

HTML

- hypertext markup language
- used to designing the web ui
- invented by sir Tim Bernerse Lee on a NextStep Workstation
- **markup language**
 - which is made up of
 - tag
 - word enclosed by < and >
 - also known as element
 - e.g.
 - <p>: paragraph
 - <table>: table
 - used as an instruction to perform some operation
 - types
 - opening
 - used to start an instruction
 - also known as starting tag
 - e.g.
 - <p>
 - closing
 - used to end the instruction
 - also known as ending tag
 - e.g.
 - </p>
 - empty
 - tag without having any data
 - e.g.
 - <p></p>
 - shorthand
 -

 - root
 - which starts and ends the document
 - e.g.
 - in html, the <html> is the root tag`
 - attribute
 - more information about the tag
 - attributes are optional
 - if used then attribute must be used in the name = value format

- e.g.
 - `<input type="text" >`
 - where
 - input is a tag
 - type is an attribute
 - text is the value for attribute type
 - for html5 attributes
 - if attribute name and value is same then one can use the shorthand attribute
 - e.g.
 - `<input required="required">`
 - `<input required>`
 - every html tag has following attributes
 - **id:** used to identify the tag uniquely
 - **name:**
 - used to add the name for a tag
 - used while submitting the form
 - **style:**
 - used to inline style to a tag
 - **class:**
 - used to add css class to a tag
- data
 - also known as content
 - information enclosed by opening and closing tags
 - e.g.
 - `<p>This is my paragraph</p>`
 - where
 - `<p>`: starting tag
 - this is my paragraph: data
 - `</p>`: closing tag
- is not a programming language

dev environment

- editor: Visual Studio Code
 - extensions
 - html snippets (<https://marketplace.visualstudio.com/items?itemName=abusaidm.html-snippets>)
 - html boilerplate (<https://marketplace.visualstudio.com/items?itemName=sidthesloth.html5-boilerplate>)
 -

html tags

- comment

- ignored while rendering the html
- used to write single or multi line comments
- e.g.
 - `<!-- this is the head section -->`
 - `<!-- this is the comment 1 this is the comment 2 this is the comment 3 this is the comment 4 -->`

- **head section**

- contains the meta data of the page
- the tags are not meant to display any output
- tags
 - **title**: used to change the tab title
 - **style**: used to add internal CSS code
 - **script**: used to add javascript code
 - **meta**: used to add meta (extra) information
 - **link**: used to link external documents
 - **base**: used for setting the base url for the website

- **body section**

- **text tags**

- heading tags

- used to add headings
- block tags
- types

- h1:

- `<h1>this is heading 1 </h1>`

- h2

- `<h2>this is heading 2 </h2>`

- h3

- `<h3>this is heading 3 </h3>`

- h4

- `<h4>this is heading 4 </h4>`

- h5

- `<h5>this is heading 5 </h5>`

- h6

- `<h6>this is heading 6 </h6>`

- paragraph

- used to add a paragraph
- a block tag
- ```
<p>this is para </p>
```
- div
  - division used to group the contents
  - can be also used for grouping the tags
  - adds new line character after finishing the data
  - a block tag
  - ```
<div>this is div 1</div>
```
- span
 - used to add textual information
 - does not add new line character after finishing the data
 - an inline tag
 - ```
this is a span
```
- **formatting tags**
  - bold
    - used to make the content bold
    - ```
<div><b>India</b> is my country.</div> <div><strong>India</strong> is my country.</div>
```
 - italic
 - used to make the content italic
 - ```
<div><i>India</i> is my country.</div>
```
  - underline
    - used to make the content underline
    - ```
<div><u>India</u> is my country.</div>
```
 - strike
 - used to make the content strike through
 - ```
<div><strike>China</strike> is spreading Covid-19.</div>
```
  - monospaced
    - used to create a monospaced content
    - ```
<div><tt>China</tt> is spreading Covid-19.</div>
```

- superscript
 - used to add the content above the line

- ```
<div>x²</div>
```

- subscript
  - used to add the content below the line

- ```
<div>x<sub>2</sub></div>
```

- pre
 - used to add pre-formatted text

- e.g.

```
<pre>
```

this is already formatted text

```
</pre>
```

- marquee
 - used to show the moving text
 - e.g.

○ lists

- ordered
 - used to create an ordered list
 - types
 - 1: latin numbers
 - A: upper case letter
 - a: lower case letter
 - I: upper case roman numbers
 - i: lower case roman numbers
 - e.g.

```
<ol type="1"> <li>this is list item 1</li> <li>this is list item 2</li> <li>this is list item 3</li> </ol>
```

- unordered
 - used to create unordered list
 - types
 - disc: filled circle
 - circle: empty circle
 - square: square
 - e.g.

```
<ul type="disc"> <li>this is list item 1</li> <li>this is list item 2</li> <li>this is  
list item 3</li> </ul>
```

- definition
 - used to add the definitions along with the information about them
 - dt: definition term
 - dd: definition definition
 - e.g.

```
<dl> <dt>HTML</dt> <dd>Hyper Text Markup Language<dd> </dl>
```

○ resources

- images
 - used to render images in the web page
 - e.g.

```

```

- audio
 - used to play audio
 - e.g.

```
<audio src="audio.mp3">
```

- video
 - used to play video files
 - e.g.

```
<video src="movie.mov">
```

○ table

○ anchor

○ white space

- br
 - used to add a line break
 - e.g.

```
<br> <br/>
```

- hr
 - used to add line break with a horizontal ruler
 - e.g.

```
<hr> <hr/>
```

-
 - used to add a space

- e.g.

```
&nbsp;
```

- **form tags**

- used for getting input values from user
- tags
 - input
 - used to get single line input from user
 - types
 - **text**: get textual (characters + numbers) input from user
 - **date**: get date input from user (browser may show a calendar control to select the date)
 - **time**: get time input from user
 - **number**: get only number input from user
 - **submit**
 - converts the input tag to a button
 - used to send the information filled by user to the server
 - **reset**:
 - converts the input tag to a button
 - resets every tag inside the form
 - **button**
 - converts the input tag to a button
 - used to perform an action locally (form will not be submitted or reset)
 - **radio**
 - used to get one of the options from user
 - **checkbox**
 - used to get multiple options from user
 - **file**:
 - used to select a file
 - **password**:
 - used to accept password from user
 - masks the characters (displays * instead of real characters)
 - **tel**:
 - used to get telephone number input from user
 - **email**:
 - used to get email address from user
 - attributes
 - **readonly**: makes the input readonly
 - **required**: user must enter the value in the input tag
 - **placeholder**: shows a hint to the user
 - **maxlength**: used to limit the number of characters entered by user
 - **value**: used to show the tag's title
 - **checked**:
 - use to select an option by default

- only used along with radio and checkbox
- **accept:**
 - used to allow certain type of files
 - used only with type = file
- textarea
 - used to get multi-line input from user
- select
 - used to get one or more options from the given list of options