# HTML

# HTML

Html stands for hyper text markup language.The purpose of HTML is to create documents that are readable over browser .HTML document contains

different tags to interpret diffrent parts of a web document

HTML  is used to create web pages that are visible over a web browser

web pages can be static as well as dynamic.Collection of diffrent static and dynamic pages is called a web application .static part of web page can be created using HTML

HTML document can have diffrent tags .These tags can be basically of two types

- Container tags :-tags that contain elements ,like data or other tags
- Empty tags:-tags that do not contain any other tag or element

tags are created using < > braces ,these are also known as markup

tag can contain tag name and optional or mandatory attributes

sytax of tag

< tag name > </tag name>

tag with attributes <tag name [attribute=value...]> </tag name>

syntax for empty tag  < tag name />

Even though HTML is not case sensitive ,it is recommended to follow case sensitive as convention to make markup more readable

HTML Comments  . Comments are used to hide the part of document that does not concern the  viewer of the document .However ,these comments are visible in source of the document

<!---  contents not visible -->

comments can be placed anywhere in document and do not affect processing of document

A HTML document can be divided in diffrent parts

Lets see the structure of HTML Document

```
<HTML>
  <HEAD>
  </HEAD>
 <BODY>
 </BODY>
</HTML>
```

The above example shows basic layout of a HTML document

There is a root tag called HTML that contains complete document

There is the head tag  and then there is body tag

These tags can contain one or more other tags

Lets see these tags

head tag :- A head tag contains head data regarding document ,like title of document ,style ,script and other meta information .

The head part of document is loaded befor body part

parts of a head tag

Title tag :-contains title of document,that will be displayed on title bar (tab of document)

```
<HTML>
 <HEAD>
  <TITLE>
  My Document
 </TITLE>
 </HEAD>
</HTML>
```

Base tag :- Contains information regarding base location of resources from where document can search for resources

```
<HTML>
 <HEAD>
  <Base href='c:/htmldemo/'/>
 </HEAD>
 <BODY>
 <img src='myimage.jpg'/>
</BODY>
 </HTML>
</HTML>
```

Style tag :-contains internal style sheet for document

```
<HTML>
 <HEAD>
<STYLE>
  p
{
 background-color:pink;
}
</STYLE>
 <BODY>
    <p>
 this is a paragraph with styling
 </p>
</BODY>
</HTML>
```

Script tag:-this tag is used to describe scripting elements of a document

```
<HTML>
  <HEAD>
  <SCRIPT>
```

```
 alert('hello user!')
</SCRIPT>
</HEAD>
</HTML>
```

Link tag :- this tag is used to connect an external  style sheet to the document

```
<HTML>
<HEAD>
 <LINK rel="stylesheet" type="text/css" href="mystyle.css"/>
</HEAD>
<body>
<p>
external style sheet applied
</p>
</body>
</HTML>
```

Meta tag : this tag contains all the meta information regarding the document .Meta means data regarding the data ,like page description ,keywords ,document creation date,document modified date

```
<HTML>
```

```
<HEAD>
 <meta name="author" content="A.Sailesh Padmanabhan">
 <meta name="keyword" content="HTML,script,style">
 <meta name="view-port" content="width=device-width,initial-scale=1.0">
 <meta http-eqiv="refresh" content="30">
</HEAD>
 <BODY>
  </BODY>
<HTML>
```

**********

Body tag contains content for the document

Contents can be arranged in diffrent ways .They are

Text

List

Tabluar

Image or graphics

Lets see different tags for text inside body tag

paragraph tag :represents one paragraph in a document

```
<HTML>
 <HEAD>
  </HEAD>
<BODY>
  <P>
 Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.
  </P>
 <P>
To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.
 </P>
 <BODY>
</HTML>
```

List tags

List in html can be ordered  or unordered

an ordered list is created using ol tag

Li tag represents content for the list

```
<HTML>
 <HEAD>

 <HEAD>
<BODY>
 <ol>
 <li>Monday</li>
 <li>Tuesday</li>
 <li>Wednesday</li>
 <li>Thursday</li>
 <li>Friday</li>
<li>Saturday</li>
<li>Sunday</li>
```

```
 </ol>
</BODY>
</HTML>
```

In the above example list is generated with numbers

```
<HTML>
 <HEAD>
 <HEAD>
<BODY>
 <ul>
 <li>Monday</li>
 <li>Tuesday</li>
 <li>Wednesday</li>
 <li>Thursday</li>
 <li>Friday</li>
<li>Saturday</li>
<li>Sunday</li>
 </ul>
</BODY>
</HTML>
```

The same example will create an un ordered list

Sublisting can be done inside any  of the list tags to generate a sublist

```
<HTML>
 <HEAD>
 <HEAD>
<BODY>
  <ul>
  <li>Monday
<ul>
<li> 9- 11
<ul>
 <li>Office</li>
 </ul>
 </li>
<li> 11 -1
<ul>
<li> Market</li>
</ul>
</li>
</ul>
</li>
  <li>Tuesday</li>
  <li>Wednesday</li>
  <li>Thursday</li>
  <li>Friday</li>
```

```
 <li>Saturday</li>
 <li>Sunday</li>
  </ul>
</BODY>
</HTML>
```

The above example creates an unordered list inside two lists to create a bullet for sublist

Creating Tables

Data can be presented a tabular format using a tabular tag

A table consists of row and columns .Row can be generated using a tr tag and column can be generated using a td tag .A table header can be generated using column headings

Lets see an example

```
<HTML>
    <HEAD>  </HEAD>
```

```
 <BODY>
 <TABLE >
  <TR>
<TH>
TIME/DAYS
</TH>
<TH>
    MONDAY
</TH>
<TH>
    TUESDAY
</TH>
<TH>
    WEDNESDAY
</TH>
<TH>
    THURSDAY
</TH>
<TH>
    FRIDAY
</TH>
<TH>
    SATURDAY
```

```
 </TH>


<TH>
     SUNDAY
 </TH>


   </TR>
<TR>
 <TD>
  9 AM -11 AM
 </TD>
 <TD>
 OFFICE
 </TD>
<TD>
 CLIENT MEET
</TD>
<TD>
 OFFICE
</TD>
<TD>
OFFICE
</TD>
```

```
<TD>
 OFFICE
</TD>
 <TD>
  WEEKEND
</TD>
 <TD>
 WEEKEND
 </TD>
</TR>
<TR>
 <TD>
  11 AM -1 PM
 </TD>
<TD>
 OFFICE
 </TD>
 <TD>
 CLIENT MEET
 </TD>
 <TD>
 MARKET SURVEY
 </TD>
```

```
<TD>
 SALES MEET
 </TD>
<TD>
  OFFICE
</TD>
 <TD>
   WEEKEND
</TD>
  <TD>
 WEEKEND
 </TD>
</TR>
<TR>
 <TD>
 2 PM -3 PM
 </TD>
<TD>
  CLIENT MEET
  </TD>
 <TD>
  TRAINING
 </TD>
```

```
 <TD>
  TRAINING
 </TD>
<TD>
 OFFICE
 </TD>
<TD>
  OFFICE
</TD>
 <TD>
   WEEKEND
</TD>
  <TD>
 WEEKEND
 </TD>
</TR>
<TR>
  <TD>
 3 PM -5 PM
 </TD>
<TD>
  PRODUCT REVIEW
  </TD>
```

```
<TD>
 OFFICE
</TD>
<TD>
 CLIENT MEET
</TD>
<TD>
 SALES REVIEW
</TD>
<TD>
 OFFICE
</TD>
<TD>
  WEEKEND
</TD>
 <TD>
 WEEKEND
</TD>

</TR>
  </TABLE>

 </BODY>
```

```
</HTML>
```

The above example generates a table with week days a column headers

The table borders can be made visible using a  table border attribute

<TABLE BORDER="2">

caption can be addes to table usin a caption tag

<TABLE>

<CAPTION>

TIME TABLE

</CAPTION>

...

merging two columns

columns can be merged using a  colspan attribute

<TH colspan="2">

SATURDAY/

SUNDAY

</TH>

rows can be merged  using rowspan attribute

<TD rowspan="2">

2 PM -3 PM

</TD>

cellpadding :specifies space between cell walls and cell contents

cellspacing : specifies space between cells

<TABLE BORDER="2" cellpadding="5" cellspacing="4">

bgcolor : specifies background color for table ,table header ,table row or table cell

align:specifies alignment of table on page

Displaying Images in HTML document

An image can be displayed using img tag .img tag has src attribute that contains source location of image

<IMG SRC="C:\htmldemo\IMAGE1.JPG"/>

alt attribute is used show alternate text in case image is not visible

<IMG SRC="C:\htmldemo\IMAGE2.JPG" ALT="image here"/>

navigation : navigation between html pages can be done using hyperlink

a hyperlink contains location of the page that should be loaded when link is clicked

to create a hyper link anchor tag is used

<a href='home.html'>Home</a>

Formatting tags

Different tags are used to display tags in different format

Bold tag

<B> Bold Text </B>

Italisiced text

<I> Italic text </I>

Underlining text

<U> Underline </U>

Font tag

<FONT COLOR="red" SIZE="40" FACE="COMIC SANS MS"> This is font </FONT>

A font tag has attributes color ,size and face to define color ,size and font face of text

Creating sections in a document

Sections in an html document can be created using Div tag .A div encloses contents as a seperate block

You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries. Themes and styles also help keep your document coordinated

another tag span is used to apply styling between text without breaking the text

Themes and styles also help keep your  document   coordinated

GUI controls in HTML

HTML provides for tags that can displayed a Graphical user interface over a web page

These controls can be used to accept input ,send information to server,our display output

Lets see these controls

FORM :This tag is used as an enclosing tag for all other html controls .A form tag collects data from enclosed controls and sends it to remote location for processing

Form tag has attributes action and method

Action attribute contains url of location where data collected from controls has to be sent

method attribute contains HTTP method to be used for sending data .method attribute in form tag uses by default GET method of HTTP .

A GET method displays data collected from controls over url using a key value pair format

for example if url in action method is http://www.myapp.com/mypage

and data to be sent is

name: PeterSans

then url would be

http://www.myapp.com/mypage?name=PeterSans

A GET method is the default method value.Another method is POST method.POST method encoloses data in message body ,hence data is not visible on url

POST can be used where confidential data has to be sent like password .GET can be used for bookmarking pages

Lets see form tag

```
<FORM method="POST" action="http://www.myapp.com">

....

</FORM>
```

GUI controls inside form tag

To define most of the controls an input tag is used .

Attributes inside input tag describes type of control and value to be displayed inside control

A type attribute defines type of control to be created

A value attribute defines type of value to be displayed

name attribute is used to identify control inside a script or css file.Also a control's value is retreived from server side using name attribute

Lets see diffrent controls

Text Control

Used for taking a single line input

<input type='text' name='txt' value='Hello User'/>

Submit Control

used to submit data to server

<input type='submit' name='smbt' value='Submit'/>

CheckBox

used for multiple selection of values

<input type='checkbox' name='chk' />

Radio Button

used for single selection from group of values

<input type='radio' name='rd'/>

Password control

used for accepting value as password

<input type='password' name='pass'/>

Reset control

used for clearing all values from control

<input type='reset' value='Reset'/>

File Select control

used to select a file from directory

<input type='file' name='fileselect'/>

Hidden control

used for placing a hiddent value in a form

<input type='hidden' name='hddn'/>

Button control

used for creating a clickable button

<input type='button' name='btn' value='Button'/>

DropDown control

used for creating a drop down list

<select name='dropdown'>

<option>

value 1

</option>

<option>

value 2

</option>

...

</select>

Multiline text box

used for creating multiline text box

<TextArea cols=10 rows=10>

</TextArea>

Lets see an example of a form

```
<Form method='POST' action='http://www.myapp.com'>
Enter User name <input type='text' name='username'/><br/>
Enter Password <input type='password' name='pass' /><br/>
Remember Me<input type='checkbox' name='chk'/>
```

```
<input type='submit' value='Login'/>
</Form>
```

Lets see an example of a drop down list

```
<Form method='POST' action='http://www.myapp.com'>
<select name='apptype'>
 <option>
   Windows
 </option>
  <option>
   GUI
  </option>
  <option>
   Web
  </option>
  </select>
<input type='submit' value='create'/>
</Form>
```

What we have seen so far is HTML 4 .A higher edition of HTML is HTML5 that contains more advance controls to handle graphic elements and multimedia controls

HTML5 contains basic attributes of HTML and also allows for some advance features like drawing on canvas ,support for audio and video controls ,location based services

Lets see an example of a video control

```
<!DOCTYPE HTML>
<HTML>
 <HEAD>
 </HEAD>
 <BODY>
   <VIDEO src="sample.mp4" type="video/mp4" controls >
 </VIDEO>
 </BODY>
</HTML>
```

The example shown above starts with DOCTYPE tag.A  DOCTYPE Tag informs browser that the document is an HTML5 document .HTML5 controls can be interpreted only when DOCTYPE is included in the document

A VIDEO tag is included that contains src of video and type of video.Controls attribute provides for display of controls to manage video over browser

```
<!DOCTYPE HTML>
<HTML>
 <HEAD>
 </HEAD>
 <BODY>
   <AUDIO src="sample.mp3" type="audio/mp3" controls >
 </AUDIO>
 </BODY>
</HTML>
```

The above example will play out an audio and display controls to manage audio over browser