

HTML

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HTML stands for **Hyper Text Markup Language**, which is the most widely used language on Web to develop web pages.

Hypertext - link available on a webpage is called Hypertext.

Markup Language which means you use HTML to simply "mark-up" a text document with tags.

- Website - collection webpage
- Webpage - document - collection web element
- Web element - images, links text, video etc

HTML was created by Berners-Lee in late 1991.

HTML 2.0	1995
HTML 4.01	1999
HTML-5 version which is an extension to HTML 4.01	2012

Why to Learn HTML?

HTML was developed to define the structure of website like headings, paragraphs, lists etc with the help of different tags

1. To create Web site
2. To become a web designer
3. It helps to learn other languages

Applications of HTML

1. Web pages development
2. Internet Navigation
3. Responsive UI
4. Offline support
5. Game development

HTML Tags

- HTML is not case sensitive language.
- Tags are enclosed within angle braces **<Tag Name>**.

- Except few tags, most of the tags have their corresponding closing tags. For example, **<html>** has its closing tag **</html>** .

Hello World using HTML.

```
<!DOCTYPE html>
<html>
<head>
  <title>This is document title</title>
</head>
<body>
  <h1>This is a heading</h1>
  <p>Hello World!</p>
</body>
</html>
```

Sr.No	Tag & Description
1. <!DOCTYPE...>	This tag defines the document type and HTML version.
2. <html>	This tag encloses the complete HTML document. It has header which is represented by <head>...</head> and document body which is represented by <body>...</body> tags.
3. <head>	This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
4. <title>	The <title> tag is used inside the <head> tag to mention the document title.
5. <body>	This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc
6. <h1>	This tag represents the heading.
7. <p>	This tag represents a paragraph.

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1. HTML - Comments

- Comment is a piece of code which is ignored by any web browser. It is a good practice to add comments into your HTML code , especially in complex documents
- HTML comments are placed in between <!-- ... --> tags.

2. Heading Tags

- Any document starts with a heading.
- You can use different sizes for your headings.

- c. HTML also has six levels of headings, which use the elements `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, and `<h6>`

```
➤ <h1>This is heading 1</h1>
➤ <h2>This is heading 2</h2>
➤ <h3>This is heading 3</h3>
➤ <h4>This is heading 4</h4>
➤ <h5>This is heading 5</h5>
➤ <h6>This is heading 6</h6>
```

3. Paragraph Tag

- a. The `<p>` tag offers a way to structure your text into different paragraphs.
- b. opening `<p>` and a closing `</p>` tag

```
➤ <p>Here is a first paragraph of text.</p>
➤ <p>Here is a second paragraph of text.</p>
```

4. Line Break Tag

- a. Whenever you use the `
` element, anything following it starts from the next line

```
➤ <p>Hello<br />
➤ You delivered your assignment ontime.<br />
➤ Thanks<br />
➤ Mahnaz</p>
```

5. Centering Content Tag

- a. You can use `<center>` tag to put any content in the center of the page or any table cell.

```
➤ <center>
➤ <p>This text is in the center.</p>
➤ </center>
```

6. Horizontal Lines

- a. The `<hr>` tag creates a line from the current position

```
➤ <p>This is paragraph one and should be on top</p>
➤ <hr />
➤ <p>This is paragraph two and should be at bottom</p>
```

7. Insert Image

- a. You can insert any image in your web page by using tag.

- Set Image Width/Height
 - a. using width and height attributes

➤ ``

- Set Image Border
 - a. image will have a border around it,

➤ ``

8. HTML - Text Links

- a. A webpage can contain various links that take you directly to other pages and even specific parts of a given page. These links are known as hyperlinks.
- b. Hyperlinks allow visitors to navigate between Web sites by clicking on words, phrases, and images.
- c. A link is specified using HTML tag <a>. This tag is called anchor tag and anything between the opening <a> tag and the closing tag becomes part of the link.

➤ `<p>Click following link</p>`

➤ `Navigate Point`

Notes :-

1. **void tag/elements** :- There are some HTML elements which don't need to be closed, such as <img.../>, <hr /> and
 elements. These are known as void elements.

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HTML – Attributes

1. We used them so far in their simplest form, but most of the HTML tags can also have attributes, which are extra bits of information.
2. An attribute is used to define the characteristics of an HTML element and is placed inside the element's opening tag.
3. All attributes are made up of two parts – a **name** and a **value**.
 - a. The **name** is the property you want to set.
 - i. For example, **<p align is attribute>**, which use to indicate the alignment of paragraph on the page.
 - b. The **value** is what you want the value of the property to be set and always put within quotations
 - i. Three possible values of align attribute: **left**, **center** and **right**.

```
➤ <p align = "left">This is left aligned</p>  
➤ <p align = "center">This is center aligned</p>  
➤ <p align = "right">This is right aligned</p>
```

4. Core Attributes :- *Type, Id, Title, Class, Style, classname, maxlength*

HTML – Formatting

1. Bold Text

- a. Anything that appears within **...** element,

```
➤ <p>The following word uses a <b>bold</b> typeface.</p>
```

2. Italic Text

- a. Anything that appears within **<i>...</i>** element

```
➤ <p>The following word uses an <i>italicized</i> typeface.</p>
```

3. Underlined Text

- a. Anything that appears within **<u>...</u>** element,

```
➤ <p>The following word uses an <u>underlined</u> typeface.</p>
```

4. Grouping Content

- a. The **<div>** and **** elements allow you to group together several elements to create sections or subsections of a page.

```
➤ <body>
```

```

➤ <div id = "menu" align = "middle" >
➤   <a href = "/index.htm">HOME</a> |
➤   <a href = "/about/contact_us.htm">CONTACT</a> |
➤   <a href = "/about/index.htm">ABOUT</a>
➤ </div>
➤
➤ <div id = "content" align = "left" >
➤   <h5>Content Articles</h5>
➤   <p>Actual content goes here.....</p>
➤ </div>
➤ </body>

```

HTML – Forms

- HTML Forms are required, when you want to collect some data from the site visitor.
 - For example, during user registration you would like to collect information such as name, email address, credit card, etc.
- A form will take input from the site visitor and then will post it to a back-end application.
- There are various form elements available like text fields, text area fields, drop-down menus, radio buttons, checkboxes, etc.

The HTML **<form>** tag is used to create an HTML form and it has following syntax –

```

➤ <form>
➤     form elements like input, text area etc.
➤ </form>

```

There are different types of form controls that you can use to collect data using HTML form –

- Text Input Controls
- Checkboxes Controls
- Radio Box Controls
- Select Box Controls
- File Select boxes
- Clickable Buttons
- Submit and Reset Button

1. Text Input Controls

- a. Line of user input, such as search boxes or names. They are created using HTML `<input>` tag.

```
➤ First name: <input type = "text" name = "first_name" />  
➤ <br>  
➤ Last name: <input type = "text" name = "last_name" />
```

2. Password input controls

- a. They are also created using HTML `<input>` tag but type attribute is set to password.

```
➤ User ID : <input type = "text" name = "user_id" />  
➤ <br>  
➤ Password: <input type = "password" name = "password" />
```

3. Checkbox Control

- a. Checkboxes are used when more than one option is required to be selected.
- b. They are also created using HTML `<input>` tag but type attribute is set to checkbox.

```
➤ <input type = "checkbox" name = "maths" value = "on"> Maths  
➤ <input type = "checkbox" name = "physics" value = "on"> Physics
```

4. Radio Button Control

- a. Radio buttons are used when out of many options, just one option is required to be selected.
- b. They are also created using HTML `<input>` tag but type attribute is set to radio.

```
➤ <input type = "radio" name = "subject" value = "maths"> Maths  
➤ <input type = "radio" name = "subject" value = "physics"> Physics
```

5. Select Box Control

- a. A select box, also called drop down box which provides option to list down various options in the form of drop down list, from where a user can select one or more options.

```
➤ <select name = "dropdown">  
➤ <option value = "Maths" selected>Maths</option>  
➤ <option value = "Physics">Physics</option>  
➤ </select>
```

6. File Upload Box

- a. If you want to allow a user to upload a file to your web site, you will need to use a file upload box, also known as a file select box.
- b. This is also created using the <input> element but type attribute is set to file.

```
➤ <input type = "file" name = "fileupload" accept = "image/*" />
```

7. Button Controls

- a. There are various ways in HTML to create clickable buttons.
- b. You can also create a clickable button using <input> tag by setting its type attribute to button.

```
➤ <input type = "submit" name = "submit" value = "Submit" />  
➤ <input type = "reset" name = "reset" value = "Reset" />
```

HTML - Tables

- The HTML tables allow web authors to arrange data like text, images, links, other tables, etc. into rows and columns of cells.
- The HTML tables are created using the <table> tag in which the <tr> tag is used to create table rows and <td> tag is used to create data cells. The elements under <td> are regular and left aligned by default.
- Table heading can be defined using <th> tag.

```
➤ <table border = "1">  
➤   <tr>  
➤     <th>Name</th>  
➤     <th>Salary</th>  
➤   </tr>  
➤   <tr>  
➤     <td>David Raman</td>  
➤     <td>5000</td>  
➤   </tr>  
➤   <tr>  
➤     <td>Kumar Dawan</td>  
➤     <td>7000</td>  
➤   </tr>
```