

0 Level : Web Designing & Publishing



Chapter 3 : HTML



Objective:

After completing this unit, Learner will be able to :

- Develop static website using different HTML Controls.
- Able to Create interactive Form to accept data from user.
- Able to represent data/information in different layouts and formats.



Introduction to HTML

- HTML (**Hypertext Markup Language**) is used to create **web document** known as **Web Page**.
- HTML is not a programming language, it is a **Markup Language**.
- It is simply a collection of certain keywords called "**Tags**".
- HTML is **not a case sensitive language** means we can write the code of html in upper case or in lower case.
- Tim Berners-Lee created HTML in late **1991** but didn't release it officially. He published it later in **1995 as HTML 2.0**.
- The latest standard of HTML is **HTML 5.0**



HTML Tags

- HTML Tags are signals to a browser that should do something other than just through text upon the screen.
- Tags are basic building block element of HTML.
- All HTML tags begin with an open **angle bracket** (<) and end with close angle bracket (>).
- HTML tags can be a two types :-
 - Paired Tag
 - Singular Tags



Paired Tag

- Tags which have both the **opening and closing tag** known as Paired tag.
- Paired tag also known as **container tags** because they hold some **text or another HTML tags** in between it.

Example:

- `<body></body>`
- `<p></p>`
- ``



Empty Tags

- Tags, which have **only opening** and no ending, are called empty tags.
- Empty tags also known as **singular tags**.
- Example:
 - `<hr/>`
 - `
`
 - ``



Structure of HTML page

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

Some tags are placed hear..

```
  </head>
```

```
  <body>
```

Some text/tags are placed hear..

```
  </body>
```

```
</html>
```



HTML Tag <HTML>

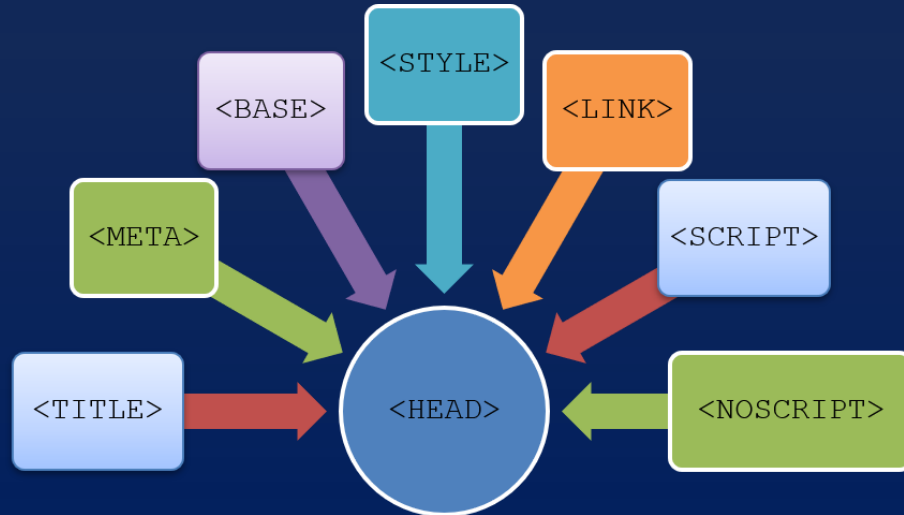
- The <HTML> tag encloses all other HTML tags and associated text within your document.
- It is an optional tag.
- You can create an HTML document that omits these tags, and your browser can still read it and display it. But it is always a good form to include the start and stop tags.



Head Section and Elements of Head Section

The <HEAD> tag:

- Is contained within the <HTML> and </HTML> tags.
- Is used to describe the header of the HTML document.
- Can include the following tags:



Elements of Head Section

The `<TITLE>` tag:

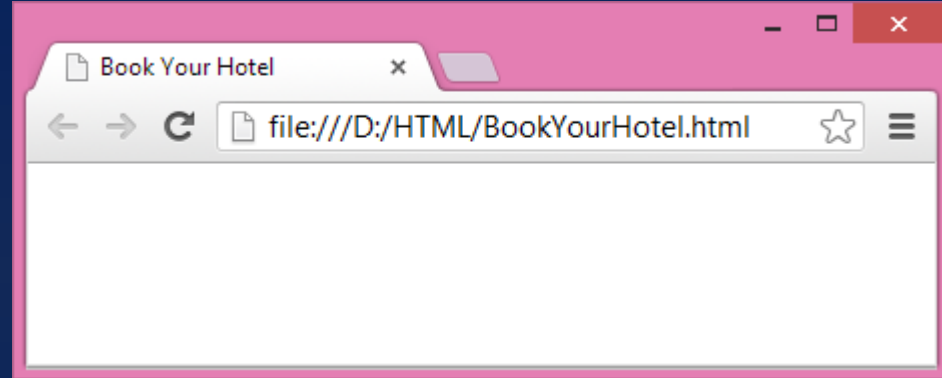
- Defines the title of the document.
- Can occur only once.

For example:

```
<HEAD>
```

```
<TITLE> Book Your Hotel</TITLE>
```

```
</HEAD>
```



Elements of Head Section (Conti.)

The <META> tag:

- Provides additional information about the current document in the form of name and value pairs.

For example:

```
<META name="description" content="This website provides you the benefit of booking rooms in the best hotels of US">
```

```
<META name="keywords" content="hotel, online, booking ">
```

```
<META name="author" content="Harry Anem">
```

```
<META http-equiv="refresh" content="30">
```



Elements of Head Section (Conti.)

The <BASE> tag:

- Specifies a base URL or address for all the related links on a page.

For example:

```
<HTML>

    <HEAD>

        <TITLE> The BASE tag Example</TITLE>

        <BASE href="d:/Images/">

    </HEAD>

    <BODY>

        <IMG src="img1.jpg">

    </BODY>

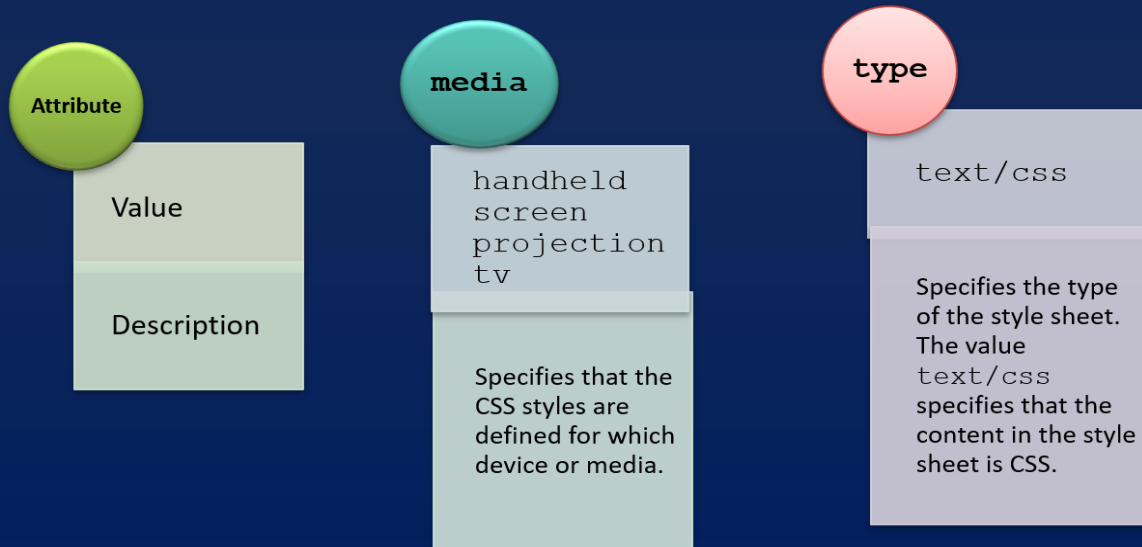
</HTML>
```



Elements of Head Section (Conti.)

The <STYLE> tag:

- Defines the style information associated with the HTML document.
- Provides various attributes:



Elements of Head Section (Conti.)

The <LINK> tag:

- Is used to establish the relationship of the current document with other documents in a website.

Ex : <LINK href="StyleHome.css" rel="stylesheet"/>

- Provides the following attributes:

rel

- Is used to establish a link from the current document to the external document.

href

- Specifies the name or the URL of the linked document.

hreflang

- Specifies the language of the text used in the linked document by using a two-letter language code, such as en for English.

media

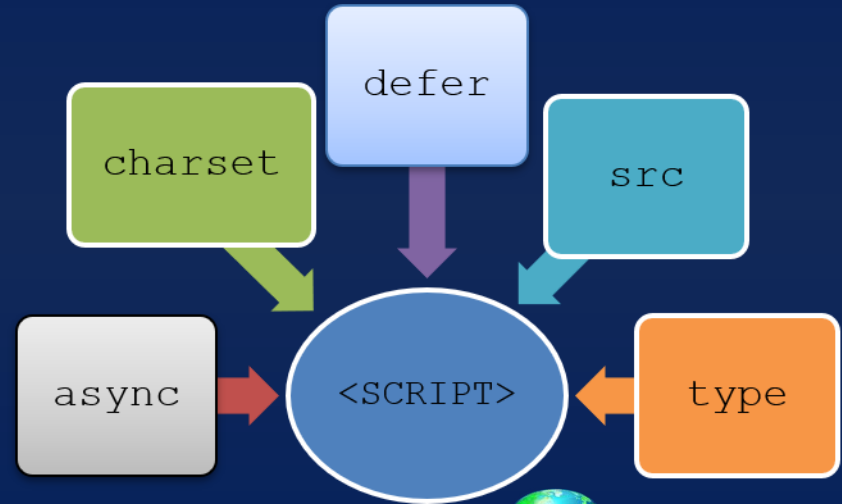
- Specifies the device on which the linked document will be displayed.



Elements of Head Section (Conti.)

The <SCRIPT> tag:

- Specifies the client-side script, such as JavaScript, associated with the document.
- Contains the following attributes:



The <NOSCRIPT> tag:

- Displays an alternate content on the browsers on which the scripts have been disabled.



The body section

- Is the central part of the HTML document required to display content on the Web page.
- Begins with the <BODY> tag.
- Contains the actual visible content of an HTML document.



Attribute of Tag

- Attribute are used to say something about the element that carries them and always appear on the opening tag of the element that carries them. All attributes are made-up two parts a name and a value.
- The name is the property of the element that you want to set.
- The value is what you want the value of property to be.

Syntax:

```
<tagName attributeName="value">content</tagName>
```

Example:

```
<a align="center"> Text</p>
```



Attributes of Body Tag:

BGCOLOR

- To set the background color page (color name or color code)

TEXT

- To set the text color of web page (color name or color code)

TOPMARGIN

- To set the margin from top of page (px or %)

LEFTMARGIN

- To set the margin from left & right of page (px or %)

BACKGROUND

- To set the background image on web page (url/path)

LINK

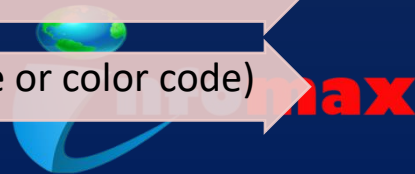
- To set the link color of page (color name or color code)

VLINK

- To set the color of visited link of page (color name or color code)

ALINK

- To set the link of active link of web page (color name or color code)



Formatting Tags:

Heading Tags:

- Specifies the main idea of the content.
- Can range from <H1> to <H6>.

A paragraph:

- <p></p> tag is used to define a paragraph.

Attribute of <p> tag:

- align : to set the alignment of paragraph [Left, Right, center, Justify]
- Ex: Paragraph text</p>



Formatting Tags (Conti.)

Link Break

➤ `
` tag is used for manual line break. It is an empty (Singular) tag.

Draw a horizontal line

➤ `<hr/>` tag is used to draw a horizontal line in page.

➤ Attribute of `<hr/>` tag:

➤ Color: to change the color of line

➤ Width: to set the width of line (default is 100%)

➤ Size: to set the thickness of line

➤ Align: to set the alignment of line i.e. left, right or center (default is center)

➤ Noshade : to remove the shade of line (make a solid line)



Formatting Tags (Conti.)

Bold

• ` Bold Text` or ` Strong Text`

Italic

• `<i> Italic Text</i>`

Underline

• `<u>Under Line</u>`

~~Strikethrough~~

• `<strike>Strikethrough Text</strike>` or `Strikethrough Text`

^{Superscript}

• `^{Superscript (a+b)2}`

_{Subscript}

• `_{Subscript H2O}`

Big

• `<big> Big text</big>`

Small

• `<small> Small text</small>`

Mark

• `<mark> Mark text</mark>`

Pre Formatted Text

• `<pre> Pre Formatted Text</pre>`

Center

• `<center> Center Text</center>`

Insert

• `<ins> Insert text </ins>`



Formatting Tags (Conti.)

Font Tag:

- To set the text color, size and face(font family)
- Attribute of tag:
 - **Color** : to set the color of text
 - **Size** : to set the size of text (range 1 to 7 , default is : 3)
 - **Face** : to set the font of text ex Times New Roman



Formatting Tags (Conti.)

Marquee tag:

- To scroll text text/image on screen like running news on screen.
- Attribute of <marquee> tag:
 - **Direction** : indicate the direction of scrolling text (left, right, up, down)
 - **Scrollamount** : to set the speed of scrolling text (number)
 - **Width** : to set the width of scrolling area
 - **Height** : to set the height of scrolling area
 - **Behavior** : indicate the type of scrolling (Slide, scroll, alternate)
 - **Bgcolor** : to set the background color of scrolling text



HTML Entities

Character	Entity	Character	Entity
Space	 	← (LEFTWARDS ARROW)	←
< (Less than)	<	↑ (UPWARDS ARROW)	↑
> (Greater than)	>	→ (RIGHTWARDS ARROW)	→
& (ampersand)	&	↓ (DOWNWARDS ARROW)	↓
© (copyright)	©	π (Pi)	π
® (registered trademark)	®		



Comment in HTML

Comments are text notes added to the program to provide explanatory about the source code.

Syntax:

```
<!-- Your Comment goes here -->
```

Example:

```
<!-- About Section Start here -->
```



Link in HTML

`<a>` ANCHOR TAG:

- Web pages are linked to one another through **Hypertext Links**.
- Text or image in the HTML document can be linked to an external document or to a specific place within the same document.
- The text or image that provides such linkage is known as **Hypertext** or **Hotspot**.

Syntax: ` Text/Image `

Example: `Open google`



Link in HTML (Conti.)

➤ Attribute of Anchor tag:

- **href** : to set the link path/source (url, path, file name, anchor name)
- **Name** : to specify the name of link as bookmark
- **Target** : to set the target of link (_blank, frame name)

➤ Link from website:

- ` Infomax Academy`

➤ Link from other webpage:

- ` About us`

➤ Link in same document:

- ``
- ` Go to Top`



Link with Email

- HTML <a> tag provides a option to specify an email address to send an email.
- To link a text with email, use **mailto: email_address** along with href attribute.

 Send Email

- We can also specify a default email subject and email body along with email address.

Send Mail



Link with Mobile/Phone

- To link a text with mobile or phone number, use **tel: mobile_number** along with href attribute.

` Call Us`



Image in HTML

- Images can be placed in a web page by using tag.
- The 'src' Attribute is used to set the source of image. The url can be a relative or absolute.
- There are many Image formats available today, but the most widely used among them are .jpg, .jpeg, .png and .gif.

Syntax:

Example:



Image in HTML (Conti.)

- Attribute of Image tag:
 - **src**: to set the source of image (URL/path)
 - **height**: to set the height of image (Px or %)
 - **width**: to set the width of image (Px or %)
 - **align**: to set the alignment of image (Left, Right, center)
 - **border**: to define the border of image (Integer Number)
 - **hspace**: to set the horizontal space(margin) from image (Px or %)
 - **vspace**: to set the vertical space(margin) from image (Px or %)
 - **titile**: to define the title of image which shows on mouse over of image
 - **alt**: to set the alternate text form when image is not available.



Image Linking

Syntax:

```
<a href="url/path"></a>
```

Example:

```
<a href="http://infomaxacademy.com">  
    
</a>
```



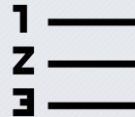
List in HTML:

- HTML Supports several ways of arranging items in lists.
- Type of List:

Unordered List



Ordered List



Definition Lists



List in HTML : Unordered List

- Unordered List also called as *bulleted list*, used to present list of items marked with bullets.
- An unordered list starts with in followed by (List Item) tag.

➤ Syntax:

list Item 1

 List item 2



➤ Attribute of Tag:

- Type: to set the bullet style.(disk, square, circle) Default – disk



List in HTML : Ordered List

- Ordered list also called as Numbered list, is used to present a numbered list of item in the order of importance or the item (paragraph) is marked with a number.
- An ordered list must begin with the `` followed by an `` list item tag.
- Syntax:

```
<ol>
```

```
    <li>list Item 1</li>
```

```
    <li> List item 2</li>
```

```
</ol>
```



List in HTML : Ordered List (Conti.)

- Attribute of Tag:
 - **Type** : to define the number style (A,a,I,I,1)
 - **Start** : to set the start value of numbering (any interger)
- Attribute of tag:
 - **Value**: to change the track on numbering (any integer)



List in HTML : Definition Lists

A definition list is a list of terms and corresponding definitions. Definition lists are typically formatted with the term on the left with the definition following on the right or on the next line. The definition text is typically indented with respect to the term.

The opening list tag must be <DL>. It is followed by an term names (<DT>) and then by definitions (<DD>).

Syntax:

```
<DL>  
  <dt>Term 1</dt>  
  <dd>This is the definition of the first term.</dd>  
  <dt>Term 2</dt>  
  <dd>This is the definition of the second term.</dd>  
</DL>
```



List in HTML : Nested List

- One list might contain one or more ordered/unordered list that is called as Nested lists.



Table in HTML

- Tables are defined with the <table> tag.
- A table is divided into rows (with the <tr> tag), and each row is divided into data cells (with the <td> tag).
- Td stands for "table data," and holds the content of a data cell.
- A <td> tag can contain text, links, images, lists, forms, other tables, etc.

```
<table border="1">  
  <tr>  
    <th>header 1</th>  
    <th>header 2</th>  
  </tr>  
  <tr>  
    <td>row 1, cell 1</td>  
    <td>row 1, cell 2</td>  
  </tr>  
  <tr>  
    <td>row 2, cell 1</td>  
    <td>row 2, cell 2</td>  
  </tr>  
</table>
```



Table in HTML (Conti)

➤ Attribute of <table> tag:

- **Height** : to set the height of table
- **Width** : to set the width of table
- **Bgcolor** : to set the background color table
- **Bordercolor** : to set the border color of table
- **Align** : to set the alignment of table
- **Cellpadding** : to set the space between text and table border
- **Cellspacing** : to set the space between two cells

➤ Attribute of <tr> tag:

- **Bgcolor** : to set the background color of specified row
- **Height** : to set the height of specified row



Table in HTML (Conti)

- Attribute of <td> or <th> tag:
 - **Width**: to set the width of specified column
 - **Height**: to set the height of row
 - **Bgcolor**: to set the background color of specified cell
 - **Align**: to set the horizontal alignment of cell text i.e. center, left or right
 - **Valign**: to set the vertical alignment of cell text i.e. top, bottom or center
 - **Rowspan**: to span (merge) the number of rows into one.
 - **Colspan**: to span(merge) the number of column into one.



Form

- HTML forms are used to pass data to a server. A form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more.

- The <form> tag is used to create an HTML form:

<form>

Form elements (ex. Textbox, radio button, checkbox etc)

</form>

- Attribute of <Form> tag:

- **Name** : to specify the name of form

- **Action**: to set the target location of form when form send

- **Method** : specify the method for sending data (GET/POST)



Form Elements

➤ **Label :**

`<label> Student Name</label>`

➤ **Text Box :** (To accept single line text)

`<input type="text" name="user_name"/>`

➤ **Password :** (To Accept Secure data like Password/Pin)

`<input type="password" name="user_pass"/>`

➤ **Number Box :** (to accept Numeric Values)

➤ `<input type="number" min="0" max="100" step="10"/>`

➤ **Date :** (To accept Date from Calendar)

➤ `<input type="date" name="dob"/>`



Form Elements (Conti)

- **Email** : (to Accept email in valid format)
 - `<input type="email" name="user_email"/>`
- **Search** : (display cross button inside text box which type some text on box)
 - `<input type="search"/>`
- **Month** : to accept only month and year
 - `<input type="month"/>`
- **Time** : to accept Time (Hour minute)
 - `<input type="time"/>`
- **Week** : to accept week and year
 - `<input type="week"/>`



- **Tel**: it show number pad when using mobile phone for input value
 - `<input type="tel"/>`
- **url** : to accept a url , it validate the url for valid protocol [http, https].
 - `<input type="url"/>`
- **Color** : to accept color from colorpicker
 - `<input type="color"/>`
- **Range** : to create a range bar
 - `<input type="range" min="1" max="1000" step="10"/>`



Form Elements (Conti)

➤ **Radio Button**: (To provide Multiple option and single selection)

➤ `<input type="radio" name="gender" />`

➤ **Note**: *to form a group of radio button the name of all radio button must be same.*

➤ **Checkbox** : to provide multiple option and multiple selection.

➤ `<input type="checkbox" />`

➤ **Textarea** : to accept multiline text

➤ `<textarea rows="5" cols="30"></textarea>`

➤ **File** : to create file browse button

➤ `<input type="file" />`



Form Element (Conti..)

- **Select Box**: to create a dropdown select box:

```
<select>  
    <option> Item 1</option>  
    <option> Item 2</option>  
    <option> Item n</option>  
</select>
```

- To enable the multiple Selection use the '**multiple**' attribute in <select> tag:

```
<select multiple>  
    ....  
</select>
```

- **Optiongroup**:

```
<select>  
    <optgroup label="Group 1">  
        <option> Item 1</option>  
        <option> Item 2</option>  
    <optgroup label="Group 2">  
        <option> Item n</option>  
</select>
```



Form Element (Conti..)

➤ **Data list:** data list use to filleter text from list of pre defined items:

```
<input list="courses" type="text">
```

```
<datalist id="courses">
```

```
  <option value="CCA">
```

```
  <option value="DCA">
```

```
  <option value="CCC">
```

```
  <option value="Tally">
```

```
  <option value="O level">
```

```
</datalist>
```



Form Element (Conti..)

- **Submit Button**: to submit the form
 - `<input type="submit" value="Save"/>`
- **Reset Button**: to create reset(Clear) Button
 - `<input type="reset" value="Clear"/>`
- **Button** : to create custom button to perform custom operation.
 - `<input type="button" value="Calculate"/>`
- **Image Button**: to Create image button.
 - `<button type="button"></button>`



Common Attributes of <input>

- Id
- Name
- Value
- Type
- Placeholder
- Readonly
- Disabled
- Required
- Checked
- Selected
- Maxlength
- Size
- Autofocus



Field set and Legend

- `<fieldset>`
 - The `<fieldset>` tag is used to group related elements in a form.
 - The `<fieldset>` tag draws a box around the related elements.
- `<legend>`
 - The `<legend>` tag defines a caption for the `<fieldset>` element.
- Example:

```
<fieldset>  
    <legend> Basic Details</legend>  
    Form Elements  
</fieldset>
```



Frameset

- HTML frames are used to divide your browser window into multiple sections where each section can load a separate HTML document.

```
<frameset rows="" >  
    <frame src="url"/>  
    <frame src="url"/>  
</frameset>
```

```
<frameset cols="" >  
    <frame src="url"/>  
    <frame src="url"/>  
</frameset>
```

Attribute of <frameset>

- rows
- cols
- border
- bordercol



Frameset (Conti.)

- Attribute of <frame> tag:
 - Name
 - Src
 - Border
 - Noresize
 - scrolling



Iframe

- Iframe known as inline Frame
- An inline frame is used to embed another document within the current HTML document.
- The Document may contain text, video, map etc.
- `<iframe src="url" height="" width="" ></iframe>`
- Others Attribute of `<iframe>`
 - Frameborder (yes, no)
 - Scrolling (yes, No , Auto)
 - name



Audio in HTML

- The HTML <audio> element is used to play an audio file on a web page.

```
<audio controls>
```

```
<source src="horse.ogg" type="audio/ogg">
```

```
<source src="horse.mp3" type="audio/mpeg">
```

```
</audio>
```



Video in HTML

- The HTML <video> element is used to show a video on a web page.

```
<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">  
</video>
```



HTML Layout



THANK YOU

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