

## INTRODUCTION TO HTML

HTML stands for Hypertext Markup Language. It is a Language used to create. Web Pages or Hypertext document. A Markup Language is a set of instructions often called TAGS which can be added to text files. HTML is only a formatting language are not a programming language.

The idea behind hypertext is that instead of reading text in a right linear structure we can easily jump from one point to another point.HTML is all about specifying the structure and format of our webpage i.e, it is mainly used for describing the structure document.

HTML is platform independent i.e, for example if we can access internet, we can access WORLD WIDE WEB (WWW) irrespective of client OS and OS of the webserver are accessing.

Elements of a web document are labelled through the usage of HTML tags. It is the tags that describe the document. Anything that is not a tag will be displayed in the document itself.

### Advantages of HTML:-

- A HTML document is small and hence easy to send over the net. It is small because it doesn't include format information.
- HTML documents are cross platform compatible and device independent. We need a HTML readable browser to view them.

### Basic HTML tags:-

(1) `<!doctype>` :

This tag formally starts an HTML document and it also indicates the version of HTML used.

```
<!doctype HTML PUBLIC "-//w3c//DTDHTML Q.o//EN">
```

(2) `<HTML>`:

Every HTML document starts with a `<html>` tag and it is always the firsttag in a html page and indicates that the document is a HTML document.The end tag `<html>` is

```
</html>.
```

Example:

<html>.....</html>

### (3) <head>:

It contains the head of an html document, which holds about the document such as title. Each property defined html page should have a head which we create with <head> tag.

It has header information and it is displayed at the top of the browser. Each tag for

<head> is </head>.

<head>.....</head>

### (4) <title>:

It contains the title of the html document which includes the content that will actually appear in the web browser. The entire content of the web page is placed in the pages

<body> tag. The end tag <body> is </body>

<title>.....</title>

### (5) <body>:

It contains the body of the HTML Document, which includes the content that will actually appear in the web browser. The entire content of the webpage will be placed in the pages <body> tag. The end tag of the

<body> tag will be </body>.

<body>.....</body>

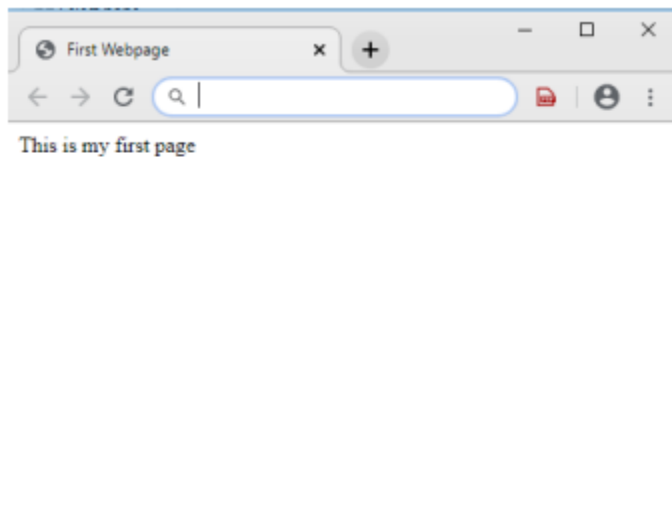
## STRUCTURE OF THE HTML PROGRAM :-

The HTML Program is generally divided into two sections i.e head and body. We use <head> and <body> tags to indicate these two sections. <head> section holds the header information of a webpage document indicated by a title that is provided by using <title> tag in the <head>. The title helps us to refer to the webpage. <body> section contains the content which we

want to display within the webpage. Anything that is not a tag will be displayed within the webpage.

**Example:**

```
<html>
  <head>
    <title>First Webpage</title>
  </head>
  <body>
    This is my first page
  </body>
</html>
```

**Output:****Attribute:**

An Attribute is a Keyword we use in an opening tag to give more information to the web browser. HTML tags tell the web browsers how to format and organize our webpages. But we can customize tags using attributes. The Format of an attribute is:

```
<tagname Attribute=value>
```

Attributes of the <body> tag:

**(1) Background:**

The URL or a graphic file to be used in the filling the browser'sBackground.

**(2) Bgcolor:**

The color of the browser's background.

**(3) Bgproperties:**

It Indicates if the background should scroll when text does. If we set it to“FIXED”, the background will not scroll when the text does.

**(4) Bottommargin:**

Specifies the bottom margin ,the empty space at the bottom of the document in pixels.

**(5) Id:**

It is a unique alphanumeric identifier for the tag which we can use to refer to it.

**(6) Language:**

Scripting language used for the tag.

**(7) Leftmargin:**

Specifies the left margin, the empty space at the left of the document.

**(8) Margin height:**

Gives the height of the margin at the top and bottom of the page in pixels.

**(9) Margin Width:**

Gives the width of the left and right margins of the page in pixels.

**(10) Right margin:**

It specifies the right margin, the empty space to the right margin of the document in pixels.

**(11) Scroll:**

It specifies whether a vertical scrollbar appears to the right of the document can be yes (or) no.

**(12) Style:**

Inline style indicating how to render the element.

**(13) Text:**

Color of the in the document.

**(14) Top margin:**

It specifies the top margin the space at the top of the document in pixels.

**(15) Link:**

It specifies the color of hyperlinks that have not yet been visited.

**(16) A link:**

It specifies the color of hyperlinks as they are being clicked.

**(17) V link:**

It specifies the color of hyperlinks as they have been visited.

**(18) <!-- --> Comment tag:**

Annotates a web page with a comment. In the HTML that we can by looking at the HTML but it will not be displayed in the web browser.

```
<!-- This is a comment----- >
```

**Formatting with HTML tags:**

To set the actual style of text as displayed in a web page we can text style tags. There are a number of ways to apply styles to text.

**(1) <b>:**

It creates a bold text i.e, sets the text style to bold.

Attributes:

- a. Id:

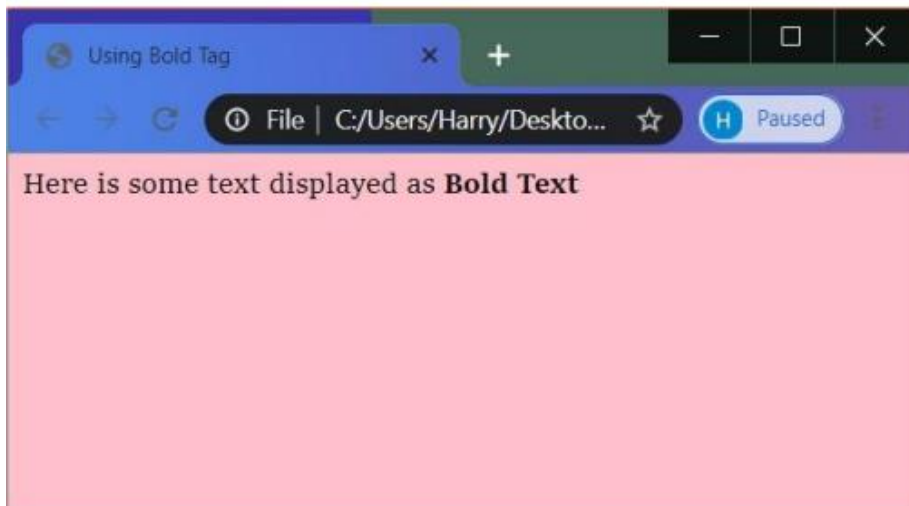
It is a unique alphanumeric identifier for the tag which we can use to refer to it.

b. Style:

The Inline style indicating how to render the element.

Example:

```
<html>
  <head>
    <title>Using Bold Tag </title>
  </head>
  <body bgcolor="pink">
    Here is some text displayed as <b> Bold Text </b>
  </body>
</html>
```



(2) <I>:

It displays text in Italics.

(3) <U>:

It displays text in Underlined text

(4) <P>:

It displays the Paragraph text.

**Example:**

```

<html>
  <head>
    <title> Using Styles </title>
  </head>
  <body bgcolor="pink">
    <p> This is a paragraph <br>
    Here is some text that is <i> Displayed in Italics </i>
    <br>Here is some <u> Underlined text </u>
  </body>
</html>

```

**Output:****(5) <s> and <strike>:**

It Displays text in smile through style. The <s> and <strike> tags are used forthe same effect. HTML 2 used <strike> , HTML 3 called it <s>, HTML 3.2 caused it <strike> again.

**(6) <big>:**

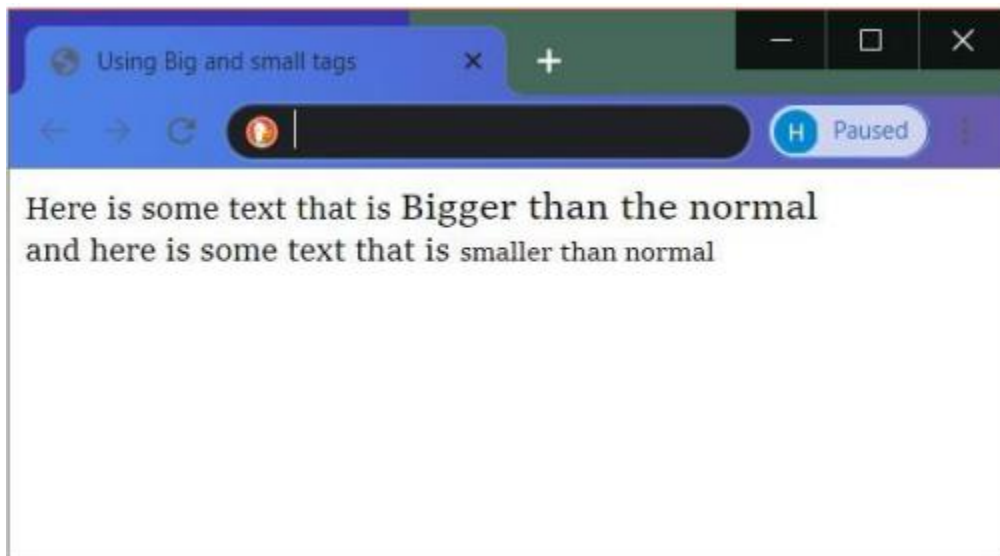
Renders text in a bigger font than the current default.

**(7) <small>:**

Renders text in a smaller font than the current default.

**Example:**

```
<html>
  <head>
    <title> Using Big and small tags </title>
  </head>
  <body>
    Here is some text that is <big> Bigger than the normal </big> <br>and here is some text
    that is <small> smaller than normal </small>
  </body>
</html>
```

**Output:**

(8) **<sub>**: It Styles the text as a subscript.

(9) **<sup>**: It Styles the text as a superscript.

(10) **<strong>**: Emphasizes text strongly, usually rendered in bold.

**Example:**

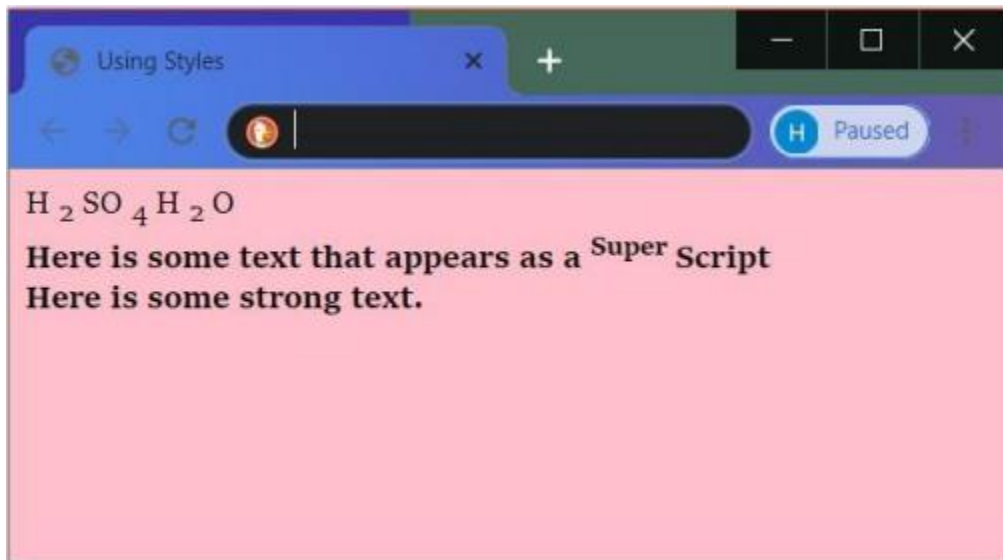
```
<html>
  <head>
```



```

<title>Using Styles </title>
</head>
<body bgcolor="pink">
  H <sub> 2 </sub> SO <sub> 4 </sub>H
  <sub> 2 </sub> O
  <br>
  <b>Here is some text that appears as a <sup> Super </sup> Script <br>Here is
  some <strong> strong </strong> text.
</body>
</html>

```

**Output:****(11) Headings:**

<h1>,<h2>,<h3>,<h4>,<h5> & <h6>

The heading element tags are <h1>,<h2>,<h3>,<h4>,<h5>,<h6>. These elements create the headings in our web pages by displaying bold text in a variety of sizes <h1> being larger <h6> being smaller.

**Example:**

```

<html>
  <head>

```

```

        <title> Heading tags </title>
    </head>
    <body bgcolor="pink">
        <center>
            <h1> Using Heading Tags</h1><br>
            <h1> RCET </h1><br>
            <h2> RCET </h2><br>
            <h3> RCET </h3><br>
            <h4> RCET </h4><br>
            <h5> RCET </h5><br>
            <h6> RCET</h6><br>
        </center>
    </body>
</html>

```

**(12) <font>:**

This tag will give us an option to select text size, color and face.

Attributes:

- a. color: Color of the text.
- b. Size: Size of the text in points
- c. Face: The font face can be a list of names separated by commas.
- d. Id: Unique alphanumeric identifier for a tag, which we can use to refer to it.

**Example:**

```

<html>
<head>
<title> Using Font Styles </title>
</head>
    <body bgcolor="pink">
        <center>

```

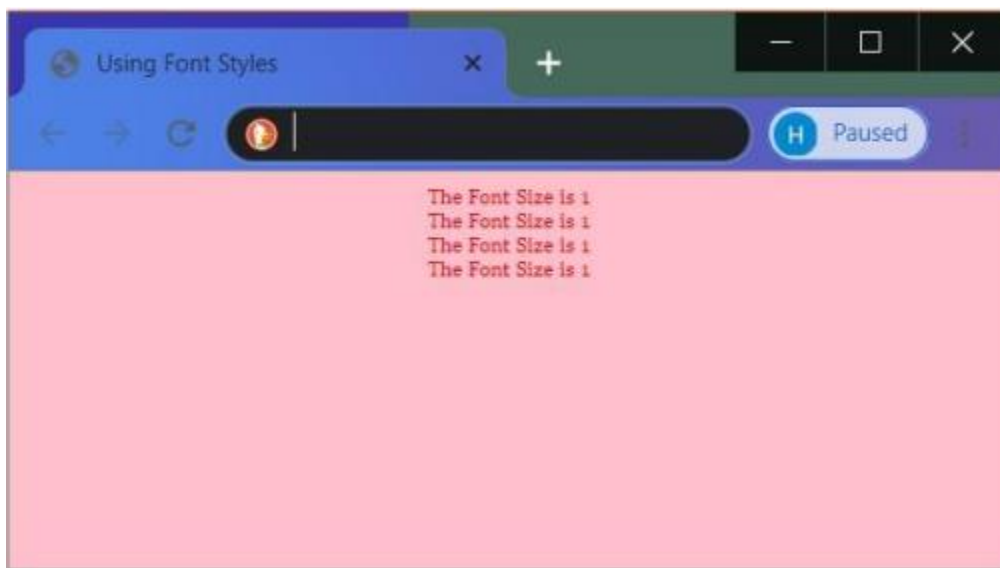
```
<font size="1" color="red"> The Font Size is 1 </font> <br>
<font size="10" color="yellow"> The Font Size is 10 </font> <br>
<font size="20" color="orange"> The Font Size is 20</font> <br>
<font size="30" color="aqua"> The Font Size is 30 </font> <br>
```

```
</center>
```

```
</body>
```

```
</html>
```

### Output



### (13) <marquee> tag:

Displays scrolling text in a marquee style.

#### Attributes:

a. Align:

Sets the alignment of the text relative to marquee. Set to:

Top(default), middle (or) bottom.

b. behavior:

Sets how the text in the marquee should move can be scroll (default), slide(text enters from one side and stops at the other side), alternate (text seemsto bounce from one side to the other).

c. bgcolor:

It sets the background color for the marquee box.

d. Direction:

Sets the direction the text should scroll can be left, right, down or up.

e. Height:

It specifies the height of the marquee.

f. Loop:

Sets how many times we want the marquee to cycle. Is set to positive integer or -1 for continuous cycling.

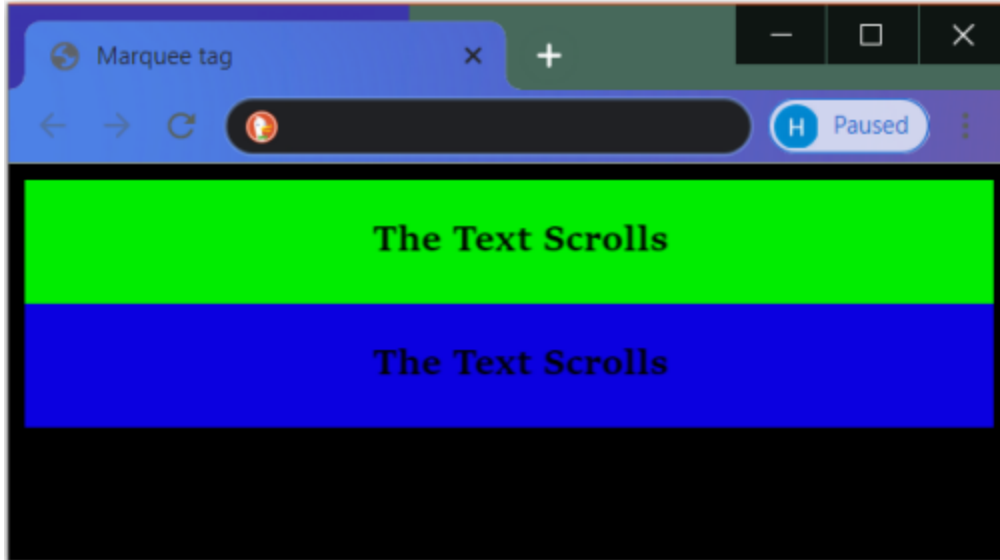
g. Scrolldelay:

Sets the number of the milliseconds between each successive display text.

### Example:

```
<html>
<head>
  <title> Marquee tag </title>
</head>
<body bgcolor="pink">
  <marquee align="top" loop="infinite" behavior="scroll" bgcolor="red"
direction="right"> <h3> The Text Scrolls </h3></marquee>
<marquee align="middle" loop="infinite" behavior="slide" bgcolor="blue"
direction="left"> <h3> The Text Scrolls </h3></marquee>
  </body>
</html>
```

### Output



**(14) <pre> tag(preformatted text):**

<pre> marks the text as preformatted text i.e, all the spaces and carriagereturns as rendered exactly as you type them.

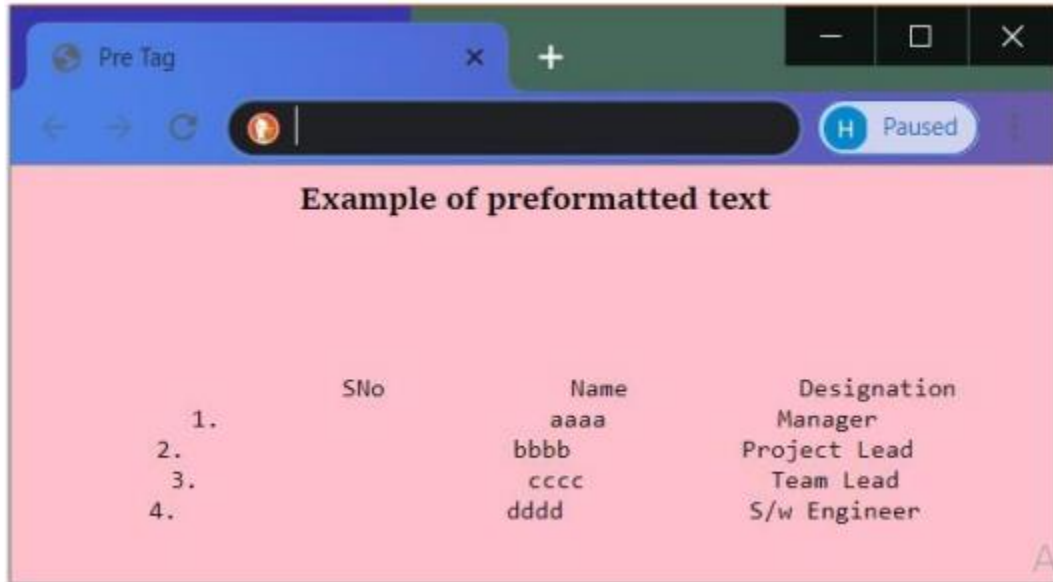
**Example:**

```
<html>
  <head>
    <title> Pre Tag </title>
  </head>
  <body bgcolor="pink">
    <center>
      <h4> Example of preformatted text </h4> <br> <br>
      <pre>
        SNo Name Designation
        1. aaaa Manager
        2. bbbb Project Lead
        3. cccc Team Lead
        4. dddd S/w Engineer
      </pre>
```

```

</center>
</body>
</html>

```



## LISTS:

Lists lets us display information in a compact, right format. There are three kinds of lists:

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

### Unordered List:

An Unordered list is a list of items that are marked with a bullet. The Unordered list is created by using <ul> tag and the list items in the list are created by <li> tag.

```

<ul>
  <li>List Item 1 </li>
  <li>List Item 2 </li>
</ul>

```

### Example:

```
<html>
  <head>
    <title> Creating Unorder List </title>
  </head>
<body bgcolor="pink">
<h1 align="center"> Creating Unorder List</h1>
<h1 align="center">List of Colleges in Kurnool</h1>
<ul>
  <li>GPREC</li>
  <li>RGM CET</li>
  <li>GPCET</li>
</ul>
</body>
</html>
```

### Output



### Creating Customized Unordered Lists:

We customized unordered lists by setting the “Type” attribute to three different values. DISC (default), SQUARE and CIRCLE which sets the type of bullet that appears before the list item.

**Example:**

```
<html>
  <head>
    <title> Creating Unorder List </title>
  </head>
  <body bgcolor="pink">
    <h1 align="center"> Creating Unorder List</h1>
    <h1 align="center">List of Colleges in Kurnool</h1>
    <ul type="square">
      <li>GPREC</li>
      <li>RGM CET</li>
      <li>GPCET</li>
    </ul>
  </body>
</html>
```

**Output**





### Ordered List:

While the unordered lists display simple bullet before each list item. Ordered lists use a number system / lettering scheme to indicate that the items are ordered in some ways, ordered lists are created by `<ol>` tag and the list items are created using

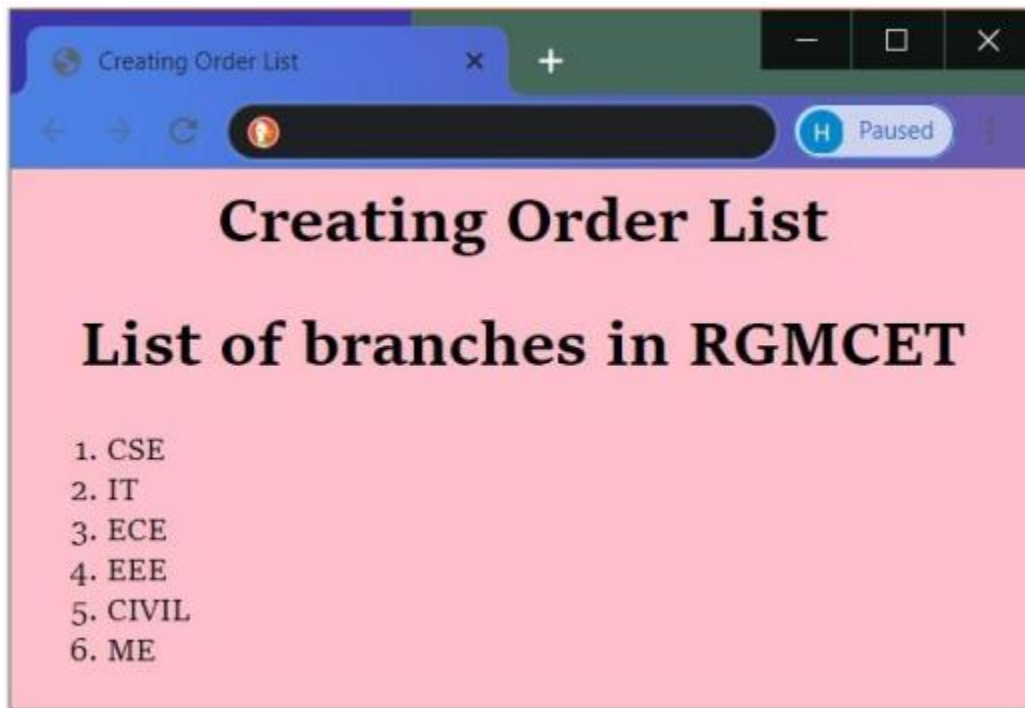
`<li>` tag.

### Example:

```
<html>
  <head>
    <title> Creating Order List </title>
  </head>
  <body bgcolor="pink">
    <h1 align="center"> Creating Order List</h1>
    <h1 align="center">List of branches in RGM CET</h1>
    <ol>
      <li>CSE</li>
      <li>IT</li>
      <li>ECE</li>
    </ol>
  </body>
</html>
```

```
<li>EEE</li>
<li>CIVIL</li>
<li>ME</li>
</ol>
</body>
</html>
```

### Output



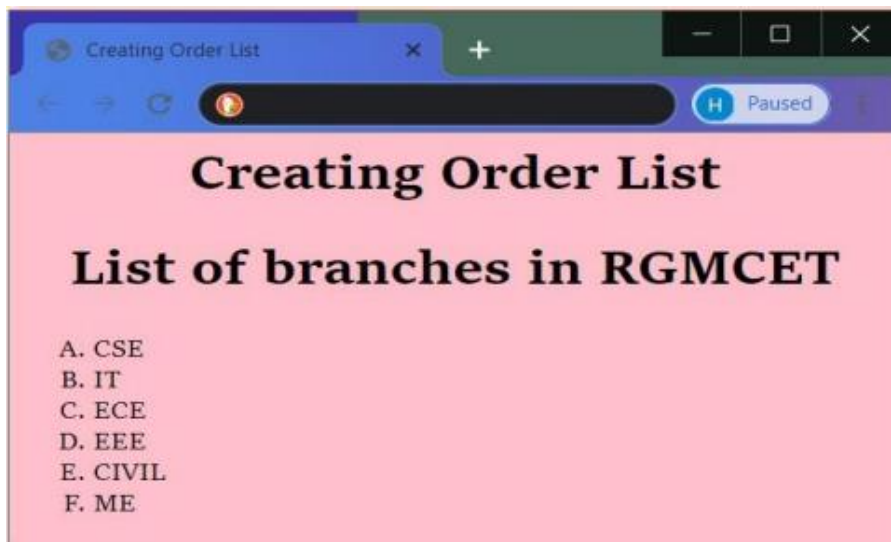
### Creating Customized Ordered Lists:-

We can customize the numbering system used in ordered lists by using the TYPE attribute, which we can set to these values:

1. Default numbering system (1, 2, 3, ....)
- A. Uppercase Letters (A, B, C, .....
- a. Lowercase Letters (a, b, c, ...)
- I. Large Roman Numerals (I, II, III, ....)
- i. Small Roman Numerals (i, ii, iii, .....

**Example:**

```
<html>
  <head>
    <title> Creating Order List </title>
  </head>
  <body bgcolor="pink">
    <h1 align="center"> Creating Order List</h1>
    <h1 align="center">List of branches in RGM CET</h1>
    <ol type="A">
      <li>CSE</li>
      <li>IT</li>
      <li>ECE</li>
      <li>EEE</li>
      <li>CIVIL</li>
      <li>ME</li>
    </ol>
  </body>
</html>
```

**Output :**

**Definition List:-**

These lists include both definition terms as well as their definition. To create the definition lists we use <dl> tag. For creating definition terms we use <dt> tag and for data definitions we use <dd> tag.

**Example:**

```
<html>
  <head>
    <title>Creating Definition List</title>
  </head>
  <body bgcolor="pink">
    <h1 align="center">Definition List</h1>
    <dl>
      <dt>CSE<dd>Computer Science & Engineering
      <dt>ECE<dd>Electronics & Communication Engineering
      <dt>IT<dd>Information Technology
      <dt>EEE<dd>Electrical & Electronics Engineering
      <dt>CE<dd>Civil Engineering
    </dl>
  </body>
</html>
```

**Output****Nesting Lists:-**

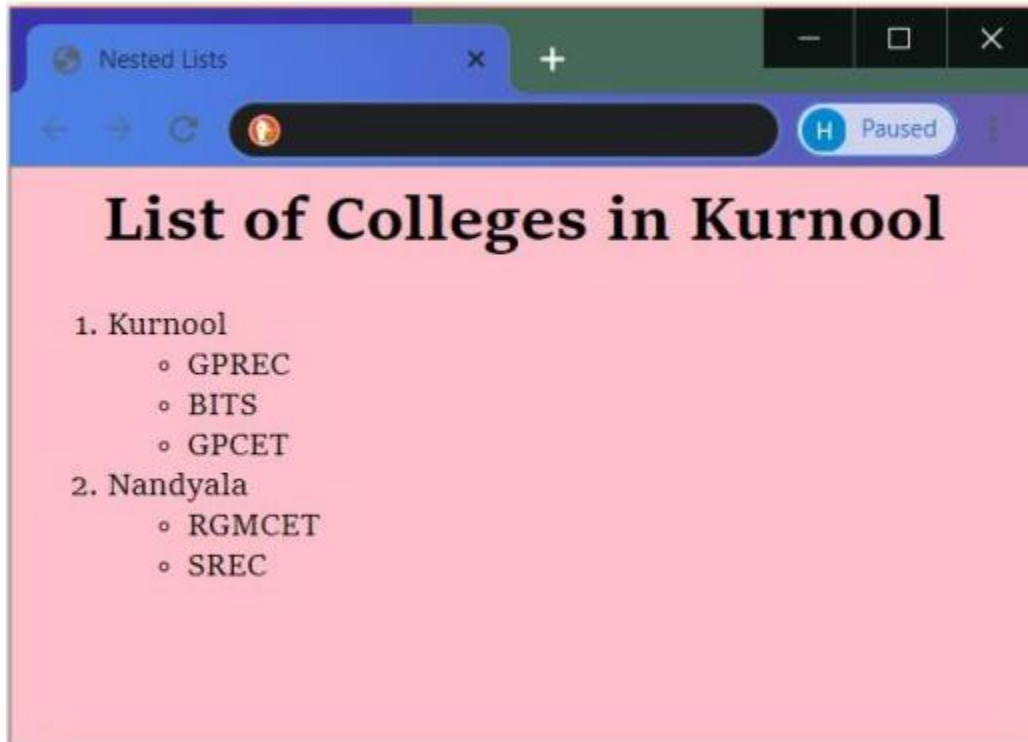
We have the capability of nesting lists inside other lists.

**Example:**

```
<html>
  <head>
    <title>Nested Lists</title>
  </head>
  <body bgcolor="pink">
    <h1 align="center">List of Colleges in Kurnool</h1>
    <ol>
      <li>Kurnool</li>
      <ul>
        <li>GPREC</li>
        <li>BITS</li>
        <li>GPCET</li>
      </ul>
    </ol>
  </body>
</html>
```

```
</ul>  
<li>Nandyala</li>  
<ul>  
<li>RGM CET</li>  
<li>SREC</li>  
</ul>  
</ol>  
</body>  
</html>
```

### Output



### Creating Hyperlinks:

What makes the web so effective is the ability to define links from one page to another. In web terms, a “hyperlinks” is a reference on the web. Hyperlinks can point to any resources on the web. An anchor is a term used to define a hyperlink destination inside a document. Format of anchor tag is:

```
<a href="address"> Line Text </a>
```

The <a> anchor tag has the following attributes.

1. href: It holds the target URL of the hyperlink.
2. Id: A unique alphanumeric identifier for the tag, which we can use to refer to it.
3. name: It specifies an anchor name, the name we want to use when referring to enclosed items.
4. Target: This attribute defines where the linked document will be opened.

**Example:**

```
<html>  
  <head>  
    <title>Creating Hyper Links</title>  
  </head>  
  <body bgcolor="pink">  
    <center><h1>This is page 1</h1>  
      <a href="page2.html">Click here</a> to goto page2  
    </center>  
  </body>  
</html>
```

**Output**

**TABLES:****Creating HTML tables:**

A HTML table arranges data/information in terms of rows and columns. Tables are defined in HTML using `<table>` tag. A table is divided into rows and each row is divided into data cells (columns). The rows of a table are created using `<tr>` tag and data cells are created by `<td>` tag.

`<tr>` - Table row

`<td>` - Table data

**Format**

```
<table>
  <tr>
    <td>row1,col1</td>
    <td>row1,col2</td>
  </tr>
  <tr>
    <td>row2,col1</td>
    <td>row2,col2</td>
  </tr>
</table>
```

• **Heading in a table are defined with `<th>` tag**

**Format**

```
<table>
  <tr>
    <th>heading 1</th>
    <th>heading 2</th>
  </tr>
  <tr>
    <td>data1</td>
    <td>data2</td>
```



```

        </tr>
</table>

```

### Attributes of <table> tag:

**align** : specifies the horizontal alignment of the table in the browser window, set to "left, center, right".

- **background** : specifies the URL of a background image to be used as background for the table.
- **bgcolor** : sets the background color of the table cells.
- **border** : sets the border width.
- **bordercolor** : sets the external border color of the entire table.
- **cellpadding** : sets the spacing between cell walls and content.
- **cellspacing** : sets the spacing between table cells.
- **height** : sets the height of the whole table.
- **width** : sets the width of the table.

### Attributes of <tr> tag:

- **align** : specifies the horizontal alignment content in the table cells set to "left, center, right".
- **bgcolor** : sets the background color of the table cells.
- **bordercolor** : sets the external border color of the entire table.
- **Valign** : sets the vertical alignment of data, set to top, middle, bottom.

### Alignment of <td> tag

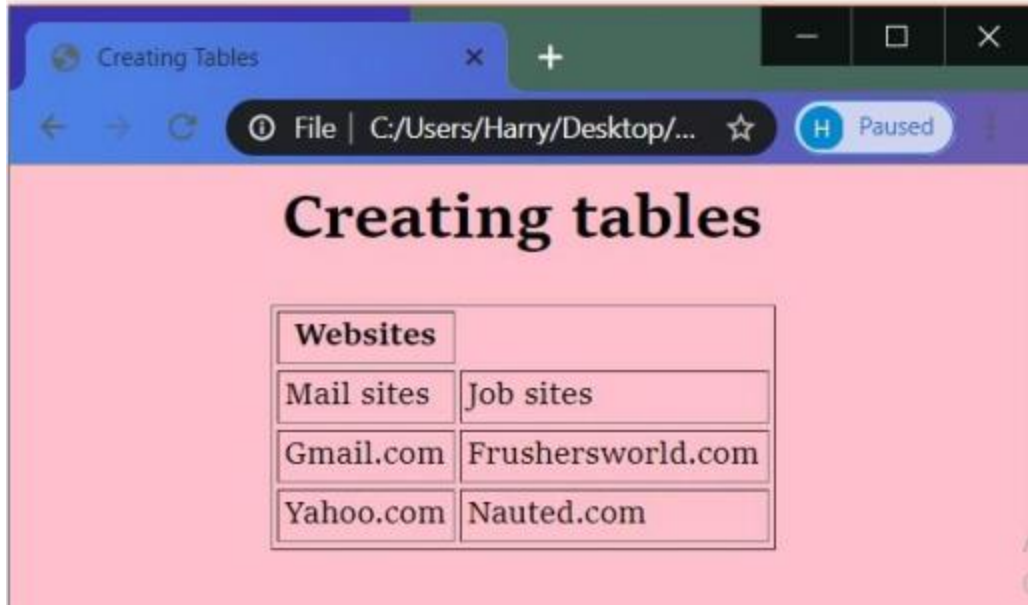
- **align** : specifies the horizontal alignment content in the table cells set to "left, center, right".
- **bgcolor** : sets the background color of the table cells.
- **bordercolor** : sets the external border color of the entire table.
- **colspan** : indicates the how many cell columns of the table this cell should span.

- **rowspan** : indicates the how many cell rows of the table this cell shouldspan.

Example

```
<html>
  <head>
    <title>Creating Tables</title>
  </head>
  <body bgcolor="pink">
    <center><h1>Creating tables</h1>
    <table border="1" cellpadding="3" cellspacing="3">
      <tr>
        <th colspan="2">Websites</th>
      </tr>
      <tr>
        <td>Mail sites</td>
        <td>Job sites</td>
      </tr>
      <tr>
        <td>Gmail.com</td>
        <td>Frushersworld.com</td>
      </tr>
      <tr>
        <td>Yahoo.com</td>
        <td>Nauted.com</td>
      </tr>
    </center>
  </table> </body></html>
```

**Output**



### Advanced Table elements :

- `<caption>` : the element is an Optional element and it used to provide a string which describes, the contern of the table ,it must follow the table element.
- `<thead>` : The rows in a table can bc groudated one are more time we cancreate a table by using this `<thead>`.
- `<tbody>` : creates a table body when grouping rows.
- `<tfoot>` : Creates a table foot when grouping rows

### Example:

```
<html>
  <head>
    <title>Advance Table Elements</title>
  </head>
  <body bgcolor="pink">
    <h1 align="center">Contents of Web Technologies</h1>
    <center>
      <table border="2">
        <caption>Subject Description</caption>
```

```

<thead>
  <tr> <td colspan="2">Advance Java Programming</td>
</thead>
<tbody>
  <tr> <td>Units</td>
  <td>Contents</td>
</tr>
  <tr> <td>I</td>
  <td>HTML & CSS</td>
</tr>
  <tr> <td>II</td>
  <td>JavaScript</td>
</tr>
  <tr> <td>III</td>
  <td>XML</td>
</tr>
</tbody>
<tfoot align="center">
  <tr>
  <td colspan="2">The table foot</td>
</tr>
</tfoot>
</table>
</center>
</body>
</html>

```

**Output:**



### Nesting of Tables:

```

<html>
  <head>
    <title>Nesting of Tables</title>
  </head>
  <body bgcolor="pink">
    <center><h1>Nested tables</h1>
    <table border="1" cellpadding="3" cellspacing="3">
      <tr>
        <td>
          <table border="2">
            <tr>
              <th>Mail sites</th>
              <th>Job sites</th>
            </tr>
            <tr>

```

```

        <td>Gmail.com</td>
        <td>Frushersworld.com</td>
    </tr>
    <tr>
        <td>Yahoo.com</td>
        <td>Nauted.com</td>
    </tr>
</table>
</td>
    <td>
        <table border="2">
            <tr>
                <th>Number</th>
                <th>Words</th>
            </tr>
            <tr>
                <th>1</th>
                <th>One</th>
            </tr>
            <tr>
                <th>2</th>
                <th>Two</th>
            </tr>
        </table>
    </td>
</tr>
</table>
</center>
</body>

```

</html>

**Output:**



### IMAGES IN HTML:

In HTML we have the capability of displaying images in a webpage. These images must be in a format that the web browser can handle, such as Graphics Interchange Format (GIF), Joint Photograph Expert Group (JPEG), and for some browsers Portable Network Graphics (PNG) formats.

Displaying images in a webpage is done by using the `<img>` tag format

```

```

#### Attributes of `<img>` tag:

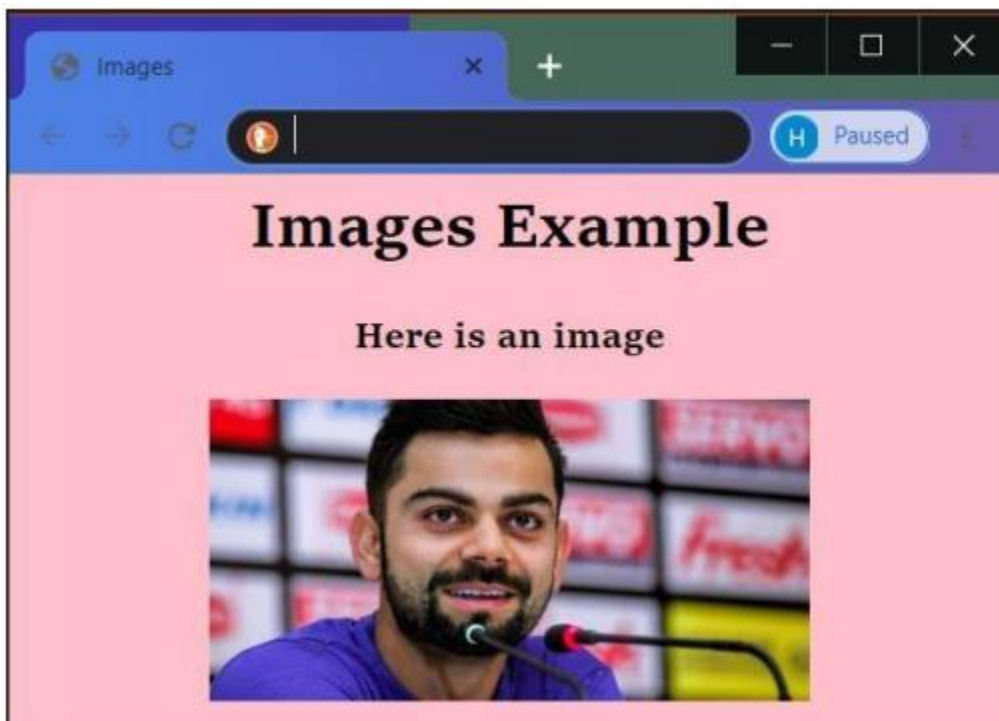
- **alt** : this attribute is used to specify text to be displayed in place of image for browser that cannot handle graphics.
- **src** : specifies the URL of the image to display.
- **border** : sets the border for the image.
- **height** : indicates the height of the image.
- **width** : indicates the width of the image.

- `hspace` : sets the horizontal space around the image.
- `vspace` : sets the vertical space around the image.

### Example

```
<html>
  <head>
    <title>Images</title>
  </head>
  <body bgcolor="pink">
    <center>
      <h1>Images Example</h1>
      <h3>Here is an image</h3>
      
    </center>
  </body>
</html>
```

### Output

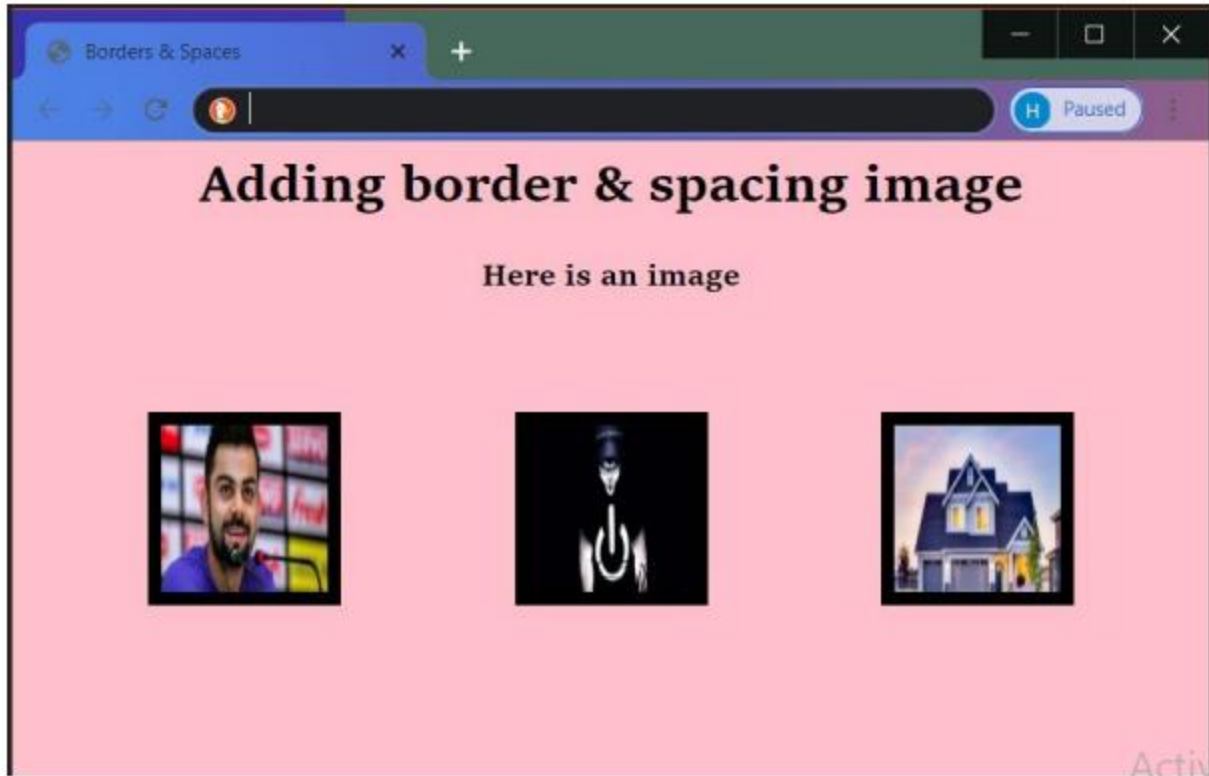




Adding borders and spaces around image:

```
<html>
  <head>
    <title>Borders & Spaces</title>
  </head>
  <body bgcolor="pink">
    <center>
      <h1>Adding border & spacing image</h1>
      <h3>Here is an image</h3>
      
      
      
    </center>
  </body>
</html>
```

**Output:**



### CREATING HTML FORMS:

Form is a collection of various HTML control files , buttons ,checkboxes , radio buttons ,text fields et., and they use to send the data to the server. There are several form elements.

- Button : `<input type="button">` :- are the standard clickable buttons.
- Checkbox : `<input type="checkbox">` :- displayed usually as a small box with a check mark in it. The user can toggle the checkbox on or off by checking the checkbox
- Customizable Buttons : `<button>` :- display images one other HTML inside itself.
- File uploading controls : `<input type="file">` :- allow the user to upload files to the server.
- Hidden controls : store data that is not visible to users unless they view the web page source code.
- Image controls : `<input type="image">` :- are like submit buttons except that they are images the user can click.
- Password controls : `<input type="password">` :- are like text fields , but each typed character displaying by an asterisk or instead any character.

Radio buttons : `<input type="radio">` :- displaying usually as a circle which when selected displays a dot in the middle. These controls are much like checkboxes except that they work in mutually exclusive at a time.

- Reset button : `<input type="reset">` : - allow the user to clear all the data they have entered. When the user clicks the reset button all controls in the form are removed to that original state displaying the data they had when they first appeared.

- Selection : Works much like drop down list boxes also called select controls. Format is:

```
<select>
```

```
    <option>Item1</option>
```

```
    <option>Item1</option>
```

```
    <option>Item1</option>
```

```
</select>
```

- Submit button : when we click the button all the data in the form will be sent to web server for processing.

- Text area : are two dimensional text fields allowing user to enter more than one line of text.

Format is: `<textarea>`

- Text fields : allow the user to enter one line of text also called a textbox. Format is :

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

In order to create form we use `<form>` tag. Format is :

```
<form>
```

```
|
```

```
|
```

```
</form>
```

### Attributes of `<form>` tag:

- name : gives the name of the form so that we can return it in code . Set to an alphanumeric string.

- target : indicates a named frame for browser to display the form results
- method : indicates a method or protocol for sending data to the target actionURL.
- action : gives the URL that that will handle the form data.

### Example

#### Registration.html

```

<html>
  <head>
    <title>HTML Form</title>
  </head>
  <body bgcolor="pink">
    <center>
      <form name="form1">
        <table border="0" cellpadding="4" cellspacing="4">
          <caption>Registration form</caption>
          <tr>
            <th>Name</th>
            <td><input type="text" name="name" /></td>
          </tr>
          <tr>
            <th>Password</th>
            <td><input type="password"/></td>
          </tr>
          <tr>
            <th>Enter your address</th>
            <td><textarea rows="5" cols="10"></textarea></td>
          </tr>
          <tr>
            <th>Enter your email</th>

```

```

        <td><input type="email"/></td>
</tr>
<tr>
    <th>Enter your mobile</th>
    <td><input type="number"/></td>
</tr>
<tr>
    <th>Select your gender</th>
    <td>
        male<input type="radio" name="g" value="m"/>
        female<input type="radio" name="g" value="f"/>
    </td>
</tr>
<tr>
    <th>Language preference</th>
    <td>
        English<input type="checkbox" value=" "/>
        Telugu<input type="checkbox" value=" "/>
        Hindi<input type="checkbox" value=" "/>
    </td>
</tr>
<tr>
    <th>Select your DOB</th>
    <td><input type="date"/></td>
</tr>
<tr>
    <td ><input type="submit" value="Register"/></td>
    <td><input type="reset" value="Cancel"/></td>
    </td>
</tr>

```

```

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

```

**Output**

