

HTML

HTML5

HTML stands for Hypertext Markup language.

It is widely used language on web to develop web pages and web applications.

It is developed by Burners Lee in late 1991.

It is a case insensitive language.

It is a tag based language.

ex: <html>

Every tag contains opening tag and closing tag.

ex: <html> -- opening tag

</html> -- closing tag

Every tag contains attributes and each attribute contains attribute name and attribute value.

ex: <body bgcolor="red">

Tag may contains multiple attributes and each attribute seperated with space.

ex: <body bgcolor="red" background="image">

HTML file is know as HTML document.

All HTML document we need to save with .html or .htm extension.

All HTML documents execute in a browser window.

ex: Chrome

Mozilla

Edge

Opera

IE and etc.

We will use following editors to write HTML code.

ex: Notepad

Notepad++

Sublime

VSC

Dreamviewer and etc.

A simple HTML document is also known as component.

HTML is used to develop client side components.

HTML 2.0 was released in the year of 1995.

HTML 4.0 was released in the year of 1999.

HTML5 which is a extension of HTML4 was released in 2012.

The main objective of HTML5 is used to develop light weight component.

HTML5 is also known as advanced hypertext markup language.

HTML skeleton

HTML

```
<!DOCTYPE>
```

```
<html>
```

```
    <head>
```

```
        - // head related tags
```

```
    -
```

```
    </head>
```

```
    <body>
```

```
        - // body related tags
```

```
    -
```

```
</body>
</html>

HTML5
<!DOCTYPE html>
<html>
    <head>
        -
        - // head related tags
        -
    </head>
    <body>
        -
        - // body related tags
        -
    </body>
</html>
```

Note: <!DOCTYPE> represent HTML document.
<!DOCTYPE html> represent HTML5 document.

<html> A <html> tag is a root tag for entire HTML document.
<head> A <head> tag is used to declare following things.
ex: title of a web page
 favicon of a web page
 styles
 scripts
<body> A <body> tag is used to declare actual content of a web page.
ex: images
 forms
 tables
 lists and etc.

First HTML Document

```
<!DOCTYPE html>
<html>
    <head>
    </head>
    <body>
        Welcome to HTML classes
    </body>
</html>
```

Q) How can we add title to a web page?

To add title of a web page we need to use <title> tag.
ex: <!DOCTYPE html>
<html>
<head>
 <title>IHUB TALENT</title>
</head>
<body>Welcome to HTML classes</body>
</html>

Q) How to add favicon to a web page?

A <link> tag is used to add favicon on a web page.

ex: <!DOCTYPE html>

```
<html>
  <head>
    <title>IHUB TALENT</title>
    <link rel="icon" href="ihub.jpg">
  </head>
  <body>
    Welcome to HTML classes
  </body>
</html>
```

Q) How to change the background color in html?

```
<!DOCTYPE html>
<html>
  <head>
    <title>IHUB TALENT</title>
    <link rel="icon" href="ihub.jpg">
  </head>
  <body bgcolor="yellow">Welcome to HTML classes</body>
</html>
```

Q) How to set the background image in html?

```
<!DOCTYPE html>
<html>
  <head>
    <title>IHUB TALENT</title>
    <link rel="icon" href="ihub.jpg">
  </head>
  <body background="bg.jpg">
    </body>
</html>
```

HTML Meta Tags

A meta tag is used to declare metadata of a document.

Here metadata means data of a data.

Metadata used by web browser, search engine and other web services.

To declare metadata we need to use <meta> tag.

A <meta> tag we can declare inside <head> tag.

A <meta> tag is used to declare following things.

- 1) Description
- 2) Author
- 3) keywords
- 4) view port
- 5) refresh
- 6) copyright

and etc.

UTF-8

UTF stands for Unicode Transformation Format.

UTF is a encoding methods which describes what character set a website is written with.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">

        <!-- meta data -->
        <meta charset="utf-8">
        <meta name="description" content="Web page for learning purpose">
        <meta name="author" content="Niyaz sir">
        <meta name="keywords" content="HTML      CSS      JAVASCRIPT
BOOSTRAP">
        <meta name="viewport" content="width=device-width, intial-scale=1.0">
        <meta http-equiv="refresh" content="05">
        <meta name="copyright" content="Copy right by Niyaz sir">
    </head>
    <body>
        This is HTML class
    </body>
</html>
```

Basic Tags in HTML

Heading Tags

It will display the text in bold and size of the text is depends upon number of heading tags.

We have 6 heading tags from h1 to h6.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <h1> Heading Tag 1</h1>
        <h2> Heading Tag 2</h2>
        <h3> Heading Tag 3</h3>
        <h4> Heading Tag 4</h4>
        <h5> Heading Tag 5</h5>
        <h6> Heading Tag 6</h6>
    </body>
</html>
```

Paragraph tag

A <p> tag is used to display the text in paragraph.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">

    </head>
    <body>
        <p>
            HTML is widely used language on web to develop
            web pages and web applications and it is developed by
            burners lee in late 1991.
        </p>
    </body>
</html>
```

center tag

A <center> tag is used to display the text in center.

HTML5 does not support <center> tag.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">

    </head>
    <body>
        <center>This is center tag</center>
    </body>
</html>
```

bold tag

A tag is used to display the text in bold without importance.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>
```

```
<!-- favicon -->
<link rel="icon" href="ihub.jpg">

</head>
<body>
    <b>This is bold tag</b>
</body>
</html>
```

strong tag

A **** tag is used to display the text in bold with important.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <strong>This is strong tag</strong>
    </body>
</html>
```

italic tag

A *<i>* tag is used to display the text in italic without force.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <i>This is italic tag</i>
    </body>
</html>
```

emphasize tag

A ** tag is used to display the text in italic with force.

ex:

```
<!DOCTYPE html>
<html>
    <head>
```

```

<!-- title -->
<title>MyPage!</title>

<!-- favicon -->
<link rel="icon" href="ihub.jpg">

</head>
<body>
    <em>This is emphasize tag</em>
</body>
</html>

```

underline tag

A <u> tag is used to display the text in underline.
HTML5 does not support <u> tag.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <u>This is underline tag</u>
    </body>
</html>

```

font tag

A font tag is used to apply the color to the text , to increase the font size and change font family.

HTML 5 does not support tag.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>

        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <font color="blue" size="30" face="cursive">
            This is font tag
        </font>
    </body>
</html>

```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <!-- title -->
    <title>MyPage!</title>

    <!-- favicon -->
    <link rel="icon" href="ihub.jpg">
  </head>
  <body>
    <font color="blue" size="30" face="monospace">
      This is font tag
    </font>
  </body>
</html>
```

breakline tag

A `
` tag is used to break the line in a web page.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <!-- title -->
    <title>MyPage!</title>

    <!-- favicon -->
    <link rel="icon" href="ihub.jpg">

  </head>
  <body>
    <i>This is italic tag</i>
    <br>
    <b>This is bold tag</b>
  </body>
</html>
```

Horizontal line

A `<hr>` tag is used to display horizontal line in a web page.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <!-- title -->
    <title>MyPage!</title>

    <!-- favicon -->
    <link rel="icon" href="ihub.jpg">

  </head>
```

```

<body>
    <i>This is italic tag</i>
    <hr>
    <b>This is bold tag</b>
</body>
</html>

```

marquee tag

A <marquee> tag is used to scroll the text.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <!-- title -->
        <title>MyPage!</title>
        <!-- favicon -->
        <link rel="icon" href="ihub.jpg">
    </head>
    <body>
        <marquee> This is HTML class for Freshers </marquee>
    </body>
</html>

```

Nested Tags in HTML

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <center>
            <h1>
                <font color="blue">Welcome to HTML classes</font>
            </h1>
        </center>
    </body>
</html>

```

Phrase tags in HTML

Phrase tags are special purpose tags which are used to define structural meaning to block of code or text.

We have following list phrase tags in html.

- 1) abbreviation - <abbr>
 - 2) definition - <dfn>
 - 3) short quote - <q>
 - 4) address - <address>
 - 5) code - <code>
 - 6) keyboard - <kbd>
 - 7) strike - <strike> or <s>
- and etc.

1) abbreviation - <abr>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <abr title="HyperText Markup Language">
      HTML
    </abr>
    is a markup language and it is a case insensitive language.

  </body>
</html>
```

2) definition - <dfn>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <dfn>HTML</dfn>
    is a markup language and it is a case insensitive language.
  </body>
</html>
```

3) short quote - <q>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <q>I love html coding because it is easy</q>
  </body>
</html>
```

4) address - <address>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <address>
      1-4-78/1 , Nilgiri Block, Ameerpet, Hyderabad.
    </address>
  </body>
</html>
```

5) code - <code>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <code>
      void main()
      {
        clrscr();
        printf("Hello");
        getch();
      }
    </code>
  </body>
</html>
```

6) keyboard - <kbd>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <p> To copy press CTRL+C button </p>
    <p> To copy press <kbd>CTRL+C</kbd> button </p>
  </body>
</html>
```

7) strike - <strike> or <s>

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>
      <s>
        This is Java Class
      </s>
    </h1>
  </body>
</html>
```

HTML images

A `` tag is used to display the images in a web page.

It is an opening tag with attributes and does not have any closing tag.

A `` tag contains following attributes.

- 1) `src` - It is used to locate a file.
- 2) `alt` - It will display alternate message if image is not found.
- 3) `width` - It is used to set the width to the image.
- 4) `height` - It is used to set the height to the image.

We have following list of images.

<u>Format</u>	<u>Abbreviation</u>
JPEG	Joint Photographic Expert Group
PNG	Portable Network Graphics
SVG	Scalable Vector Graphics
GIF	Graphical Interchange Format and etc.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        
    </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        
    </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        
    </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    
  </body>
</html>
```

Hyperlink in HTML

A [anchor tag](#) is used to display hyperlink in a web page.
Anchor tag contains "href" attribute to navigate to other resources.

ex:1

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>
      <a href="http://www.facebook.com/login"> Facebook </a>
    </h1>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>
      <a href="http://www.facebook.com/login"
         target="_self">
        Facebook
      </a>
    </h1>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>
      <a href="http://www.facebook.com/login"
          target="_blank">
        Facebook
      </a>

    </h1>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <center>
      <a href="https://en.wikipedia.org/wiki/Dwayne_Johnson"
          target="_blank">

      </a>
    </center>
  </body>
</html>
```

HTML Entity

HTML entity is a groupd of characters starts with '&' and ends with semicolon(;).
 HTML entities are used to display reversed characters or hidden characters in html.
 We have following list of html entities.

ex:

<u>HTML entity</u>	<u>character</u>
>	>
<	<
«	<<
»	>>
 	(1 space)
©	
and etc.	

Q) What is difference between HTML tag and HTML element?

HTML tag

HTML tag starts with '<' symbol and ends with '>' symbol.

ex: `<html>`, `<head>`, `<body>`, `<h1>` and etc.

HTML element

HTML element defines opening tag, some content and closing tag.

ex: `<h1> This is heading tag </h1>`
 `<p> This is paragraph tag </p>`

Q) What is the different between block elements and inline elements?

block elements

A block elements always start with new line.

They will occupy 100% of width.

ex: `<h1>` , `<p>` , `<div>` and etc

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <h1> This is heading tag </h1>
        <p> This is paragraph tag </p>
        <div> This is division tag </div>
    </body>
</html>
```

inline elements

Inline elements starts with same line.

They will occupy width as much as required.

ex: ``, `<i>`, `` and etc.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <b>This is bold tag</b>
        <i>This is italic tag</i>
        <span>This is span tag</span>
    </body>
</html>
```

Q) Types of tags in HTML ?

We have two types of tags in HTML.

1) Paired Tags / Container Tags

Paired tag contains opening tag and closing tag.

ex: `<html>`, `<head>`, `<body>` , `<title>` and etc.

2) Unpaired Tags / Empty Tags

Unpaired tag contains only opening and does not have any closing tag.

ex:
 , <hr>, , <link> and etc.

Q) Types of list in HTML ?

We have three types of list in HTML.

- 1) Ordered list
- 2) Unordered list
- 3) Description list

Ordered list

A tag is used to represent ordered list with numeric and alphabet.

Order list contains list of items.

Each list of item we can represent by using tag.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ol>
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ol>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ol start="101">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ol>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ol type="a">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ol>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ol type="A">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ol>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ol type="i">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
```

```

<li>ExpressJS</li>
<li>NodeJS</li>
<li>NextJS</li>
</ol>
</body>
</html>

```

Unordered list

A `` tag is used to represent unordered list with bullets.

Unorder list contains list of items.

Each list of item we can represent by using `` tag.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        Courses:
        <ul type="disc">
            <li>ReactJS</li>
            <li>AngularJS</li>
            <li>VueJS</li>
            <li>ExpressJS</li>
            <li>NodeJS</li>
            <li>NextJS</li>
        </ul>
    </body>
</html>

```

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        Courses:
        <ul type="circle">
            <li>ReactJS</li>
            <li>AngularJS</li>
            <li>VueJS</li>
            <li>ExpressJS</li>
            <li>NodeJS</li>
            <li>NextJS</li>
        </ul>
    </body>
</html>

```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ul type="square">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ul>
  </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Courses:
    <ul type="none">
      <li>ReactJS</li>
      <li>AngularJS</li>
      <li>VueJS</li>
      <li>ExpressJS</li>
      <li>NodeJS</li>
      <li>NextJS</li>
    </ul>
  </body>
</html>
```

Description list

A `<dl>` tag is used to represent description list.

A description list contains description term and description definition.

A `<dt>` tag is used to represent description term.

A `<dd>` tag is used to represent description definition.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
```

```

<dl>
    <dt>HTML5</dt>
    <dd>
        HTML5 is a advanced hypertext markup language
        which is used to develop light weight components
        to design interactive static web pages and web
        applications.
    </dd>
</dl>
</body>
</html>

```

HTML Forms

HTML forms are used to accept the values from the user.

It will send the data to database or server for processing.

To create a form in html we need to use <form> tag.

We have following list of form components.

ex: Label, TextField, Buttons, Checkbox, RadioButton, textarea, select box, and etc.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <form>
            <label>Name:</label>
            <input type="text" name="t1"/>
            <br>
            <label>Password:</label>
            <input type="password" name="t2"/>
            <br>
            <label>Age:</label>
            <input type="number" name="t3"/>
            <br>
            <label>DOB:</label>
            <input type="date" name="t4"/>
            <br>
            <label>Gender:</label>
            <input type="radio" value="male" name="t5"/>MALE
            <input type="radio" value="female" name="t5"/>FEMALE
            <br>
            <label>Marital Status:</label>
            <input type="checkbox" value="married" name="t6"/>MARRIED
            <input type="checkbox" value="single" name="t6"/>SINGLE
            <br>
            <label>Qualification:</label>
            <select name="t7">
                <option value="">none</option>

```

```

        <option value="b.tech">B.Tech</option>
        <option value="b.sc">B.SC</option>
        <option value="b.com">B.COM</option>
    </select>
    <br>
    <label> Address : <label>
    <textarea name="t8" rows="5" cols="10"></textarea>
    <br>
    <input type="reset" value="reset"/>
    <input type="submit" value="submit"/>
</form>
</body>
</html>

```

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <form>
            <label>Name:</label>
            <input type="text" name="t1" autocomplete="off" required/>
            <br>
            <label>Password:</label>
            <input type="password" name="t2" required/>
            <br>
            <label>Age:</label>
            <input type="number" name="t3" required/>
            <br>
            <label>DOB:</label>
            <input type="date" name="t4" required/>
            <br>
            <label>Gender:</label>
            <input type="radio" value="male" name="t5"/>MALE
            <input type="radio" value="female" name="t5"/>FEMALE
            <br>
            <label>Marital Status:</label>
            <input type="checkbox" value="married" name="t6"/>MARRIED
            <input type="checkbox" value="single" name="t6"/>SINGLE
            <br>
            <label>Qualification:</label>
            <select name="t7">
                <option value="">none</option>
                <option value="b.tech">B.Tech</option>
                <option value="b.sc">B.SC</option>
                <option value="b.com">B.COM</option>
            </select>
            <br>

```

```

<label> Address : <label>
<textarea name="t8" rows="5" cols="10"></textarea>
<br>
<input type="reset" value="reset"/>
<input type="submit" value="submit"/>
</form>
</body>
</html>

```

ex:1

```

index.html
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <form name="myform" action="a.html" method="POST">
      <label>Name:</label>
      <input type="text" name="t1" autocomplete="off" required/>
      <br>
      <label>Password:</label>
      <input type="password" name="t2" required/>
      <br>
      <label>Age:</label>
      <input type="number" name="t3" required/>
      <br>
      <label>DOB:</label>
      <input type="date" name="t4" required/>
      <br>
      <label>Gender:</label>
      <input type="radio" value="male" name="t5"/>MALE
      <input type="radio" value="female" name="t5"/>FEMALE
      <br>
      <label>Marital Status:</label>
      <input type="checkbox" value="married" name="t6"/>MARRIED
      <input type="checkbox" value="single" name="t6"/>SINGLE
      <br>
      <label>Qualification:</label>
      <select name="t7">
        <option value="">none</option>
        <option value="b.tech">B.Tech</option>
        <option value="b.sc">B.SC</option>
        <option value="b.com">B.COM</option>
      </select>
      <br>
      <label> Address : <label>
      <textarea name="t8" rows="5" cols="10"></textarea>
      <br>
      <input type="reset" value="reset"/>
    </form>
  </body>
</html>

```

```

        <input type="submit" value="submit"/>
    </form>
</body>
</html>

```

a.html

```

<!DOCTYPE html>
<html>
    <head>
        <title>A.html</title>
    </head>
    <body bgcolor="yellow">

        <center>welcome to A.html document </center>
    </body>
</html>

```

ex:2

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <form name="myform" action="#" method="GET">
            <input type="text" name="t1" autocomplete="off" placeholder="username"/>
<br>
            <input type="password" name="t2" placeholder="password"/> <br>
            <input type="submit" value="Login"/>
        </form>
    </body>
</html>

```

HTML Table

A table is used to store the data in rows and columns.

A `<table>` tag is used to represent table in html.

A `<tr>` tag is used represent table row.

A `<th>` tag is used represent table heading.

A `<td>` tag is used to represent table data.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <table border="0">
            <tr>
                <th>NO</th>
                <th>NAME</th>

```

```

        <th>ADDRESS</th>
    </tr>
    <tr>
        <td>101</td>
        <td>Alan</td>
        <td>Texas</td>
    </tr>
    <tr>
        <td>102</td>
        <td>Jose</td>
        <td>Chicago</td>
    </tr>
    <tr>
        <td>103</td>
        <td>Jason</td>
        <td>Florida</td>
    </tr>
</table>
</body>
</html>
```

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <table border="1" align="center" width="100%" bgcolor="cyan">
            <caption>Employee Details</caption>
            <tr>
                <th>NO</th>
                <th>NAME</th>
                <th>ADDRESS</th>
            </tr>
            <tr>
                <td>101</td>
                <td>Alan</td>
                <td>Texas</td>
            </tr>
            <tr>
                <td>102</td>
                <td>Jose</td>
                <td>Chicago</td>
            </tr>
            <tr>
                <td>103</td>
                <td>Jason</td>
                <td>Florida</td>
            </tr>
```

```
        </table>
    </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <table border="1" align="center" cellspacing="10px" cellpadding="10px">
            <caption>Employee Details</caption>
            <tr bgcolor="cyan">
                <th>NO</th>
                <th>NAME</th>
                <th>ADDRESS</th>
            </tr>
            <tr>
                <td>101</td>
                <td>Alan</td>
                <td>Texas</td>
            </tr>
            <tr>
                <td>102</td>
                <td>Jose</td>
                <td>Chicago</td>
            </tr>
            <tr>
                <td>103</td>
                <td>Jason</td>
                <td>Florida</td>
            </tr>
        </table>
    </body>
</html>
```

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <table border="1" align="center">
            <caption>Employee Details</caption>
            <tr bgcolor="cyan">
                <th>NO</th>
                <th>NAME</th>
```

```

        <th>ADDRESS</th>
    </tr>
    <tr>
        <td>101</td>
        <td>Alan</td>
        <td>Texas</td>
    </tr>
    <tr>
        <td>102</td>
        <td>Jose</td>
        <td>Chicago</td>
    </tr>
    <tr>
        <td>103</td>
        <td>Jason</td>
        <td>Florida</td>
    </tr>
    <tr>
        <td colspan="3">Thank you</td>
    </tr>
</table>
</body>
</html>

```

HTML form using Table

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <form name="myform" action="#" method="POST">
            <table align="center">
                <tr>
                    <td><label>UserName:</label></td>
                    <td><input type="text" name="t1" autocomplete="off" required/></td>
                </tr>
                <tr>
                    <td><label>Password:</label></td>
                    <td><input type="password" name="t2" required/></td>
                </tr>
                <tr>
                    <td><label>Qualification:</label></td>
                    <td>
                        <select name="t3">
                            <option value="">none</option>
                            <option
value="btech">B.TECH</option>
                        </select>
                    </td>
                </tr>
            </table>
        </form>
    </body>
</html>

```

```

        <option value="bsc">B.SC</option>
        <option
value="bcom">B.COM</option>
            </select>
        </td>
    </tr>
    <tr>
        <td><input type="reset" value="reset"/></td>
        <td><input type="submit" value="submit"/></td>
    </tr>
</table>
</form>
</body>
</html>

```

Datalist tag

A `<datalist>` tag/element is used to specify list of predefine options for an `<input>` tag/element.

A `<datalist>` tag/element provides autocomplete features for an `<input>` element/tag.

User will see a drop-down list of predefine options for an `<input>` tag/element.

A `<datalist>` tag/element "id" attribute must be same as `<input>` tag/element "list" attribute.

ex:

```

<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        Select Country : <input type="text" list="countries"/>

        <datalist id="countries">
            <option value="India">
            <option value="Ireland">
            <option value="Iran">
            <option value="Iraq">
            <option value="Iceland">
        </datalist>
    </body>
</html>

```

<details> and <summary> tag

A `<details>` tag/element is used display special content where a user can open and close on demand.

A `<details>` tag is used to design interactive widgets where user can open and close.

A `<details>` tag contains `<summary>` tag.

We can keep any sort of tags inside `<details>` tags.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <details>
      <summary>HTML</summary>
      <h1>HTML is a markup language</h1>
      <p>It is a case insensitive language</p>
      <div>It is a tag based language</div>
    </details>
  </body>
</html>
```

<big> tag

The `<big>` tag is used to make the text one size bigger i.e from small to medium, medium to large, large to x-large.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <p>This is paragraph tag</p>
    <p>This is <big>paragraph</big> tag</p>
  </body>
</html>
```

<small> tag

The `<small>` HTML element represents small print like copyright and legal text.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <small>&copy;AllRight Reserved-2023</small>
  </body>
</html>
```

<cite> tag

The `<cite>` tag defines the title of a creative work i.e movie , songs, Poems and etc.

The text in the `<cite>` element usually renders in italic.

ex:

```
<!DOCTYPE html>
```

```
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    Movie Title : <cite>Salaar</cite>
  </body>
</html>
```

<mark>

The HTML **<mark>** tag is used to mark or highlight text that has special interest.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>This is is <mark>very important</mark> for practice</h1>
  </body>
</html>
```

<sub> tag

The **<sub>** tag defines subscript text.

Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>H<sub>2</sub>O</h1>
  </body>
</html>
```

<sup> tag

The **<sup>** tag defines superscript text.

Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <h1>x<sup>2</sup>+y<sup>2</sup></h1>
  </body>
```

```
</html>
```

<bdo> tag

BDO stands for Bi-Directional Override.

The <bdo> tag is used to override the current text direction.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <bdo dir="rtl"> Hello </bdo>
    </body>
</html>
```

HTML <header> and <nav> tag

The <header> element represents a container for introductory content or a set of navigational links.

The <nav> tag defines a set of navigation links.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <header style="background-color:cyan">
            <center>
                <nav>
                    <a href="" style="text-decoration:none"> HOME
                    <a href="" style="text-decoration:none"> ABOUTUS
                    <a href="" style="text-decoration:none"> SERVICES
                    <a href="" style="text-decoration:none"> PORTFOLIO
                    <a href="" style="text-decoration:none"> CONTACT
                </nav>
            </center>
        </header>
    </body>
</html>
```

HTML <section>, <article> and <figure> tag

The <section> tag defines a section in a document.

The <article> tag specifies independent, self-contained content.

The <figure> tag specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <section>
      <article>
        <center>
          <h1>Hollywood Actor</h1>

          <figure>
            
            <figcaption>Dwayne Johnson</figcaption>
          </figure>
          <p>
            Dwayne Douglas Johnson (born May 2, 1972), also
            known by his ring name the Rock, is an American actor, film producer, and retired
            professional wrestler. Widely regarded as one of the greatest professional wrestlers of all
            time,[6][7] he was integral to the development and success of the World Wrestling Federation
            (WWF, now WWE) during the Attitude Era, an industry boom period in the late 1990s and
            early 2000s. Johnson wrestled for the WWF for eight years before pursuing an acting career.
            His films have grossed over $3.5 billion in North America and over $10.5 billion
            worldwide,[8] making him one of the world's highest-grossing and highest-paid actors.
          </p>
        </center>
      </article>
    </section>
  </body>
</html>
```

HTML <footer> tag

The <footer> tag defines a footer for a document or section.

ex:

```
<!DOCTYPE html>
<html>
  <head>
    <title>MyPage!</title>
  </head>
  <body>
    <footer>
      <center>
        <small>&copy;All Right reserved - 2023</small>
      </center>
    </footer>
  </body>
</html>
```

NotePad++ Editor [Download link](https://notepad-plus-plus.org/downloads/) : <https://notepad-plus-plus.org/downloads/>

HTML Frames

To use frames on a web page we need to use <frameset> tag instead of <body> tag.
The <frameset> tag defines how to divide the window into frames.
The "rows" attribute of <frameset> tag defines horizontal frames.
The "cols" attribute of <frameset> tag defines vertical frames.
Each frame is indicated by <frame> tag and it defines which document should be open into that place.

ex:1

index.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <frameset cols="33%,*,33%">
        <frame src="a.html"/>
        <frame src="b.html"/>
        <frame src="c.html"/>
    </frameset>
</html>
```

a.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>A.html</title>
    </head>
    <body bgcolor="red">
        </body>
</html>
```

b.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>B.html</title>
    </head>
    <body bgcolor="green">
        </body>
</html>
```

c.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>C.html</title>
    </head>
```

```
<body bgcolor="blue"></body>
</html>
```

ex:2

index.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <frameset rows="33%,*,33%">
        <frame src="a.html"/>
        <frame src="b.html"/>
        <frame src="c.html"/>
    </frameset>
</html>
```

a.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>A.html</title>
    </head>
    <body bgcolor="orange"></body>
</html>
```

b.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>B.html</title>
    </head>
    <body bgcolor="white">
        <center>
            
        </center>
    </body>
</html>
```

c.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>C.html</title>
    </head>
    <body bgcolor="green">
        </body>
</html>
```

HTML <iframe> tag

It is used to specify inline frame.

A <iframe> tag/element is used to embed a document into current HTML document.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <iframe src="http://www.ihubtalent.com" width="400px"
height="400px"/>
    </body>
</html>
```

Steps to display Google Map on a web page

step1: Goto Google Maps.

ex: https://www.google.com/maps

step2: Type Ihub Talent in Google Map Search Box.

step3: Click on "menu" button.

step4: Click on "share and embed Map"

step5: Click on "embeded a map" link.

step6: Click to "Copy Html".

step7: Paste the code inside <body> tag of index.html file.

step8: Check the output on browser window.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>MyPage!</title>
    </head>
    <body>
        <iframe
src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d3806.487656502131!2
d78.44202777415968!3d17.436358401394536!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3
m3!1m2!1s0x3bcb919633f78bef%3A0xbb63515db9bc2eba!2siHub%20Talent%20Info%20S
ystems%20-
%20Testing%20Tools%2C%20Full%20Stack%20Java%2C%20Python%20Training%20Insti
tute%20in%20Hyderabad!5e0!3m2!1sen!2sin!4v1694234739077!5m2!1sen!2sin"
width="100%" height="450" style="border:0;" allowfullscreen=""
loading="lazy" referrerpolicy="no-referrer-when-downgrade"></iframe>
    </body>
</html>
```

HTML <audio> tag

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

<audio> tag contains "controls" attribute adds audio control like play,pause ,volume and etc.

The <source > tag/element allows us to specify alternate audio file which the browser my choose.

HTML audio formats can be MP3,WAV,OGG and etc.

HTML Audio Media types are

<u>File Formats</u>	<u>Media Type</u>
MP3	audio/mpeg
OGG	audio/ogg
WAV	audio/wav

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>IHUB</title>
    </head>
    <body>
        <audio controls>
            <source src="media/sajda.mp3" type="audio/mpeg">
        </audio>
    </body>
</html>
```

HTML <video> tag

The <video> tag or element is used to embed video content in a document such as movie clip, other video streams.

The <video> tag contains one or more <source> tag with different video source.

There are three supported video fromats in html are MP4,webM and OGG.

HTML video media types are

<u>File format</u>	<u>Media Type</u>
MP4	video/mp4
OGG	video/ogg

and etc.

ex:

```
<!DOCTYPE html>
<html>
    <head>
        <title>IHUB</title>
    </head>
    <body>
        <video controls width="200px" height="200px">
            <source src="media/video.mp4" type="video/mp4">
        </video>
    </body>
</html>
```

Graphics in HTML5

There are two ways to draw the graphics in HTML5.

- 1)SVG
- 2)CANVAS

1) SVG

HTML5 uses SVG technology to derived graphics in HTML.

SVG stands for Scalable Vector Graphics.

SVG is used to draw two-dimensional vector based graphics in HTML.

World Wide Web Consortium (W3C) prefers SVG technology to draw the graphics in HTML.

A <svg> tag/element is a container tag for vector graphics.

A <svg> tag/element contains various methods to display circle, rectangle, polygon, graphic images and etc.

ex:1

```
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <svg style="border:2px solid black" width="300px" height="300px">
        </svg>
    </body>
</html>
```

ex:2

```
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <svg style="border:2px solid black" width="300px" height="300px">
            <!-- circle -->
            <circle cx="150px" cy="150px" r="50px"/>
        </svg>
    </body>
</html>
```

ex:3

```
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <svg style="border:2px solid black" width="300px" height="300px">
            <!-- circle -->
            <circle cx="150px" cy="150px" r="50px"
                fill="#FFFF00" stroke="#FF0000" stroke-width="5px"/>
        </svg>
    </body>
</html>
```

```

        </body>
    </html>

ex:4
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <svg style="border:2px solid black" width="300px" height="300px">
            <!-- reactangle -->
            <rect x="50px" y="20px" width="200px" height="200px"
                fill="green" stroke="blue" stroke-width="5px"/>
        </svg>
    </body>
</html>

```

```

ex:5
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <svg style="border:2px solid black" width="300px" height="300px">
            <!-- polygon -->
            <polygon points="10,78 100,10 250,190 160,210"
                fill="yellow" stroke="red" stroke-width="5px"/>
        </svg>
    </body>
</html>

```

2) CANVAS

A <canvas> tag is used to draw vector graphics via javascript.

A <canvas> tag/element is a container tag.

A <canvas> tag/element contains various methods to display lines, circle, rectangle, polygon, graphic images and etc.

ex:1

```

<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <canvas style="border:2px solid black;" width="300px" height="300px">

```

```

        </canvas>
    </body>
</html>

ex:2
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <canvas id="myId" style="border:2px solid black;" width="300px" height="300px">
            </canvas>
        <script>
            var context=document.getElementById("myId");
            var c=context.getContext("2d");
            c.moveTo(0,0);
            c.lineTo(400,400);
            c.stroke();
        </script>
    </body>
</html>

ex:2
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <canvas id="myId" style="border:2px solid black;" width="300px" height="300px">
            </canvas>
        <script>
            var context=document.getElementById("myId");
            var c=context.getContext("2d");
            c.beginPath();
            c.arc(100,100,50,0,2*Math.PI);
            c.stroke();
        </script>
    </body>
</html>
```

```

ex:3
<!DOCTYPE html>
<html>
    <head>
        <title>INDEX</title>
    </head>
    <body>
        <!-- container -->
        <canvas id="myId" style="border:2px solid black;" width="300px" height="300px">
        </canvas>

        <script>
            var context=document.getElementById("myId");
            var c=context.getContext("2d");
            c.font = "30px Arial";
            c.fillText("Hello World", 20, 50);
        </script>
    </body>
</html>

```

Q) What is the difference between HTML and HTML5 ?

HTML

To represent html document we need to Use <!DOCTYPE>.

HTML is bit slow.

It is inflexible for the programmer.

It does not support drag and drop menu.

It is less mobile friendly.

It does not allow to execute javascript.

We can't play audio and video without using flash player.

Vector graphics is possible by using technologies VML, silver light , adope flash and etc.

HTML5

To represent html5 document we need to use <!DOCTYPE html>.

HTML5 is more faster because it is light weight.

It is flexible for the programmer.

It supports drag and drop menu.

It is more mobile friendly.

It allows to execute javascript with help of JS Web work API.

We can play audio and video with the help <audio> and <video> tag without using flash player.

Vector graphics is possible by using internal technologies like SVG and CANVAS.

It can't handle inaccurate errors.

Shapes like circle, rectangle , polygon and etc are not easy to draw.

It can handle inaccurate errors.

Shapes like circle, rectangle, polygon and etc are easy to draw.

Q) What is the difference between <div> tag and tag ?

div

It is a block element.

It is used to wrap the sections.

It is used to develop css based layouts.

span

It is a inline element.

It is used to wrap the small portion of a text, images and etc.

It is used to stylize the text.

Q) What is the disadvantages of HTML5?

1. It is used to develop static web pages but not dynamic web pages.
2. Security features are not good.
3. For simple design we need to do lot of code.
4. If code is increases then it will increase the complexity.

How do HTML document will execute in a browser window

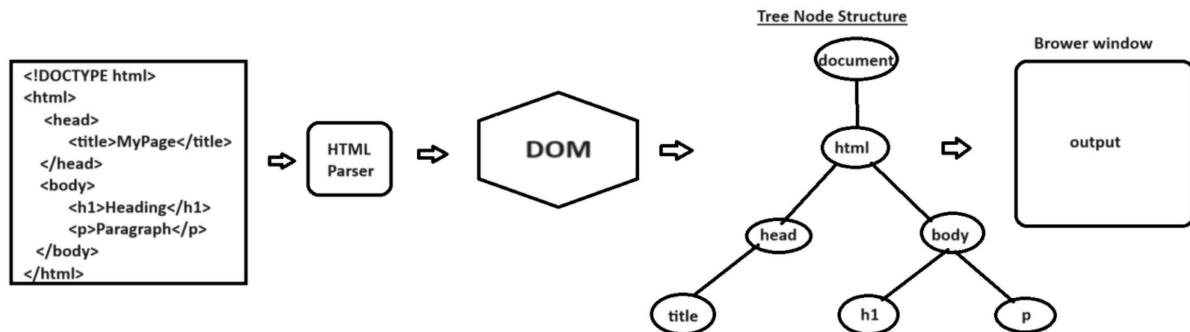


Diagram: class7.1

HTML parse will parse the data from HTML document and it will give to DOM.

DOM stands for Document Object Mode.

DOM is present in a browser window.

DOM will convert our HTML document to Tree Node structure.

Late, Tree Node structure will execute in a browser window.