

Introduction to HTML

What is HTML?

- HTML, otherwise known as HyperText Markup Language, is the language used to create Web pages
- Using HTML, you can create a Web page with text, graphics, sound, and video

Introduction

- HTML is the standard markup language for creating Web pages.
- HTML stands for Hyper Text Markup Language
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page

example

- `<!DOCTYPE html>`
`<html>`
`<head>`
`<title>Page Title</title>`
`</head>`
`<body>`
 `<h1>My First`
 `Heading</h1>`
 `<p>My first`
 `paragraph.</p>`
`</body>`
`</html>`
- The `<!DOCTYPE html>` declaration defines this document to be HTML5
- The `<html>` element is the root element of an HTML page
- The `<head>` element contains meta information about the document
- The `<title>` element specifies a title for the document
- The `<body>` element contains the visible page content
- The `<h1>` element defines a large heading
- The `<p>` element defines a paragraph

The <!DOCTYPE> Declaration

- The <!DOCTYPE> declaration represents the document type, and helps browsers to display web pages correctly.
- It must only appear once, at the top of the page (before any HTML tags).
- The <!DOCTYPE> declaration is not case sensitive.
- The <!DOCTYPE> declaration for HTML5 is:

<!DOCTYPE html>

Html Tags

- The essence of HTML programming is tags
 - A tag is a keyword enclosed by angle brackets (Example: <I>)
 - HTML tags normally come in pairs like <p> and </p>
 - The first tag in a pair is the start tag, the second tag is the end tag
 - The end tag is written like the start tag, but with a forward slash inserted before the tag name
- <tagname> content goes here...</tagname>

More Tags...

- The opening and closing tags use the same command except the closing tag contains an additional forward slash /
- For example, the expression

` Warning `

would cause the word 'Warning' to appear in bold face on a Web page

Nested Tags

- Whenever you have HTML tags within other HTML tags, you must close the nearest tag first
- Example:

`<H1> <I> The Nation </I> </H1>`

Structure of a Web Page

- All Web pages share a common structure
- All Web pages should contain a pair of `<HTML>`, `<HEAD>`, `<TITLE>`, and `<BODY>` tags

`<HTML>`

`<HEAD>`

`<TITLE> Example </TITLE>`

`</HEAD>`

`<BODY>`

This is where you would include the text and images on your Web page.

`</BODY>`

`</HTML>`

HTML Attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about an element
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: **name="value"**

For Example:

```
<a href="https://www.w3schools.com">This is a link</a>  

```

The <TITLE> Tag

- Choose the title of your Web page carefully; The title of a Web page determines its ranking in certain search engines
- The title will also appear on Favorite lists, History lists, and Bookmark lists to identify your page

Text Formatting

- Manipulating text in HTML can be tricky; Oftentimes, what you see is NOT what you get
- For instance, special HTML tags are needed to create paragraphs, move to the next line, and create headings
- The formatting tags indicate how text can appear in HTML.
- These tags can make text bold, italic, underlined, superscripted, subscripted and more.

Text Formatting Tags

 Bold Face

<I> *Italics* </I>

<U> Underline </U>

<P> New Paragraph </P>

 Next Line

HTML text formatting tags are:

Tag	Description	Example and Output
Bold	It defines bold text.	Example: <code>CareerRide Info</code> Output: CareerRide Info
Italic	It defines italic text.	Example: <code><i>TutorialRide.com</i></code> Output: <i>TutorialRide.com</i>
Underline	It underlines the text.	Example: <code><u>TutorialRide.com</u></code> Output: <u>TutorialRide.com</u>
Strike-out	It puts a line right through the center of the text, crossing it out. It shows that the text is old and no longer relevant.	Example: <code><strike>ABC Coperation</strike></code> Output: ABC Coperation
Small	It defines small text.	Example: <code><h4>CareerRide <small>Info</small></h4></code> Output: CareerRide Info
Font Color	It changes the text color.	Example: <code>TutorialRide.com</code> Output: TutorialRide.com

Emphasis	It is used to emphasize text, usually it appears in italics but can vary according to your browser.	Example: <code>CareerRide Info</code> Output: <i>CareerRide Info</i>
Mark	It defines marked or highlighted text.	Example: <code><mark>TutorialRide.com</mark></code> Output: TutorialRide.com
Subscript	It defines subscripted text.	Example: <code>H<sub>2</sub>O</code> Output: H ₂ O
Superscript	It defines superscripted text.	Example: <code>E = mc<sup>2</sup></code> Output: E = mc ²
Strong	It defines strong text. Usually it appears in bold but can vary according to your browser.	Example: <code>CareerRide Info</code> Output: CareerRide Info

The `<pre>` Tag

- The `<pre>` tag is used to define preformatted text.
- The browsers render the enclosed text with white spaces and line breaks.

Example:

`<pre>`Spaces

and line breaks

within this element

are shown as typed. `</pre>`

```
Spaces
```

```
    and line breaks
```

```
    within this element
```

```
are shown as typed.
```


Changing the Font

- The expression

` ... `

can be used to change the font of the enclosed text

- To change the size of text use the expression

` `

where n is a number between 1 and 7

Changing the Font

- To change the color, use
- `.... ;`
- The color can also be defined using hexadecimal representation (Example: #ffffff)
- These attributes can be combined to change the font, size, and color of the text all at once; For example,
- ` `

- `This is some text!`
`This is some text!`
`This is some text!`

- **Output:**

This is some text!

This is some text!

This is some text!

Note: The `font` element is not supported in HTML5. Use CSS instead.

Headings

- Web pages are typically organized into sections with headings; To create a heading use the expression
`<Hn>....</Hn>`
- where n is a number between 1 and 6
- In this case, the 1 corresponds to the largest size heading while the 6 corresponds to the smallest size

- `<!DOCTYPE html>`
`<html>`
 `<head>`
 `<title>Example of Heading`
Tag`</title>`
 `</head>`
 `<body>`
 `<h1>CareerRide Info</h1>`
 `<h2>CareerRide Info</h2>`
 `<h3>CareerRide Info</h3>`
 `<h4>CareerRide Info</h4>`
 `<h5>CareerRide Info</h5>`
 `<h6>CareerRide Info</h6>`
 `</body>`
`</html>`

- Output:

CareerRide Info

CareerRide Info

CareerRide Info

CareerRide Info

CareerRide Info

CareerRide Info

Center Tag

- Center tag is used to place the content in the center of a web page.
- `<center>`
 `<p>This is a paragraph.</p>`
 `</center>`

Output:

This is a paragraph.

Horizontal line (<hr> tag)

- This is used to draw a horizontal line on a web page.
- The <hr> tag has no end tag.
- <body>
 <p>This is a first paragraph.</p>
 <hr />
 <p>This is a second paragraph.</p>
</body>

Output:

This is a first paragraph.

This is a second paragraph.

Aligning Text

- The ALIGN attribute can be inserted in the <P> and <Hn> tags to right justify, center, or left justify the text
- For example,

`<H1 ALIGN=CENTER> The New York Times </H1>`

would create a centered heading of the largest size

Comment Statements

- Comment statements are notes in the HTML code that explain the important features of the code
- The comments do not appear on the Web page itself but are a useful reference to the author of the page and other programmers
- To create a comment statement use the `<!-- -->` tags

Blink Tag

- It is possible to make text blink using the `<BLINK> ... </BLINK>` tag
- However, it is best to use this feature at most sparingly or not at all; What seems like a good idea to a Web designer can become very annoying to a Web user
- The `<BLINK>` tag is not supported by Internet Explorer

BODY Tag

- The <body> element contains all the contents of an HTML document, such as text, hyperlinks, images, tables, lists, etc.

Attributes

- **background:** It contains the URL of background image. It is used to set the background image.
- **bgcolor:** It is used to specify the background color of document.
- **alink:** It is used to specify the color of active link.
- **link:** Specifies the color of unvisited links in a document
- **text:** It specify the color of text in a document.
- **vlink:** It specify the color of visited links.

Example

```
<!DOCTYPE html>
```

```
<html>
```

```
<body background="w3s.png" >
```

```
  <h1>Hello world!</h1>
```

```
  <p>Visit </p>
```

```
  <p>The background attribute is not supported HTML5. Use CSS  
  instead.</p>
```

```
</body>
```

```
</html>
```

Syntax for other attribute:

```
<body text="green">
```

```
<body link="blue">
```

```
<body bgcolor="red">
```

```
<body bgcolor="#000000">
```

```
<body bgcolor="rgb(0,0,0)">
```

Image Tag

- Images can improve the design and the appearance of a web page.
- To display an image on a page, you need to use the src attribute.
- Src stands for "source".
- The value of the src attribute is the URL of the image you want to display on your page. The syntax of defining an image:

This Code	Would Display
<pre></pre>	

Alternate Text

- The alt attribute is used to define an alternate text for an image.
- The alt attribute provides an alternate text for an image, if the user for some reason cannot view it.
- The value of the alt attribute is User-defined text:
- **``**

Image Dimensions

- Width and Height

```

```

Links/ Anchor Tag

- HTML uses the <a> anchor tag to create a link to another document or web page.

There are different types of links:

- **Absolute Link:**

These are the links which are fully qualified as a URL, they are present on the Web already. Ex. <https://www.google.co.in>

- **Relative Link:**

These are the links which are related to our own document and these types of links are the part of our website.

- **Internal Link:**

It is used to navigate from one portion of our webpage to other portion of our webpage.

This Code	Would Display
<code>Visit ACC!</code>	Visit ACC!

Attributes for the Anchor Tag:

- **href:**

It stands for hyperlink reference, it is used to add link to our Webpage.

- **target:**

It is used in case of links, it helps if we want to open our link in a new tab or In the same tab in which we are working.

- **download:**

It is a attribute which is used to download a file which is attached in our webpage just by clicking on it. It works only when href attribute is also used.

HTML Links - The target Attribute

- The target attribute specifies where to open the linked document.
- The target attribute can have one of the following values:
- **_blank** - Opens the linked document in a new window/tab
- **_self** - Opens the linked document in the same window/tab as it was clicked (this is 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

Example: Links

- To create a link to CNN, I would type:
`CNN`
- To create a link to MIT, I would type:
`MIT`

Changing the Color of Links

- The LINK, VLINK, and ALINK attributes can be inserted in the <BODY> tag to define the color of a link
 - LINK defines the color of links that have not been visited
 - VLINK defines the color of links that have already been visited
 - ALINK defines the color of a link when a user clicks on it

Using Links to Send Email

- To create a link to an email address, type
``
Label``
- For example, to create a link to send email to myself, I would type: ``email Katie Dunn``

Anchors

- Anchors enable a user to jump to a specific place on a Web site
- Two steps are necessary to create an anchor. First you must create the anchor itself. Then you must create a link to the anchor from another point in the document.

Anchors

- To create the anchor itself, type `label` at the point in the Web page where you want the user to jump to
- To create the link, type `label` at the point in the text where you want the link to appear

Example: Anchor

`Chapter Two
`

Link →

Table of Contents

[Introduction](#)
[Chapter One](#)
[Chapter Two](#)

Introduction

(Text for Introduction)

Chapter 1

(Text for Chapter 1)

`Chapter 2 ` *Anchor* →

Chapter 2

(Text for Chapter 2)

Ordered Lists

- Ordered lists are a list of numbered items.
- To create an ordered list, type:

``

`` This is step one.

`` This is step two.

`` This is step three.

``

Here's how it would look on the Web:

- 1. This is step one.**
- 2. This is step two.**
- 3. This is step three.**

More Ordered Lists....

- The TYPE=x attribute allows you to change the the kind of symbol that appears in the list.
 - A is for capital letters
 - a is for lowercase letters
 - I is for capital roman numerals
 - i is for lowercase roman numerals

Unordered Lists

- An unordered list is a list of bulleted items
- To create an unordered list, type:

``

`` First item in list

`` Second item in
list

`` Third item in list

``

Here's how it would look on the Web:

- **First item in list**
- **Second item in list**
- **Third item in list**

More Unordered Lists...

- The TYPE=shape attribute allows you to change the type of bullet that appears
 - *circle* corresponds to an empty round bullet
 - *square* corresponds to a square bullet
 - *disc* corresponds to a solid round bullet; this is the default value

Forms

■ What are forms?

- `<form>` is a HTML element to collect input data with containing interactive controls.
- It provides facilities to input text, number, values, email, password, and control fields such as checkboxes, radio buttons, submit buttons, etc., or
- in other words, form is a container that contains input elements like text, email, number, radio buttons, checkboxes, submit buttons, etc.
- Forms are generally used when you want to collect data from the user.
- For example, a user wants to buy a bag online, so he/she has to first enter their shipping address in the address form and then add their payment details in the payment form to place an order.

Forms

- There are two basic components of a Web form: the shell, the part that the user fills out, and the script which processes the information
- HTML tags are used to create the form shell. Using HTML you can create text boxes, radio buttons, checkboxes, drop-down menus, and more...

Forms

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Example: Form

First Name:

← Text Box

Last Name:

Type of Shirt:

← Drop-down Menu

Size: ☐ Large ☒ Medium ☐ Small

← Radio Buttons

Color: ☐ Red ☒ Navy ☐ Black

← Checkboxes

Comments?

← Text Area

Buy Now!

Reset

Reset Button

Submit Button

The Form Shell

- A form shell has three important parts:
 - the <FORM> tag, which includes the address of the script which will process the form
 - the form elements, like text boxes and radio buttons
 - the submit button which triggers the script to send the entered information to the server

Creating the Shell

- To create a form shell, type `<FORM METHOD=POST ACTION="script_url">` where "script_url" is the address of the script
- Create the form elements
- End with a closing `</FORM>` tag

Creating Text Boxes

- To create a text box, type <INPUT
TYPE="text" NAME="name"
VALUE="value" SIZE=n MAXLENGTH=n>
- The NAME, VALUE, SIZE, and
MAXLENGTH attributes are optional

Text Box Attributes

- The NAME attribute is used to identify the text box to the processing script
- The VALUE attribute is used to specify the text that will initially appear in the text box
- The SIZE attribute is used to define the size of the box in characters
- The MAXLENGTH attribute is used to define the maximum number of characters that can be typed in the box

Example: Text Box

```
First Name: <INPUT  
TYPE="text"  
NAME="FirstName"  
VALUE="First Name"  
SIZE=20>  
<BR><BR>
```

```
Last Name: <INPUT  
TYPE="text"  
NAME="LastName"  
VALUE="Last Name"  
SIZE=20>  
<BR><BR>
```

- Here's how it would look on the Web:

First Name:

Last Name:

Creating Larger Text Areas

- To create larger text areas, type
`<TEXTAREA NAME="name" ROWS=n1
COLS=n2 WRAP> Default Text
</TEXTAREA>`, where n1 is the height of
the text box in rows and n2 is the width
of the text box in characters
- The WRAP attribute causes the cursor to
move automatically to the next line as the
user types

Example: Text Area

Comments?

<TEXTAREA NAME="Comments" ROWS=10
COLS=50 WRAP>

</TEXTAREA>

Creating Radio Buttons

- To create a radio button, type `<INPUT TYPE="radio" NAME="name" VALUE="data">Label`, where “data” is the text that will be sent to the server if the button is checked and “Label” is the text that identifies the button to the user

Example: Radio Buttons

** Size: **

**<INPUT TYPE="radio" NAME="Size"
VALUE="Large">Large**

**<INPUT TYPE="radio" NAME="Size"
VALUE="Medium">Medium**

**<INPUT TYPE="radio" NAME="Size"
VALUE="Small">Small**

Creating Checkboxes

- To create a checkbox, type `<INPUT TYPE="checkbox" NAME="name" VALUE="value">Label`
- If you give a group of radio buttons or checkboxes the same name, the user will only be able to select one button or box at a time

Example: Checkboxes

 Color:

<INPUT TYPE="checkbox" NAME="Color"
VALUE="Red">Red

<INPUT TYPE="checkbox" NAME="Color"
VALUE="Navy">Navy

<INPUT TYPE="checkbox" NAME="Color"
VALUE="Black">Black

Creating Drop-down Menus

- To create a drop-down menu, type
`<SELECT NAME="name" SIZE=n
MULTIPLE>`
- Then type `<OPTION VALUE=
"value">Label`
- In this case the SIZE attribute specifies the height of the menu in lines and MULTIPLE allows users to select more than one menu option

Example: Drop-down Menu

WHICH IS FAVOURITE FRUIT:

<SELECT>

<OPTION VALUE="MANGOES">MANGOES

<OPTION VALUE="PAPAYA">PAPAYA

<OPTION VALUE="GUAVA">GUAVA

<OPTION VALUE="BANANA"> BANANA

<OPTION VALUE="PINEAPPLE">PINEAPPLE

</SELECT>

Creating a Submit Button

- To create a submit button, type `<INPUT TYPE="submit">`
- If you would like the button to say something other than submit, use the VALUE attribute
- For example, `<INPUT TYPE="submit" VALUE="Buy Now!">` would create a button that says "Buy Now!"

Creating a Reset Button

- To create a reset button, type `<INPUT TYPE="reset">`
- The `VALUE` attribute can be used in the same way to change the text that appears on the button

Tables

- 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 tables are used to manage the layout of the page e.g. header section, navigation bar, body content, footer section etc. But it is recommended to use div tag over table to manage the layout of the page .

CSS3 Browser Support (latest browser versions)					
CSS Property	Internet Explorer	FireFox	Chrome	Safari	Opera
Border Radius	YES	YES	YES	YES	YES
Box Shadow	YES	YES	YES	YES	YES
CSS Animations	NO	NO	YES	YES	NO

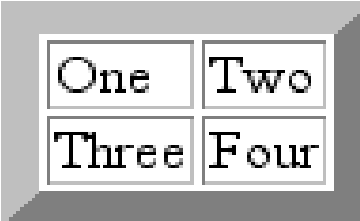
HTML Table Tags

Tag	Description
<code><table></code>	It defines a table.
<code><tr></code>	It defines a row in a table.
<code><th></code>	It defines a header cell in a table.
<code><td></code>	It defines a cell in a table.
<code><caption></code>	It defines the table caption.
<code><colgroup></code>	It specifies a group of one or more columns in a table for formatting.
<code><col></code>	It is used with <code><colgroup></code> element to specify column properties for each column.
<code><tbody></code>	It is used to group the body content in a table.
<code><thead></code>	It is used to group the header content in a table.
<code><tfooter></code>	It is used to group the footer content in a table.

Creating Simple Table

```
<TABLE BORDER=10>  
  <TR>  
    <TD>One</TD>  
    <TD>Two</TD>  
  </TR>  
  <TR>  
    <TD>Three</TD>  
    <TD>Four</TD>  
  </TR>  
</TABLE>
```

- Here's how it would look on the Web:



One	Two
Three	Four

Table Heading

- Table heading can be defined using `<th>` tag.
- This tag will be put to replace `<td>` tag, which is used to represent actual data cell.
- Normally you will put your top row as table heading as shown below, otherwise you can use `<th>` element in any row.
- Headings, which are defined in `<th>` tag are centered and bold by default.
- By default, table headings are bold and centered.

- **HTML table with caption**

HTML caption is displayed above the table. It must be used after table tag only.

```
<body>
<table border=1>
<caption>Student Records</caption>
<tr>
    <th>First_Name</th>
    <th>Last_Name</th>
</tr>
<tr>
    <td>Ankita</td>
    <td>Chauhan</td>
</tr>
</table>
</body>
```

Centering a Table

- There are two ways to center a table
 - Type `<TABLE ALIGN=CENTER>`
 - Enclose the `<TABLE>` tags in opening and closing `<CENTER>` tags

Cellpadding and Cellspacing Attributes

- There are two attributes called cellpadding and cellspacing which you will use to adjust the white space in your table cells.
- The cellspacing attribute defines space between table cells, while cellpadding represents the distance between cell borders and the content within a cell.

```
<table border = "1" cellpadding = "5" cellspacing = "5">
```

```
<tr>
```

```
<th>Name</th>
```

```
<th>Salary</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Ankita</td>
```

```
<td>60000</td>
```

```
</tr>
```

```
</table>
```

Colspan and Rowspan Attributes

- **Colspan:**
- If you want to make a cell span more than one column, you can use the colspan attribute.
- It will divide one cell/row into multiple columns, and the number of columns depend on the value of colspan attribute.
- **Rowspan:**
- If you want to make a cell span more than one row, you can use the rowspan attribute.
- It will divide a cell into multiple rows. The number of divided rows will depend on rowspan values.

Cell that spans two columns:

Name	Telephone	
Vikas Rawat	9125577854	8565557785

Cell that spans two rows:

Name:	Vikas Rawat
Telephone:	9125577854
	8565557785

Nesting Tables

- Create the inner table
- Create the outer table and determine which cell of the outer table will hold the inner table
- Test both tables separately to make sure they work
- Copy the inner table into the cell of the outer table
- Don't nest too many tables. If you find yourself doing that, find an easier way to lay out your Web page

Changing a Cell's Color

- Tables Backgrounds
- You can set table background using one of the following two ways
- **b bgcolor** attribute – You can set background color for whole table or just for one cell.
- **background** attribute – You can set background image for whole table or just for one cell.
- You can also set border color also using bordercolor attribute.

```
<table border = "1" bordercolor = "green" background =  
"/images/test.png">
```

- **Table Height and Width**

You can set a table width and height using width and height attributes. You can specify table width or height in terms of pixels or in terms of percentage of available screen area.

Table Header, Body, and Footer

- Tables can be divided into three portions – a header, a body, and a foot. The head and foot are rather similar to headers and footers in a word-processed document that remain the same for every page, while the body is the main content holder of the table.
- The three elements for separating the head, body, and foot of a table are –
 - `<thead>` – to create a separate table header.
 - `<tbody>` – to indicate the main body of the table.
 - `<tfoot>` – to create a separate table footer.
- A table may contain several `<tbody>` elements to indicate different pages or groups of data. But it is notable that `<thead>` and `<tfoot>` tags should appear before `<tbody>`

HTML Table Colgroup

- The <colgroup> element is used to style specific columns of a table.
- If you want to style the two first columns of a table, use the <colgroup> and <col> elements.
- The <colgroup> element should be used as a container for the column specifications.
- Each group are specified with a <col> element.
- The span attribute specifies how many columns that gets the style.
- The style attribute specifies the style to give the columns.

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28