax:** <textarea>....</textarea>

**Attributes:** name, rows, cols

**Radio Button:** Radio buttons are used when only one option is required to be selected.

**Syntax:** <input type="radio">

**Attributes:** name, value, checked

**Checkbox control:** Checkboxes are used when more than one option is required to be selected.

**Syntax:** <input type="checkbox">

**Attributes:** name, value, checked

**<select> tag:** It is used to create drop down list. Drop down list is used when we have many options available to be selected but only one or two will be selected.

**Syntax:** <select>.....</select>

**Attributes:** disabled, multiple, name, size

**<option> tag:** It defines an option in a select list. The <option> tag go inside a <select> element.

**Syntax:** <option>....</option>

**Attributes:** disabled, multiple, name, size

**Creating Button:** The <button> tag defines a push button. When we use the <input> element to create a button, the type of button we create is specified using the type attribute. The type attribute can take submit, reset and button values.

**Syntax:** <button>.....</button>

**Attributes:** disabled, name, type, value

**<embed> tag:** The <embed> tag allows us to add multimedia files like sound, music and video files to the web pages.

Attributes	Values
align	center, left, right
autostart	true, false
loop	true, false
playcount	Specifies number of times to play the sound
width	pixels
height	pixels
name	text
src	URL
volume	0 to 100

**<marquee> tag:** The < marquee > is used to create scrolling text or an image horizontally or vertically.

### **Attributes**

### **Values**

direction	up,down,left,right
behavior	scroll, slide, alternate
bgcolor	colorname
height	pixels
width	pixels
hspace	pixels
vspace	text
scrolldelay	mSeconds
loop	number

# Thank you