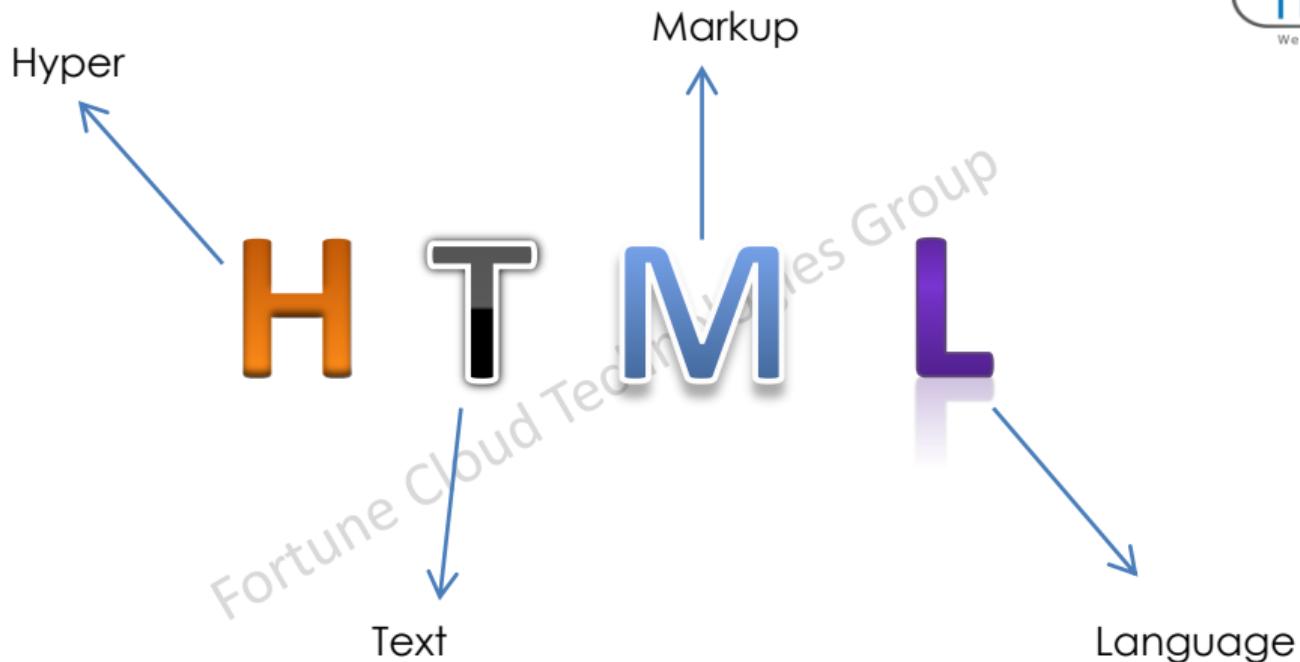


## ***HTML Introduction***



- HTML stands for HyperText Markup Language.
- HTML is used to create web pages and web applications.
- We can create a static website by HTML only.
- HTML is a Markup language rather than a programming language.

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

.......
```

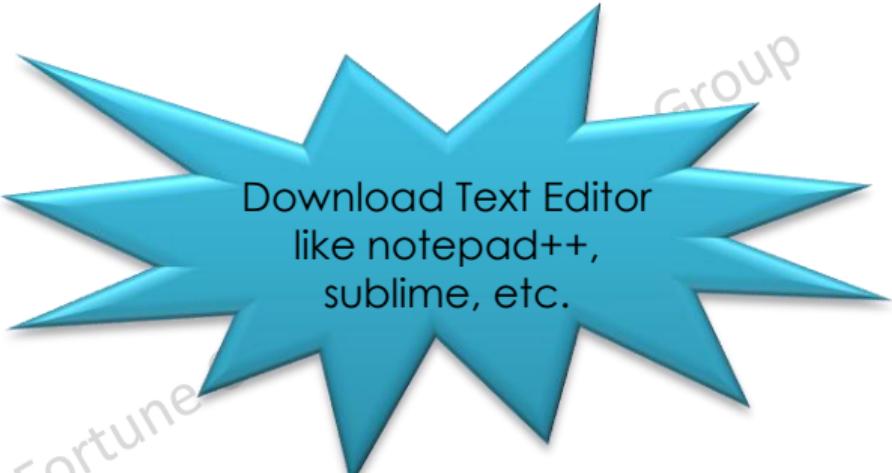
.....

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



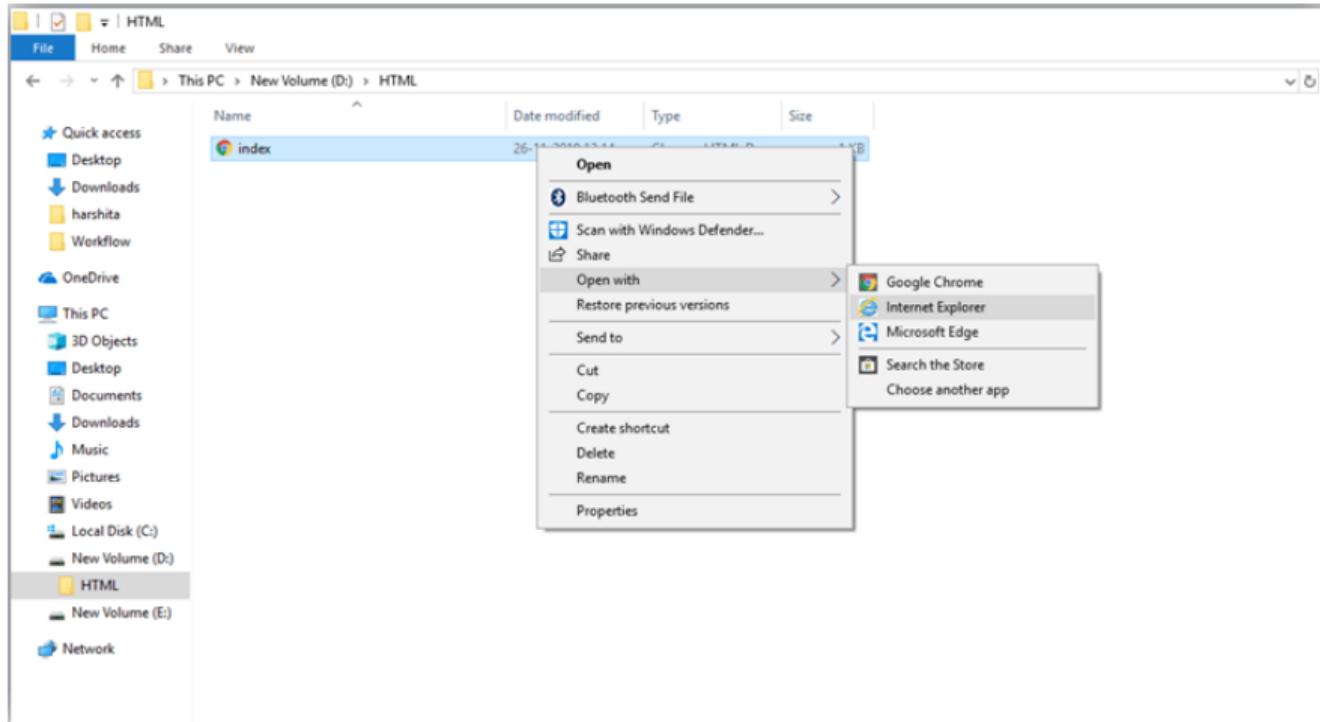
## Features

- It is a very **easy and simple language**.
- It is very easy to make an **effective presentation**.
- It is a **markup language**, so it provides a flexible way to design web pages along with the text.
- It facilitates programmers to add a **link** on the web pages (by html anchor tag).
- It is **platform-independent**.
- It facilitates the programmer to add **Graphics, Videos, and Sound** to the web pages
- HTML is a case-insensitive language



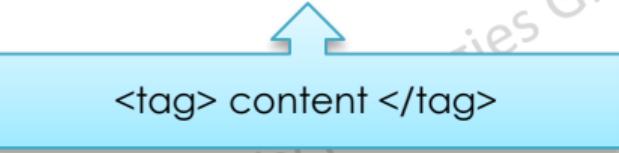
Download Text Editor  
like notepad++,  
sublime, etc.

## How to run



## HTML Tags

- HTML tags are like keywords which defines that how web browser will format and display the content.

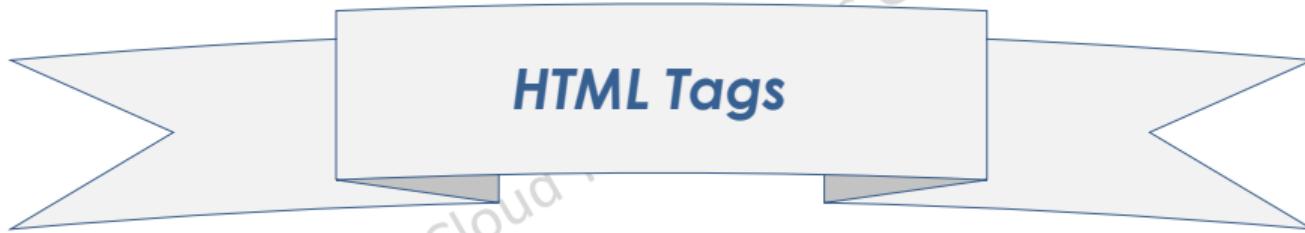


```
<tag> content </tag>
```

## Unclosed HTML Tags

- **<br> Tag:** br stands for break line, it breaks the line of the code.
- **<hr> Tag:** hr stands for Horizontal Rule. This tag is used to put a line across the webpage.

## ***HTML Tags***



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## HTML Heading

- A HTML heading or HTML h tag can be defined as a title or a subtitle
- There are six different HTML headings which are defined with the `<h1>` to `<h6>` tags

```
<h1>Heading no. 1</h1>
```

```
<h2>Heading no. 2</h2>
```

```
<h3>Heading no. 3</h3>
```

```
<h4>Heading no. 4</h4>
```

```
<h5>Heading no. 5</h5>
```

```
<h6>Heading no. 6</h6>
```

## HTML Paragraph

- HTML paragraph or HTML p tag is used to define a paragraph in a webpage.
- An HTML <p> tag indicates starting of new paragraph.

```
<p>This is first paragraph.</p>  
  
<p>This is second paragraph.</p>
```

## Bold Text

- The HTML **<b>** element is a physical tag which displays text in bold font

```
<b>bold text.</b>
```

- The HTML **<strong>** tag is a logical tag, which displays the content in bold font and informs the browser about its logical importance.

```
<strong>strong text.</strong>
```

## Italic Text

- The HTML *<i>* element is physical element, which display the enclosed content in italic font

```
<i>Italic text.</i>
```

## HTML Marked formatting

- If you want to mark or highlight a text, you should write the content within *<mark>.....</mark>*.

```
<h2> Hyper Text <mark> Markup</mark> Language</h2>
```

## Underline Text

- If you write anything within `<u>.....</u>` element, is shown in underlined text.

```
<u> underlined text. </u>
```

## HTML pre tag

- The **HTML <pre> tag** is used to specify pre formatted texts.
- Texts within <pre>.....</pre> tag is displayed in a fixed-width font.
- Usually it is displayed in Courier font.
- It maintains both space and line break.

```
<pre>
```

This is a formatted text

    This is a formatted text

        This is a formatted text

```
</pre>
```

## HTML <sub> tag

- HTML <sub> tag is termed as Subscript tag and which is used to define subscript text.

```
H<sub>2</sub>SO<sub>4</sub>
```

## HTML <sup> tag

- HTML <sup> tag is termed as a superscript tag which is used to define superscript text.

```
10<sup>th</sup>
```

```
12<sup>th</sup>
```

## HTML Anchor

- The **HTML anchor tag** defines a hyperlink that links one page to another page.

```
<a href="second.html">Click for Second Page</a>
```

- If we want to open that link to another page then we can use target attribute of <a> tag.

```
<a href="second.html" target="_blank">Click for Second Page</a>
```

## HTML Table

- **HTML table tag** is used to display data in tabular form (row \* column). There can be many columns in a row.

```
<table>  
.....  
</table>
```

```
<thead>  
  <tr>  
    <th>Id</th>  
    <th>Name</th>  
  </tr>  
</thead>
```

```
<tbody>  
  <tr>  
    <td>101</td>  
    <td>Abc</td>  
  </tr>  
</tbody>
```

```
<tfoot>  
  <tr>  
    <th>Id</th>  
    <th>Name</th>  
  </tr>  
</tfoot>
```

## HTML Image

- **HTML img tag** is used to display image on the web page.
- Closing tags are not used in HTML image element.

```

```

- **src:** It is a necessary attribute that describes the source or path of the image.
- **alt:** The alt attribute defines an alternate text for the image, if it can't be displayed.

HTML Lists

## Types of HTML Lists



Ordered List



Unordered List



Description List or  
Definition List

## Ordered List

- In the ordered HTML lists, all the list items are marked with numbers by default.
- The ordered list starts with `<ol>` tag and the list items start with `<li>` tag.

```
<ol>
  <li>Abc</li>
  <li>Lmn</li>
  <li>Pqr</li>
  <li>Xyz</li>
</ol>
```

type="1"  
type="a"  
type="A"  
type="i"

## Unordered List

- In HTML Unordered list, all the list items are marked with bullets.
- The Unordered list starts with <ul> tag and list items start with the <li> tag.

```
<ul>
  <li>Abc</li>
  <li>Lmn</li>
  <li>Pqr</li>
  <li>Xyz</li>
</ul>
```

list-style-type:circle  
list-style-type:disc  
list-style-type:square

## Description List or Definition List

- The definition list is very appropriate when you want to present glossary, list of terms or other name-value list.
- **<dl> tag** defines the start of the list.
- **<dt> tag** defines a term.
- **<dd> tag** defines the term definition (description).

```
<dl>
  <dt>Aries</dt>
  <dd>-One of the 12 horoscope sign.</dd>
  <dt>Bingo</dt>
  <dd>-One of my evening snacks</dd>
</dl>
```



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- **HTML form** is a section of a document which contains controls such as text fields, password fields, checkboxes, radio buttons, submit button, menus etc.
- An HTML form facilitates the user to enter data that is to be sent to the server for processing
- HTML forms are required if you want to collect some data from of the site visitor.

```
<form action="" method="">  
    //input controls e.g. textfield, textarea, radiobutton, button  
</form>
```

## HTML <input>

- It is used to create form fields, to take input from user.

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

type="text"

type="email"

type="password"

type="number"

type="checkbox"

type="radio"

type="file"

## HTML <textarea>

- <textarea> tag in HTML is used to insert multiple-line text in a form.
- The size of <textarea> can be specified either using "rows" or "cols" attribute

```
<textarea rows="7" cols="20"></textarea>
```

## <label> Tag

- it makes the code parser/browser/user friendly.
- If you click on the label tag, it will focus on the text control.
- To do so, you need to have for attribute in label tag that must be same as id attribute of input tag.

```
<form>
    <label for="firstname">First Name: </label> <br/>
    <input type="text" id="firstname" name="firstname"/> <br/>

    <label for="lastname">Last Name: </label>
    <input type="text" id="lastname" name="lastname"/> <br/>
</form>
```

## <select> Tag

- HTML <select> tag is used to create a drop down list with multiple options.
- The <option> element is nested within <select> tag

```
<select>
    <option>A</option>
    <option>B</option>
    <option>C</option>
</select>
```

## Submit Button

- it is used to add a submit button on web page.

```
<input type="submit" value="submit">
```

```
<button type="submit" >Submit</button>
```

## HTML <fieldset>

- It is used to group the related information of a form.
- This element is used with <legend> element which provide caption for the grouped elements.

```
<form>
  <fieldset>
    <legend>User Information:</legend>
    <label for="name">Enter name</label><br>
    <input type="text" id="name" name="name"><br>

    <input type="submit" value="submit">
  </fieldset>
</form>
```

## HTML <abbr>

- HTML <abbr> tag is used to represent an acronym or abbreviation of a longer word or phrase, such as www, HTML, HTTP, etc.

```
<abbr title="HyperText Markup language">HTML</abbr>
```

## HTML <ins>

- HTML <ins> tag is used to represent the newly added text in an HTML document.
- It usually renders with an underline through the text.

## HTML <del>

- HTML <del> tag is used to represent the range of text that has been deleted/removed from the document.

If you will do **<del>hard work </del> <ins>smart work</ins>** then you will get success easily

## HTML <div>

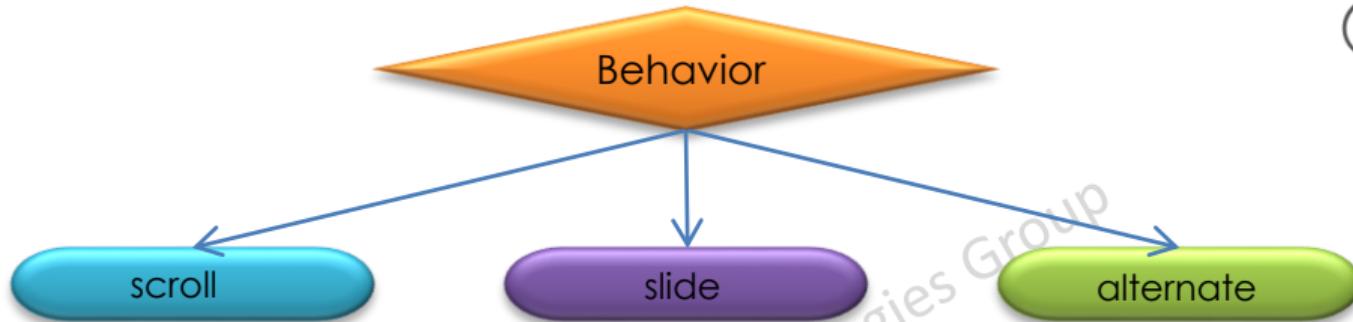
- The **HTML <div> tag** is used to group the large section of HTML elements together.
- The div tag is generally used by web developers to group HTML elements together and apply CSS styles to many elements at once.

```
<div style="border:1px;padding:20px;font-size:20px">  
  
    <p>This is first paragraph</p>  
    <p>This is second paragraph</p>  
  
</div>
```

## HTML <marquee>

- The **Marquee HTML** tag is a non-standard HTML element which is used to scroll a image or text horizontally or vertically.

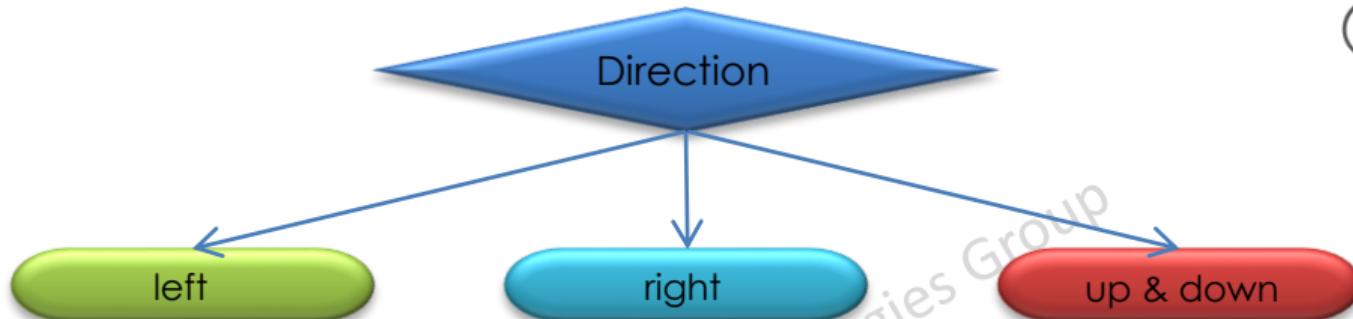
```
<marquee>Hyper Text Markup Language</marquee>
```



```
<marquee width="100%" behavior="scroll" bgcolor="pink">
```

This is an example of a scroll marquee...

```
</marquee>
```



```
<marquee width="100%" direction="right">
```

This is an example of a right direction marquee...

```
</marquee>
```

## HTML <nav>

- HTML <nav> tag is used to represent a section which contains navigation links.

```
<nav>
  <a href="#">Home</a> |
  <a href="#">Courses</a> |
  <a href="#">About-us</a> |
  <a href="#">Contact-us</a> |
</nav>
```

## HTML Audio

- **HTML audio tag** is used to define sounds such as music and other audio clips.
- Currently there are three supported file format for HTML 5 audio tag.  
mp3, wav, ogg.

```
<audio controls>
  <source src="birthday.mp3" type="audio/mp3">
</audio>
```

## Attributes

controls, autoplay, loop, muted, preload

## HTML Video

- The HTML video tag is used for streaming video files such as a movie clip, song clip on the web page.
- Currently, there are three video formats supported for HTML video tag:  
Mp4, webM, ogg

```
<video controls>
  <source src="movie.mp4" type="video/mp4">
</video>
```

## Attributes

controls, autoplay, loop, muted, preload

## HTML iframes

- HTML Iframe is used to display a nested webpage (a webpage within a webpage).
- An HTML iframe embeds another document within the current HTML document in the rectangular region.

```
<iframe src="sample.html" height="300" width="400"></iframe>
```

```
<iframe src="sample.html" height="50%" width="50%"></iframe>
```



- CSS stands for Cascading Style Sheet.
- CSS is used to design HTML tags.
- CSS is a widely used language on the web.
- HTML, CSS and JavaScript are used for web designing. It helps the web designers to apply style on HTML tags.

## CSS Example

```
<style>
h1
{
    color:white;
    background-color:red;
}
</style>
```

**<h1>Cascading Stylesheet</h1>**

## Ways to insert CSS



## Inline CSS

- Inline CSS is used to apply CSS on a single line or element.

```
<p style="color:red">Welcome</p>
```

```
<h1 style="color:blue">Welcome</h1>
```

## Internal CSS

- It is written inside the style tag within head section of html.

```
<style>
h1
{
    color:white;
    background-color:red;
}
</style>
```

**<h1>Cascading Stylesheet</h1>**

## External CSS

- Here, we write all the CSS code in a css file.
- Its extension must be .css

```
<link rel="stylesheet" type="text/css" href="style.css">
```

The link tag must be used inside head section of html.

### style.css

```
P  
{  
    color:blue;  
}
```

## CSS Selectors

Element  
Selector

Id  
Selector

Class  
Selector

Universal  
Selector

Group  
Selector

## Element Selector

- The element selector selects the HTML element by name.

```
<style>
h1
{
    color:white;
    background-color:red;
}
</style>
```

**<h1>Cascading Stylesheet</h1>**

## Id Selector

- The id selector selects the id attribute of an HTML element to select a specific element.
- An id is always unique within the page

```
<style>  
#abc  
{  
    color:red;  
}  
</style>
```

```
<h1 id="abc">Cascading Stylesheet</h1>  
  
<h1>Cascading Stylesheet</h1>
```

## Class Selector

- The class selector selects HTML elements with a specific class attribute.
- It is used with a . (full stop symbol)

```
<style>  
.xyz  
{  
    color:red;  
}  
</style>
```

```
<h1 class="xyz">Cascading Stylesheet</h1>  
  
<h1>Cascading Stylesheet</h1>
```

## Universal Selector

- It selects all the elements on the pages.

```
<style>
*
{
    color:red;
}
</style>
```

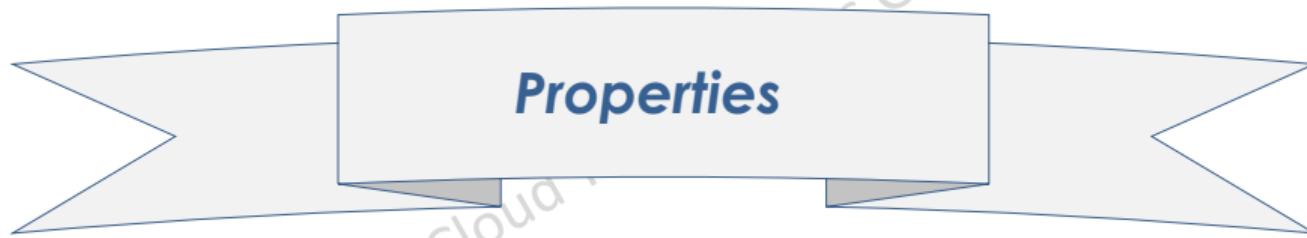
```
<h1>Cascading Stylesheet</h1>
<p>This is heading</p>
```

## Group Selector

- It select all the elements with the same style definitions
- Grouping selector is used to minimize the code.
- Commas are used to separate each selector in grouping.

```
<style>  
h1,h2,p  
{  
    color: blue;  
}  
</style>
```

```
<h1>Cascading Stylesheet</h1>  
  
<h2>Cascading Stylesheet</h2>  
  
<p>This is heading</p>
```



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## background-color

- The background-color property is used to specify the background color of the element.

```
<style>
p
{
    background-color: #b0d4de;
}
</style>
```

**<p>**This is an example of CSS background-color.**</p>**

## background-image

- The background-image property is used to set an image as a background of an element.

```
<style>
body {
    background-image: url("test.jpg");
}
</style>
```

```
<body>
</body>
```

## CSS Border

- It is used to set the border on an element.

```
<style>  
p {  
    border-style: dotted;  
}  
</style>
```

**<p>Cascading Stylesheet</p>**

dotted

dashed

solid

double

inset

outset

none

## border-radius

- This CSS property sets the rounded borders and provides the rounded corners around an element, tags, or div.

```
<style>
div
{
    border-radius: 90px;
    background: lightgreen;
}
</style>
```

```
<div>
    <h2>CSS border-radius property</h2>
</div>
```

**border-top-left-radius:10px;**

**border-top-right-radius:10px;**

**border-bottom-right-radius:10px;**

**border-bottom-left-radius:10px;**

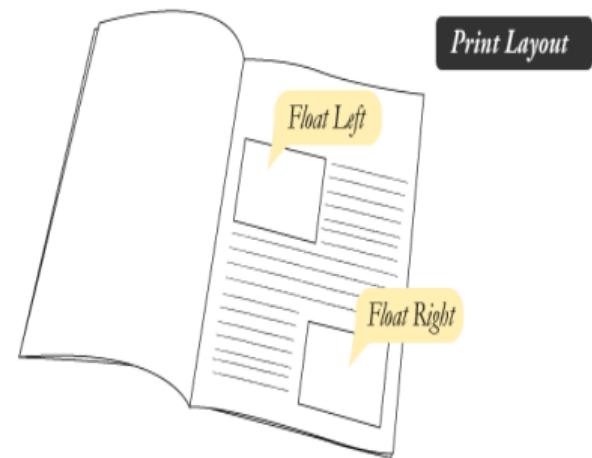
## CSS Float

- The **CSS float property** is a positioning property.
- It is used to push an element to the left or right, allowing other element to wrap around it.

```
<style>
img {
    float: right;
}
</style>
```

```

```



## Font Color

- It is used to change the color of the text.
- There are three different formats to define a color:
  - By a color name
  - By hexadecimal value
  - By RGB

```
<style>
  h1 { color: red; }
  h2 { color: #9000A1; }
  p { color:rgb(0, 220, 98); }
</style>
```

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
```

## Font Family

```
<style>
  h1 { font-family: sans-serif; }
  h2 { font-family: serif; }
  p { font-family: monospace; }
</style>
```

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
```

## Font Size

- CSS font size property is used to change the size of the font.

```
<style>  
p  
{  
    font-size:xx-small;  
}  
</style>
```

```
<p>This is a paragraph.</p>
```

xx-small

x-small

small

medium

large

x-large

xx-large

smaller

larger

size in pixels or %

## Font Style

- CSS Font style property defines what type of font you want to display.
- It may be italic, oblique, or normal.

```
<style>
  h1 { font-style: italic; }
  h2 { font-style: oblique; }
  p { font-style: normal; }
</style>
```

```
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
```

## CSS Hover

- The **:hover** selector is for selecting the elements when we move the mouse on them.
- the hover effect modifies the element's property value

```
<style>
a:hover
{
  color: red;
}
</style>
```

```
<a href = "">Home</a>
<a href = "">About</a>
<a href = "">Contact</a>
```

## CSS Important

- This property in CSS is used to give more importance compare to normal property.
- The ***!important*** means '**this is important**'.

```
<style>
h1
{
    font-size: 30px !important;
}
</style>
```

```
<h1>welcome</h1>
```

```
<h1>Hello</h1>
```

- CSS Margin property is used to define the space around elements.
- It is completely transparent and doesn't have any background color.

```
<style>
p
{
    margin-top: 50px;
    margin-bottom: 50px;
    margin-right: 100px;
    margin-left: 100px;
}
</style>
```

```
<p>welcome</p>
```

## CSS Padding

- **CSS Padding property** is used to define the space between the element content and the element border.

```
<style>
p
{
    padding-top: 50px;
    padding-right: 100px;
    padding-bottom: 150px;
    padding-left: 200px;
}
</style>
```

```
<p>welcome</p>
```

## CSS Opacity

- The CSS opacity property is used to specify the transparency of an element.
- Opacity is defined as degree in which light is allowed to travel through an object.

```
<style>  
img  
{  
    opacity: 0.5;  
}  
</style>
```

```

```

## Box - Shadow

- It is used to add shadow-like effects around the frame of an element.

```
<style>
img
{
    box-shadow: 5px 10px 10px 10px orange;
}
</style>
```

```

```

## Text - Shadow



- This CSS property adds shadows to the text.

```
<style>
P
{
    text-shadow: 3px 3px red;
}
</style>
```

<p>Text Shadow </p>

## Icons

- It is a graphical representation of a file or program that helps the user to identify about the type of file quickly.

```
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
```

```
<i class="fa fa-envelope"></i>  
  
<i class="fa fa-home"></i>  
  
<i class="fa fa-phone"></i>
```

## Letter-spacing

- This CSS property used to control the space between every letter inside an element or the block of text.
- Using this property, we can increase or decrease the space between the characters of the text.

```
<p style= "letter-spacing: 7px;">This is a paragraph.</p>
```

## Word-spacing

- This CSS property is used to control the space between the words.

```
<p style= "word-spacing: 7px;">This is a paragraph.</p>
```

## Navigation Bar

- A navigation bar is mostly displayed on the top of the page in the form of a horizontal list of links.

```
<style>
ul {
    list-style-type: none;
}

li {
    float: left;
}

li a {
    padding: 10px 20px;
    text-decoration: none;
}
</style>
```

```
<ul>

```

## Overlay

- it is used to set one thing on the top of another.
- Creating an overlay effect means to put two **div** together at the same place

```
<style>
img { width: 300px; height: 300px; }

.container { position: relative; width: 25%; height: auto; }

.overlay{
position: absolute; transition: 0.5s ease;
height: 300px; width: 300px; top: 0;
background-color: blue; opacity: 0; }

.container:hover .overlay {
opacity: 0.9; }
</style>
```

```
<div class="container">

```

## Background-blend-mode

- We can blend the background images together.

```
<style>
#div1 {
    width: 400px;
    height: 400px;
    background-image: url("one.jpg"), url("two.jpg");
    background-blend-mode: multiply;
}
</style>
```

```
<div id="div1"></div>
```

## Text-align

- It is used to set the horizontal alignment of a table-cell box or the block element.

```
<style>  
p {  
    text-align: center;  
}  
</style>
```

**<p>Cascading Stylesheet</p>**



center



left



right



justify

## Columns

- It is used to set both **column-count** and **column-width** properties at the same time.
- The **column-count** property is used to set the number of columns.
- The **column-width** property specifies the width of the columns.

```
<style>
div {
    columns: 100px 4;
    border: solid 2px black;
    font-size: 20px;
}
</style>
```

```
<div>Your content....</div>
```

## Animation



- An animation makes an element change gradually from one style to another.
- You can also specify the changes in percentage.
- 0% specify the start of the animation and 100% specify its completion.

```
<style>
div
{
    width: 150px;
    height: 150px;
    background: red;
    position: relative;
    -webkit-animation: myfirstanimation 5s;
}

@-webkit-keyframes myfirstanimation
{
    0% {background:red; left:0px; top:0px;}
    25% {background:yellow; left:300px; top:0px;}
    50% {background:blue; left:200px; top:300px;}
    75% {background:green; left:0px; top:200px;}
    100% {background:red; left:0px; top:0px;}
}

</style>
```



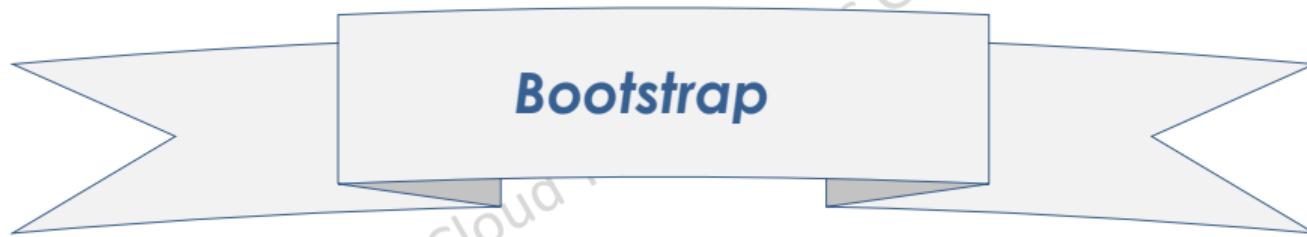
<div></div>

```
<style>
div
{
    width: 150px;
    height: 150px;
    background: red;
    position: relative;
    animation: myfirstanimation 5s;
}

@keyframes myfirstanimation
{
    0% {background:red; left:0px; top:0px;}
    25% {background:yellow; left:300px; top:0px;}
    50% {background:blue; left:300px; top:200px;}
    75% {background:green; left:0px; top:200px;}
    100% {background:red; left:0px; top:0px;}
}
</style>
```



```
<div></div>
```



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- Bootstrap is the popular HTML, CSS and JavaScript framework for developing a responsive and mobile friendly website
- It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many others.

### What is a responsive website

- A website is called responsive website which can automatically adjust itself to look good on all devices, from smart phones to desktops etc.

## Why use Bootstrap

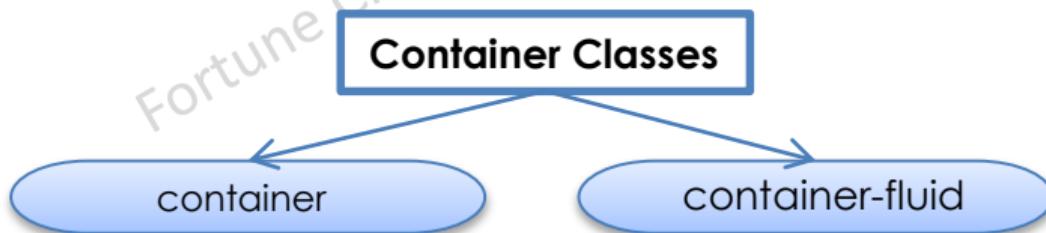
- It is very easy to use. Anybody having basic knowledge of HTML and CSS can use Bootstrap.
- It facilitates users to develop a responsive website.
- It is compatible on most of browsers like Chrome, Firefox, Internet Explorer, Safari and Opera etc.

## Example

```
<html>
<head>
<title>Bootstrap Example</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<body>
  <div class="container-fluid">
    <h1>Hello World!</h1>
  </div>
</body>
</html>
```

## Bootstrap Container

- container is used to set the content's margins dealing with the responsive behaviors of your layout.
- It contains the row elements and the row elements are the container of columns (known as grid system).
- The **container class** is used to create boxed content.



Container-fluid

```
<div class="container-fluid">
  <h1>Container-fluid</h1>
  <p>container-fluid content</p>
</div>
```

Container

```
<div class="container">
  <h1>Container</h1>
  <p>container content</p>
</div>
```

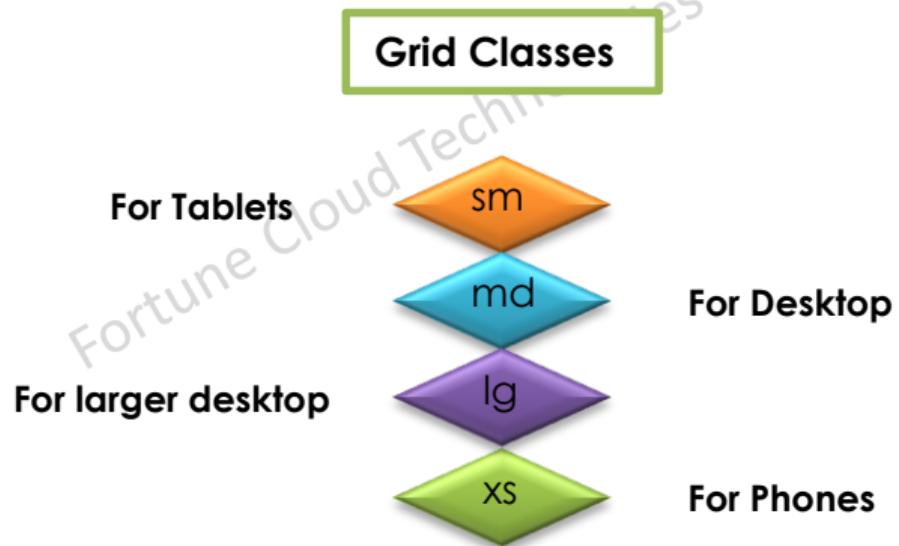
## Grid System

- The Bootstrap Grid System allows up to 12 columns across the page.
- You can use all 12 columns individually or you can group the columns together

col-md-1											
col-md-8						col-md-4					
col-md-4				col-md-4				col-md-4			
col-md-6						col-md-6					

## Grid System

- Bootstrap Grid System is responsive and the columns are re-arranged automatically according to the screen size.



## Grid System

```
<div class="row">
  <div class="col-sm-3">Division A</div>
  <div class="col-sm-3">Division B</div>
  <div class="col-sm-3">Division C</div>
  <div class="col-sm-3">Division D</div>
</div>
```

```
<div class="row">
  <div class="col-sm-6">Division A</div>
  <div class="col-sm-6">Division B</div>
</div>
```

Button

```
<button type="button" class="btn btn-primary">Primary</button>
```

Primary

Secondary

Success

Danger

Warning

Info

Light

Dark

[Link](#)

## Table

The **.table class** is used to add basic styling to a table.

```
<table class="table">
  <tr>
    <th>Id</th>
    <th>Name</th>
  </tr>
  <tr>
    <td>101</td>
    <td>Abc</td>
  </tr>
  <tr>
    <td>102</td>
    <td>Xyz</td>
  </tr>
</table>
```

**table table-striped**

**table table-bordered**

**table table-hover**

## Bootstrap Form Rules

- Always use `<form role="form">` (helps improve accessibility for people using screen readers)
- Wrap labels and form controls in `<div class="form-group">` (needed for optimum spacing)
- Add class `.form-control` to all textual `<input>`, `<textarea>`, and `<select>` elements

## Form

```
<div class="form-group">
    <label for="InputEmail1">Email address</label>
    <input type="email" class="form-control" id="InputEmail1" placeholder="Email">
</div>

<div class="form-group">
    <label for="InputPassword">Password</label>
    <input type="password" class="form-control" id="InputPassword" placeholder="Password">
</div>

<button type="submit" class="btn btn-default">Login</button>
```

## Alert

- Bootstrap Alerts are used to provide an easy way to create predefined alert messages. Alert adds a style to your messages to make it more appealing to the users.
- There are four classes that are used within <div> element for alerts.

.alert-success

.alert-info

.alert-warning

.alert-danger

```
<div class="alert alert-success">
  <strong>Success!</strong> Registration Successfully Completed
</div>
```

## Closing Alert

- If you want to close the alert message, you have to add an .alert-dismissible class to the alert container.

```
<div class="alert alert-success alert-dismissible">
    <button type="button" class="close" data-dismiss="alert">x</button>
    <strong>Success!</strong> Registration Successfully Completed
</div>
```

## Panel

- A panel is a bordered box with some padding around its element.
- The panel components are used when you want to put your DOM component in a box.
- The **class .panel** is used within the <div> element to create Bootstrap panels. The content inside the panel has a **.panel-body class**.

Panel contains three parts

panel header

panel content

panel footer

## Panel



```
<div class="panel panel-primary">
  <div class="panel-heading">
    <h3 class="panel-title">Panel title</h3>
  </div>

  <div class="panel-body">
    Panel content
  </div>

  <div class="panel-footer">
    Panel footer
  </div>
</div>
```

## Collapsible Panel

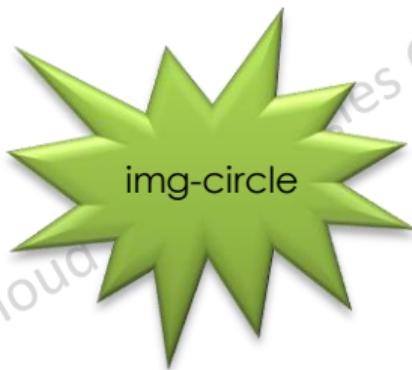
```
<div class="panel-group">
  <div class="panel panel-default">
    <div class="panel-heading">
      <h4 class="panel-title">
        <a data-toggle="collapse" href="#collapse1">Collapsible panel</a>
      </h4>
    </div>
    <div id="collapse1" class="panel-collapse collapse">
      <div class="panel-body">Panel Body</div>
      <div class="panel-footer">Panel Footer</div>
    </div>
  </div>
</div>
```

## Image

### Classes



- It adds border-radius
- image rounded corners



- It makes the entire image round by adding border-radius



- It adds a bit of padding and a gray border.

## Image

```

```

```

```

```

```

## Glyphicons

- Glyphicons are the icon fonts that are used in web projects.

## Syntax

```
<span class="glyphicon glyphicon-name"></span>
```

**Note:** To create the desired Glyphicon, the "name" part of the syntax must be replaced accordingly.

## Glyphicon

### Examples

```
<span class="glyphicon glyphicon-envelope"></span>
```

```
<span class="glyphicon glyphicon-earphone"></span>
```

```
<span class="glyphicon glyphicon-log-in"></span>
```

```
<span class="glyphicon glyphicon-log-out"></span>
```

```
<span class="glyphicon glyphicon-save"></span>
```

## Carousel slider

- The Bootstrap carousel is a flexible, responsive way that is used to add a slider to your webpage.
- It is very responsive and flexible enough to allow, images, iframes, videos, or any other type of content that you want to add.

## Carousel slider



```
<div id="myCarousel" class="carousel slide" data-ride="carousel">
  <div class="carousel-inner" role="listbox">
    <div class="item active">
      
    </div>
    <div class="item">
      
    </div>
  </div>

  <a class="left carousel-control" href="#myCarousel" role="button" data-slide="prev">
    <span class="glyphicon glyphicon-chevron-left" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="right carousel-control" href="#myCarousel" role="button" data-slide="next">
    <span class="glyphicon glyphicon-chevron-right" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```

## Progress Bar

- The progress bar shows how far a user is in a process.

## Colored Progress Bar

progress-bar-success      progress-bar-info      progress-bar-danger      progress-bar-warning

```
<div class="progress">
  <div class="progress-bar progress-bar-success" role="progressbar" aria-valuenow="50"
       aria-valuemin="0" aria-valuemax="100" style="width:50%">
    50% Complete (success)
  </div>
</div>
```

## Animated Progress Bar

- Use class **.active** to create animated progress bar.

```
<div class="progress">
  <div class="progress-bar progress-bar-striped active" role="progressbar"
      aria-valuenow="70" aria-valuemin="0" aria-valuemax="100" style="width:70%">
    70%
  </div>
</div>
```

## Responsive Navigation Bar



```
<nav class="navbar navbar-inverse">
  <div class="container-fluid">
    <div class="navbar-header">
      <button type="button" class="navbar-toggle" data-
        toggle="collapse" data-target="#myNavbar">
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="#">WebSiteName</a>
    </div>
```

## Responsive Navigation Bar



```
<div class="collapse navbar-collapse" id="myNavbar">
  <ul class="nav navbar-nav">
    <li class="active"><a href="#">Home</a></li>
    <li class="dropdown">
      <a class="dropdown-toggle" data-toggle="dropdown" href="#">Categories
      <span class="caret"></span></a>
      <ul class="dropdown-menu">
        <li><a href="#">Page 1-1</a></li>
        <li><a href="#">Page 1-2</a></li>
      </ul>
    </li>
  </ul>
</div>
</div>
</nav>
```

## Modal

- The bootstrap modal plugin is a dialog box / popup window that is displayed on top of the current page.

```
<button type="button" class="btn btn-info btn-lg" data-toggle="modal" data-target="#myModal">Open Modal</button>
```

## Modal



```
<div class="modal fade" id="myModal" role="dialog">
  <div class="modal-dialog">
    <div class="modal-content">
      <div class="modal-header">
        <button type="button" class="close" data-dismiss="modal">×</button>
        <h4 class="modal-title">Modal Header</h4>
      </div>
      <div class="modal-body">
        <p>Write your text in the modal.</p>
      </div>
      <div class="modal-footer">
        <button type="button" class="btn btn-default" data-dismiss="modal">Close</button>
      </div>
    </div>
  </div>
</div>
```



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- JavaScript (js) is a light-weight object-oriented programming language
- JavaScript is not a compiled language
- enables dynamic interactivity on websites when applied to an HTML document.

## Features

- All popular web browsers support JavaScript
- JavaScript follows the syntax and structure of the C programming language
- JavaScript is an object-oriented programming language
- It is a case-sensitive language.

## Applications

- Client-side validation
- Dynamic drop-down menus
- Displaying date and time
- Displaying pop-up windows and dialog boxes (like an alert dialog box, confirm dialog box and prompt dialog box)
- Displaying clocks etc.

## How to write program in JavaScript



### Demo.html

```
<script>
    document.write("Hello JavaScript");
    alert("Hello JavaScript ");
</script>
```

## External JavaScript

### index.html

```
<html>
<head>
  <script type="text/javascript" src="ext.js"></script>
</head>
<body>
  <p>Welcome to JavaScript</p>
  <form>
    <input type="button" value="click" onclick="msg()"/>
  </form>
</body>
</html>
```

### ext.js

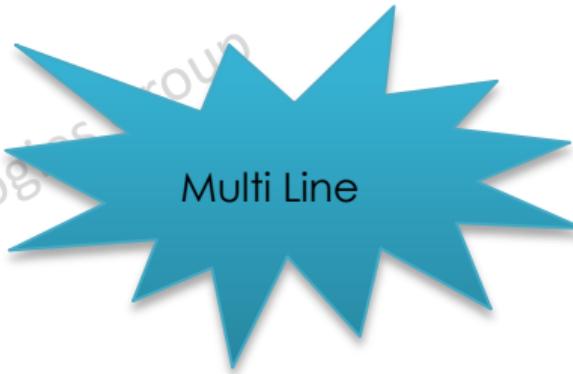
```
function msg()
{
  alert("Hello JavaScript");
}
```

## Comments



Single Line

```
<script>
    // It is single line comment
</script>
```



Multi Line

```
<script>
/*
    It is multi line comment.
    It will not be displayed.
*/
</script>
```



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- A **variable** is simply a name of storage location.



- Name must start with a letter (a to z or A to Z), underscore( \_ ), or dollar( \$ ) sign.
- After first letter we can use digits (0 to 9)
- JavaScript variables are case sensitive

```
<script>
var x = 10;
var y = 20;

var z=x+y;

document.write(z);
</script>
```



## Local Variable

- Declared inside block or function
- Accessible within the function or block only

```
<script>

function display()
{
    var a=10; //local variable
}

</script>
```

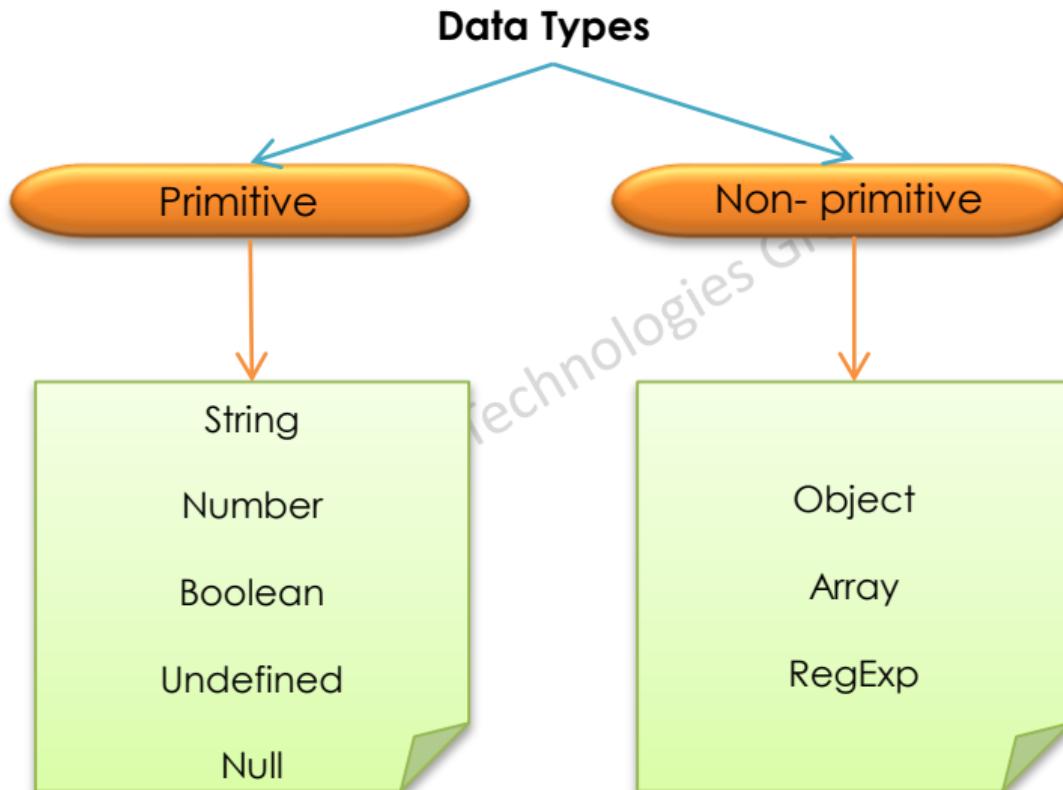
## Global Variable

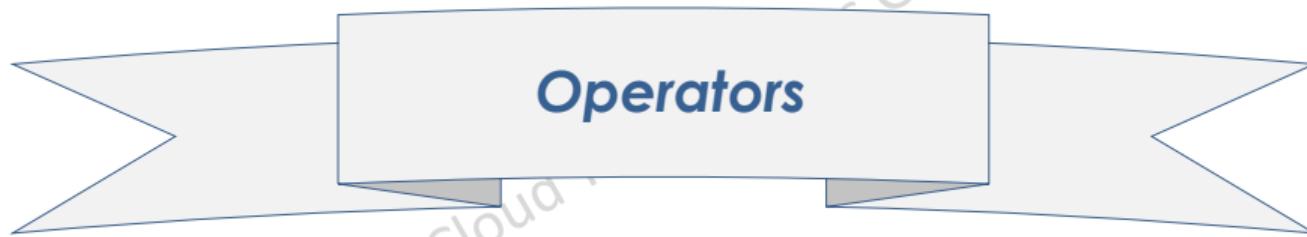
- Declared outside the function
- A **global variable** is accessible from any function

```
<script>

var a=10; //Global variable

function display()
{
    document.writeln(a);
}
</script>
```





## Arithmetic

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus
++	Increment
--	Decrement

## Comparison

Operator	Description
==	Is equal to
==	Identical
!=	Not equal to
!==	Not Identical
>	Greater than
>=	Greater than or equal to
<	Less than
<=	Less than or equal to

**Bitwise**

<b>Operator</b>	<b>Description</b>
&	Bitwise AND
	Bitwise OR
^	Bitwise XOR
~	Bitwise NOT
<<	Bitwise Left Shift
>>	Bitwise Right Shift

**Logical**

<b>Operator</b>	<b>Description</b>
&&	Logical AND
	Logical OR
!	Logical Not

## ***Control Statements***

if

```
if (expression)
{
    Statement(s) to be executed if expression is true
}
```

if...else

```
if (expression)
{
    Statement(s) to be executed if expression is true
}
else
{
    Statement(s) to be executed if expression is false
}
```

## if...else if...

```
if (expression 1)
{
    Statement(s) to be executed if expression 1 is true
}
else if (expression 2)
{
    Statement(s) to be executed if expression 2 is true
}
else if (expression 3)
{
    Statement(s) to be executed if expression 3 is true
}
else
{
    Statement(s) to be executed if no expression is true
}
```

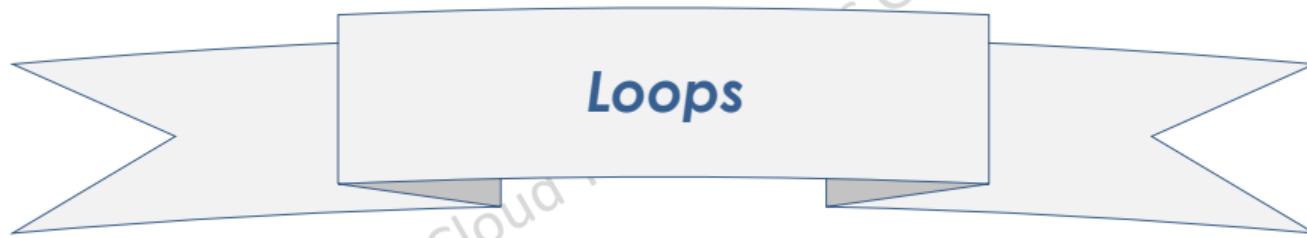
switch

```
switch (expression)
{
    case condition 1:
        statement(s)
        break;

    case condition 2:
        statement(s)
        break;

    ...
    case condition n:
        statement(s)
        break;

    default:
        statement(s)
}
```



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for

```
for (initialization; test condition; iteration statement)
{
    Statement(s) to be executed if test condition is true
}
```

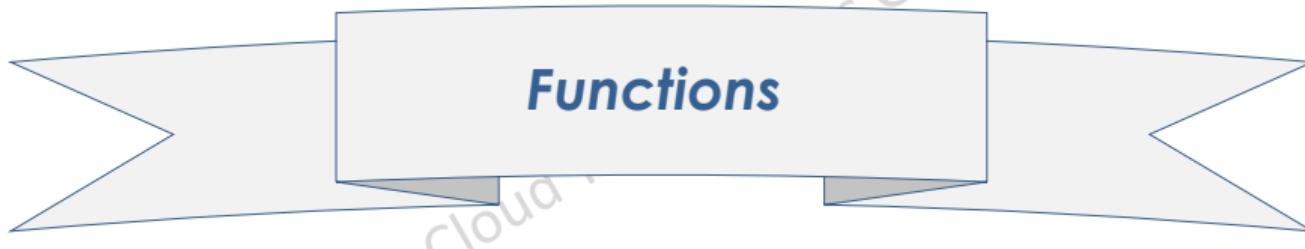
while

```
while (expression)
{
    Statement(s) to be executed
}
```

do...while

```
do
{
    Statement(s) to be executed;
} while (expression);
```

## ***Functions***



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- A function is a group of reusable code which can be called anywhere in your program.
- This eliminates the need of writing the same code again and again.
- Functions allow a programmer to divide a big program into a number of small and manageable functions.

## Default Function

### index.html

```
<html>
<head>
  <script type="text/javascript" src="ext.js"></script>
</head>
<body>
  <input type="button" value="click" onclick="show()"/>
</body>
</html>
```

### ext.js

```
function show()
{
  alert("Default Function");
}
```

## Function Parameters

### index.html

```
<html>
<head>
    <script type="text/javascript" src="ext.js"></script>
</head>
<body>
    <input type="button" value="click" onclick="addition(10,20)"/>
</body>
</html>
```

### ext.js

```
function addition(a,b)
{
    var c=a+b;
    alert("Addition="+c);
}
```

## Return Statement

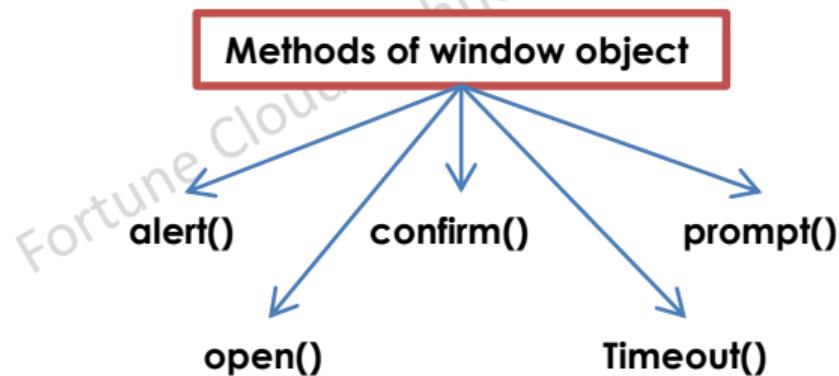
```
<input type="button" onclick="showme()" value="Return Function">

<script type = "text/javascript">
    function concatenate(first, last)
    {
        var fullname;
        fullname = first + last;
        return fullname;
    }

    function showme()
    {
        var result;
        result = concatenate('abc', 'def');
        document.write (result );
    }
</script>
```

## BOM - Browser Object Model

- The **Browser Object Model** (BOM) is used to interact with the browser.
- The default object of browser is **window**.



alert()

```
<input type="button" onclick="clickme()" value="Alert">  
  
<script type = "text/javascript">  
  
    function clickme()  
    {  
        alert("I am alert");  
    }  
  
</script>
```

confirm()

```
<input type="button" onclick="clickme()" value="Confirm Alert">

<script type = "text/javascript">

    function clickme()
    {
        var v= confirm("Do you want to delete ?");
        if(v==true)
        {
            alert("ok");
        }
        else
        {
            alert("cancel");
        }
    }
</script>
```

prompt()

```
<input type="button" onclick="clickme()" value="Prompt Alert">

<script type = "text/javascript">

    function clickme()
    {
        var name= prompt("What is your name?");
        alert("My Name is"+name);
    }
</script>
```

open()

- It displays the content in a new window.

```
<input type="button" onclick="clickme()" value="Open">

<script type = "text/javascript">

    function clickme()
    {
        open("https://www.facebook.com/");
    }
</script>
```

## Timeout()

- It performs its task after the given milliseconds.

```
<input type="button" onclick="clickme()" value="Open">

<script type = "text/javascript">

    function clickme()
    {
        setTimeout( function()
        {
            alert("I am Timeout");
        },2000);
    }
</script>
```

## DOM - Document Object Model

- The **document object** represents the whole html document.

```
<form name="myform">
    <input type="text" name="firstname"/>
    <button type="button" onclick="validation()" > DOM </button>
</form>
```

```
<script type="text/javascript">
function validation()
{
    var fname=document.myform.firstname.value;
    alert("My name is: "+fname);
}
</script>
```

## Methods

document.getElementById()

document.getElementsByName()

document.getElementsByTagName()

document.getElementById()

- Return the element that has the ID attribute with the specified value.

```
<script type="text/javascript">
function show()
{
    var num=document.getElementById("number").value;
    alert(num);
}
</script>
```

```
<input type="text" id="number" />

<input type="button" value="submit" onclick="show()"/>
```

## document.getElementsByName()

- Returns collection of all elements of particular document by name.

```
<script type="text/javascript">
function show()
{
    var x=document.getElementsByName("abc");
    alert("Total elements are:"+x.length);
}
</script>
```

```
<h4 name="abc">l</h4>
<h4 name="abc">Am</h4>
<h4 name="abc">Javascript</h4>
```

```
<input type="button" value="submit" onclick="show()"/>
```

## document.getElementsByTagName()

- Returns the collection of all the elements in the document with the given tag name.

```
<script type="text/javascript">
function show()
{
    var y=document.getElementsByTagName("h4");
    alert("Total elements are:"+y.length);
}
</script>
```

```
<h4>I</h4>
<h4>Am</h4>
<h4>Javascript</h4>
```

```
<input type="button" value="submit" onclick="show()"/>
```

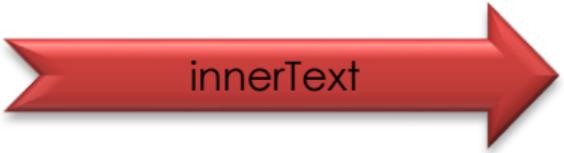
## innerHTML

- This property is used to **set or return** the HTML content inside an element.

```
<script type="text/javascript">
function show()
{
    var data=<input type='text' name='name'><br><br><input
type='submit' value='Submit'>;
document.getElementById('showdiv').innerHTML=data;
}
</script>
```

```
<input type="button" value="submit" onclick="show()"/>

<div id="showdiv"></div>
```



innerText

- Generate the dynamic content such as writing the validation message

```
<script type="text/javascript">
function validate()
{
    var name=document.getElementById('name').value;
    var msg="";
    if(name.length>3)
    {
        msg="correct";
    }
    else
    {
        msg="poor";
    }
    document.getElementById('error').innerText=msg;
}
</script>
```

```
<input type="text" id="name" onkeyup="validate()">
<span id="error"></span>
```



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- jQuery is a framework built using JavaScript capabilities.
- you can use all the functions and other capabilities available in JavaScript.
- jQuery is a small and lightweight JavaScript library.
- jQuery simplifies DOM manipulation.

## Example



```
<html>
<head>
    <title>Home Page</title>
    <script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/2.1.3/jquery.min.js"></script>

    <script type="text/javascript" language="javascript">
        $(document).ready(function() {
            $('p').css("background-color", "cyan");
        });
    </script>
</head>
<body>

    <p>The first paragraph is selected.</p>

</body>
</html>
```

## Effects

### Hide & Show

```
<script>
$(document).ready(function(){

    $("#hide").click(function(){
        $("p").hide();
    });

    $("#show").click(function(){
        $("p").show();
    });

});
</script>
```

<p> Hello Jquery </p>

<button id="hide">Hide</button>  
<button id="show">Show</button>



## Effects

toggle



- It shows the hidden elements and hides the shown element.

```
<script>
$(document).ready(function(){

    $("button").click(function(){
        $("p").toggle();
    });

});
</script>
```

**<p> Hello Jquery </p>**

**<button>Toggle</button>**

## Effects

### slideDown



- jQuery slideDown() method is used to slide down an element.

```
<script>
$(document).ready(function(){

    $("#p1").click(function(){
        $("#p2").slideDown("slow");
    });

});
</script>
```

```
<style>
#p2
{
    display: none;
}
</style>
```

<p id="p1"> Click Here </p>

<p id="p2"> Hello Jquery </p>

## Effects

### slideUp

- jQuery slideDown() method is used to slide up an element.

```
<script>
$(document).ready(function(){

    $("#p1").click(function(){
        $("#p2").slideUp("slow");
    });

});
</script>
```

<p id="p1"> Click Here </p>

<p id="p2"> Hello Jquery </p>



## Effects

### slideToggle



- If the element is slide down, it will slide up the element and if it is slide up, it will slide down.

```
<script>
$(document).ready(function(){

    $("#p1").click(function(){
        $("#p2").slideToggle("slow");
    });

});
</script>
```

```
<style>
#p2
{
    display: none;
}
</style>
```

<p id="p1"> Click Here </p>

<p id="p2"> Hello Jquery </p>

## Method

html



- It replaces the selected element content with new contents.

```
<script>
$(document).ready(function(){

    $("button").click(function(){
        $("p").html("JQuery");
    });

});
</script>
```

```
<button>Click here</button>

<p>This is a paragraph.</p>
```

## Method

val

- It is used to set the value of every matched element.
- Get current value of the first element in the set of matched elements.

```
<script>
function show()
{
    var sel = $( "#dropdown" ).val();
    alert(sel);
}
$( "select" ).change(show);
show();
</script>
```

```
<select id="dropdown">
    <option>Abc</option>
    <option>Pqr</option>
    <option>Lmn</option>
    <option>Xyz</option>
</select>
```



## Method

append



- Insert specified content as the last child

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("ol").append("<li>New item</li>");
    });
});
</script>
```

```
<ol>
<li>Abc</li>
<li>Pqr</li>
<li>Lmn</li>
<li>Xyz</li>
</ol>

<button>Append</button>
```

## Method

Clone

- It also makes copies of their child nodes

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").clone().appendTo("body");
    });
});
</script>
```

<p>I am clone method</p>

<button>Clone</button>



## Method

remove

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $( "p" ).remove();
    });
});
</script>
```

<p>I am remove method</p>

<button>Remove</button>



## Method

empty



- Remove all content from the selected elements.

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("div").empty();
    });
});
</script>
```

```
<div style="height:150px;background-color:red">
I am empty
</div>
```

```
<button>Empty</button>
```

## Method

### addClass



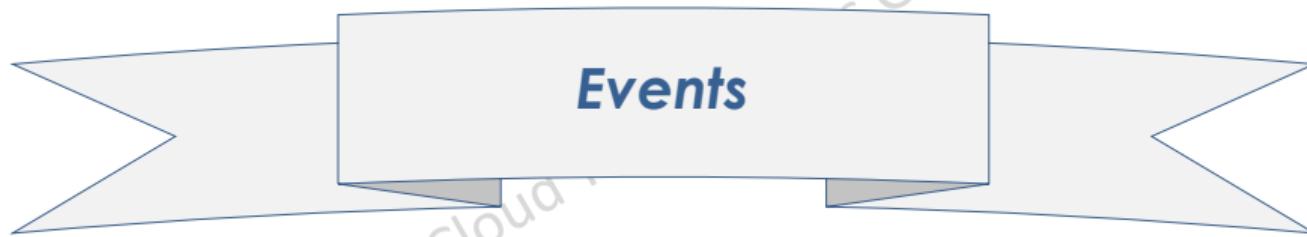
- The addclass() method is used to add one or more class name to the selected element.

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p ").addClass("test");
    });
});
</script>
```

```
<style>
.test
{
    font-size: 50px;
    color: red;
}
</style>
```

```
<p>This is a paragraph.</p>

<button>addClass</button>
```



## Event

click()

- When you click on an element, the click event occurs

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        alert("I am click event");
    });
});
</script>
```

<button>Click here</button>

## Event

focus()



- The jQuery focus event occurs when an element gains focus.

```
<input type="text">  
<span>What is your name ?</span>
```

```
<style>  
span  
{  
    display: none;  
}  
</style>
```

```
<script>  
$( "input" ).focus(function() {  
    $( this ).next( "span" ).css( "display", "inline" ).fadeOut( 2000 );  
});  
</script>
```

## Event

change()

```
<script>
function show()
{
    var sel = $( "#dropdown" ).val();
    alert(sel);
}
$( "select" ).change(show);
show();
</script>
```

```
<select id="dropdown">
    <option>Abc</option>
    <option>Pqr</option>
    <option>Lmn</option>
    <option>Xyz</option>
</select>
```



## Event

keydown() & keyup()



```
<script>
$(document).ready(function(){
    $("input").keydown(function(){
        $("input").css("background-color", "green");
    });

    $("input").keyup(function(){
        $("input").css("background-color", "red");
    });
});
</script>
```

<input type="text">

## Event

keypress()



- The jQuery keypress () event is occurred when a keyboard button is pressed down.

```
<script>
i = 0;
$(document).ready(function(){
    $("input").keypress(function(){
        $("span").text (i += 1);
    });
});
</script>
```

```
<input type="text">

<span>0</span>
```

### mouseover() & mouseout()

- The mouseover event is occurred when you put your mouse cursor over the selected element .
- The mouseout event is occurred when you remove your mouse cursor from the selected element .

```
<script>
$(document).ready(function(){
    $("p").mouseover(function(){
        $("p").css("background-color", "lightgreen");
    });
    $("p").mouseout(function(){
        $("p").css("background-color", "orange");
    });
});
</script>
```

<p>This is a paragraph.</p>

## Event

load()



- The load event occurs when a specific element is loaded.
- It is generally used with a URL (image, script, frame, iframe), and the window object.

```
<script>
$(document).ready(function(){
    $("img").load(function(){
        alert("Image loaded.");
    });
});
</script>
```

```

```



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