

# *Internet And Web-Technologies*

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# *Internet And Web-Technologies*

Topic:  
***HTML***

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## HTML

- It is basically used for designing web page.
- It is not programming language it is markup language.
- Markup language is a set of tags.
- HTML file is always saved with .htm or .html.
- HTML prog. always start with HTML tag.

### STRUCTURE OF HTML PROGRAM / WEB PAGE :-

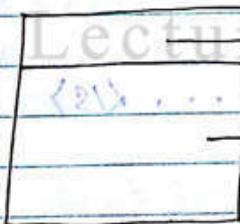
`<html>`

`<head>`

`<body>`

`</body>`

`</html>`



→ Head / Title

→ Body.

- Title Tag is used for setting the title of web page.

`<head><title>`

`</title></head>`

- Head Tag is used for setting the title of the webpage.  
• It can also put the java script code in head tag (validation purpose).

### BODY SECTION :-

- The body tag used for printing the contents of the page.

### BOLD TAG :-

bold = `<b> ... </b>`

→ It is used to bold the contents of the web page.

Eg;

```
<html>
```

```
  <body>
```

```
    Hello <b> Trident </b>
```

```
  </body>
```

```
</html>
```

O/P:- Hello **Trident**

### Italic Tag :-

italic = `<i> ... </i>`

→ It is used to italicize the contents of the body.

Eg; Hello *Trident*

O/P: Hello Trident

### STRIKE OFF TAG :-

Strike off = `<s> ... </s>`

Eg;

```
<s> Hello </s>
```

O/P: ~~Hello~~

### UNDERLINE :-

underline = `<u> ... </u>`

→ It underlines the content.

Eg;

```
<u> Hello </u>
```

O/P: Hello

## HEADING TAG :-

It is used for making heading in web page.

There are 6 type of heading tag :-

① <h1>	</h1> <small>larger</small>	Client Format = IT size
② <h2>	</h2>	
③ <h3>	</h3>	
④ <h4>	</h4>	
⑤ <h5>	</h5>	
⑥ <h6>	</h6>	<small>smaller</small>

It is automatically in bolded form

## STAND ALONE TAG :-

Some tag do not have closing tag ; these tag are called as stand alone tag.

- ① <br> - used for breaking the row
- ② <br> - it create one horizontal line.

Eg;

Hello <br> Trident

Hello

Trident

Hello <br> Trident

<br>

Hello

Trident

## CHANGING THE BACKGROUND COLOR OF WEB PAGE :-

We can write background colour in body tag using bg color element.

Eg; <body bgcolor = "red" >

element .

</body>



## LIST TAG:-

→ It is the collection of one or more items, HTML supports 3 types of list

- ① Unordered List (bullet)
- ② Ordered List (Number)
- ③ Definition List

Eg of Ordered List:

course

1. ESE

2. ETC

3. EEE

4. EE

unordered list

course

• CSE

• ETC

• EEE

• EE

Tag Unordered List

→ It is created using `<ul>` tag.

→ Items in the list are created using `<li>` tag.

\* `<html>`

`<body>`

`<ul>`

`<li> Subject </li>`

`<li> qualification </li>`

`<li> Age </li>`

`</ul>`

`</body>`

`</html>`

- Subject
- qualification
- Age

<html>

(contd.)

<body>

<ul>

<li> Subject </li>

<ul>

<li> INIT </li>

<li>

<li> OS </li>

<li> POM </li>

<li>

<li> CD </li>

</ul>

<ul>

</body>

</html>.

Subject

- INIT
- OS
- POM
- CD.

Attribute of UL tag :-

Set the shape of bullet using type attribute.

<ul type = "square">

<ul type = "circle">

Name:
Reg. No.:
Subject:
• INIT
• OS
• POM
• CD.

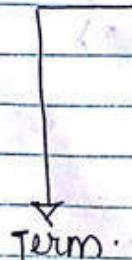
```
<html>
  <body>
    <ul>
      <li> Name: </li>
      <li> Reg. No: </li>
      <li> Subject: </li>
    <ul>
      <li> IWT </li>
      <ul>
        <li> OS </li>
      <ul>
        <li> OS Lab </li>
        <li> OS Theory </li>
      <ul>
        <li> CD </li>
      <ul>
    </body>
</html>.
```

27th Feb 2013

Definition List :-

A definition list is one where list of items consists of 2 parts

► Description



- <dl> tag is used for definition list
- <dt> tag is used for definition term
- <dd> tag is used for definition description

Eg:

```
<html>
```

```
  <head> <title> Computer </title> </head>
```



```

<body>
  <dl>
    <dt> RAM </dt>
    <dd> Random Access Memory </dd>
  </dl>
</body>
</html>

```

computers

RAM

Random Access  
Memory

SCRIPT TAG : <sup>

<sup> Tag is used for superscript.

Eg; <body>

(sup)

 $x^{sup} 2 </sup> + Y^{sup} 3 </sup> + 10$ 

</body>

	$x^2 + y^3 + 10$

SUB-SCRIPT Tag : <sub>

<sub> Tag is used for subscript.

Eg;

<body>
 <math>x + y<sub>1</sub> + <math>x + y<sub>2</sub></math>
</body>

	$x_1 + y_2$

2mp <pre> Tag :-

It is used for pre-formatted text.

<pre>

| NAME | MARKS |
|------|-------|
| ABC  | 20    |
| XYZ  | 50    |
| PQR  | 40    |

Mark list

| NAME | MARK |
|------|------|
| ABC  | 20   |
| XYZ  | 50   |
| PQR  | 40   |

</pre>

<font> Tag :-

It is used for changing the font style, color, size and font name.

\* <html>

```
<head><title> DemoPage </title></head>
<body>
<font color = "blue"> India </font>
<br>
<font color = "white"> India </font>
<br>
<font color = "green"> India </font>
</body>
</html>
```

Demo Page

India

India

India

→ Blue

centre Tag:

<body>

<centre> India </centre>

India.

1st March 2013

\* Table :-

It is useful to display data in 2D format ..

Tables are also powerful tools for formatting web page.

Table is created using 3 basic tags.

<table>

<td> (for one cell of the table)

<tr> (no. of rows)

<th> (optional) (heading)

Eg:

\* <html>

<body>

<table border="2">

<tr> <td> ABC </td> </tr>

<tr> <td> XYZ </td> </tr>

</table>

</body>

</html>

ABC
XYZ

<tr> <td> ABC </td> </tr>

<tr> <td> XYZ </td> </tr>

ABC
-----

XYZ
-----

<table border="4">

<tr> <td> A </td> <td> B </td>

<td> C </td> <td> D </td>

</tr>

<tr> <td> E </td> <td> F </td>

<td> G </td> <td> H </td>

A	B	C	D
E	F	G	H
I	J	K	L

<tr>

<td> <td> </td> <td> <td> <td> </td> </td> </td>

</tr>

### Attribute For Table Tag:-

1) Border

2) BorderColor

3) Align

Border is used to set the border of the table.

BorderColor is used to change the border colour of table

Align is used for setting alignment of table -

\* <html>

<head><title>Table Demo</title>

<body>

<table border="2" align=

Table Demo

AA BB

<tr><td> AA </td> <td> BB </td> </tr>

<table>

</body>

</html>

→ To align the data

<tr><td align="left"> AA </td> </tr>

<td align="center"> BB </td> <td align="right">

→ to set the caption in the table

Time Table

A	B	C
---	---	---

<table border = "2" align = "center">  
<caption> Time Table </caption>

Q. Indian Flag using Table.

FLAG

\* <html>

<head><title> Indian Flag </title>  
LectureNotes.in </head>


<body>

<table border = "2" align = "center">

<caption> Flag </caption>

<tr> <td> Orange </td> </tr>

<tr> <td> White </td> </tr>

<tr> <td> </td> </tr>

<tr> <td> </td> </tr>

<tr> <td> Green </td> </tr>

<tr> <td> </td> </tr>

</table>

</body>

</html>

## NESTED TABLE :-

Table within table

BTech

\* <html>

<head><title> Table </title>

Section	A	B
C	D	

<head>

<body><table border = "2" align = "center">

<tr> <td> A </td> <td> B </td>

<tr> <td> C </td> <td> D </td>

<tr> <td> </td> <td> </td>

<caption> BTech </caption>

<tr> <td> Section </td>

<td> <table border = "2" >



```

<tr><td> A </td> </tr>
<tr><td> B </td> </tr>
<tr><td> C </td> </tr>
<tr><td> D </td> </tr>
<table>
<tr>
</tr>
<table>
</body>
</html>

```

## \* `<html>`

```
<head><title> Table </head>
```

```
<body>
```

```
<table border="2" align="center">
```

Branch	Section
CSE	A
IT	B
ETC	C

```
</body>
```

```
<caption> Trident </caption>
```

```
<tr><td> <table border="2" align="left">
```

```
<caption> Branch </caption>
```

```
<tr><td> CSE </td> </tr>
```

```
<tr><td> IT </td> </tr>
```

```
<tr><td> ETC </td> </tr> </table>
```

```
</td>
```

```
</tr> </table>
```

```
<tr><td> <table border="2" align="right">
```

```
<caption> Section </caption>
```

```
<tr><td> A </td> </tr>
```

```
<tr><td> B </td> </tr>
```

```
<tr><td> C </td> </tr>
```

```
<tr><td> D </td> </tr>
```

```
<tr><td> E </td> </tr>
```

```
<tr><td> F </td> </tr>
```

```
</table>
```

```
</td>
```

```
</tr>
```

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

Time Table

`<table border="2" align="center">`

`<tr align="center">`

`<td align="center">`

Title Attribute Of Table Tag :-

\* `<body>`

`<table border="2" title="MyTable">`

`<tr><td>A</td><td>B</td></tr>`

`<tr><td>C</td><td>D</td></tr>`

`</body>`

A	B
C	D

Title tag is used to show the tool tip i.e. if we move the cursor to the table then it will show " MyTable".

To set the whole row color

`<tr style="background-color:red;"><td>A</td><td>B</td></tr>`

`<tr style="background-color:red;"><td>C</td><td>D</td></tr>`

To change the border color

`<table border="2" title="MyTable" style="border:3px solid green;">`

`<tr><td>A</td><td>B</td></tr>`

`<tr><td>C</td><td>D</td></tr>`

`<tr><td>E</td><td>F</td></tr>`

## ROW SPAN AND COLUMN SPAN ATTRIBUTE

- It is a attribute of td and th tag.
- It is used to set span of row and column.

### ROWS COLSPAN

\* <table border="2">

```

<tr> <td colspan="2" rowspan="2">STUDENT
```

A	B
C	D

```

<td> A </td> <td> B </td>
<td> C </td> <td> D </td>
</tr>
</table>

```

→ Rowspan and columnspan is used to give heading to the table whereas title gives heading to the web page.

\* <table border="2">

```

<tr> <td> A </td> <td> B </td>
<td> C </td> <td> D </td>
<td> E </td> <td> F </td>
</tr>

```

A	B	C
SECTION		
D	E	F

```

<tr> <td colspan="3" rowspan="3">SECTION
<td> D </td> <td> E </td> <td> F </td>
</tr>

```

</table>

### STUDENT LIST

<table border="2">

```

<tr> <td colspan="2" rowspan="2">SECTION STUDENT
```

A <sub>1</sub>	A <sub>2</sub>	ABC
B <sub>1</sub>	B <sub>2</sub>	XYZ

STUDENT LIST </td>

<caption> Student List </caption>

```

<tr> <td colspan="2" rowspan="2">SECTION
```

</td> </tr>

\* <tr> <td> A<sub>1</sub> </td> <td> A<sub>2</sub> </td> <td>

<tr> <td> B<sub>1</sub> </td> <td> B<sub>2</sub> </td> <td>

<br> <td colspan="3" style="text-align: center;">STUDENT </td> </tr>

<tr> <td> ABC </td> <td>

<tr> <td> XYZ </td> <td>

<table>

\* <tr> <td colspan="3" style="text-align: center;">SECTION </td> <td> student </td> <td>

<tr> <td> A<sub>1</sub> </td> <td> A<sub>2</sub> </td> <td> ABC </td> <td>

<tr> <td> B<sub>1</sub> </td> <td> B<sub>2</sub> </td> <td> XYZ </td> <td>

ROUNDPAN :-

G <sub>11</sub>	ABC	
	XYZ	

\* <table border="2">

<caption> student </caption>

student	
AA	
BB	B <sub>1</sub>
CC	
DD	
EE	B <sub>2</sub>
FF	

<tr> <td align="right" rowspan="3" style="vertical-align: middle;">B<sub>1</sub> </td>

<td> AA </td> </tr>

<td> BB </td> </tr>

<td> CC </td> </tr>

<tr> align="right" rowspan="3" style="vertical-align: middle;">B<sub>2</sub> <td>

<td> DD </td> </tr>

<td> EE </td> </tr>

<td> FF </td> </tr>

</table>

\* `<table border="2">`  
`<tr> <td> AA </td> <td rowspan="3"> BB </td> </tr>`  
`<tr> <td> CC </td> <td rowspan="2" style="border-top: none;"> DD </td> </tr>`  
`<tr> <td> EE </td> <td> FF </td> </tr>`

\* `<table border="2">`

`<tr colspan="3" style="border-bottom: 2px solid black;">> Marke </tr>`

`<tr> <td> ABC </td> <td rowspan="2" style="border-top: none;"> OS </td> </tr>`

`<tr> <td> XYZ </td> <td> INIT </td> </tr>`

`<td rowspan="2" style="border-top: none;"> OS </td> <td> XY2 </td> </tr>`

`<td rowspan="2" style="border-top: none;"> INIT </td> </tr>`

`<td> XYZ </td> </tr>`

`</table>`

Marke		
ABC	OS	INIT
XYZ		

### CELL SPACING AND CELL PADDING :-

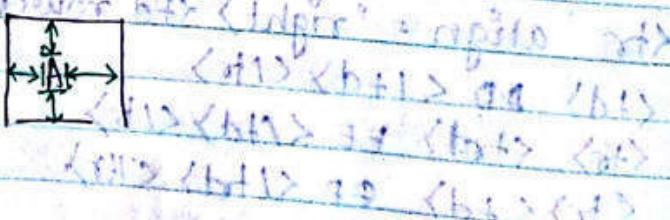


→ These attributes are used to adjust wide spaces in your table.

→ `cellspacing="10"` :- specifies width of space between adjacent cells.

→ `cellpadding="10"` :- specifies width of space between cell border and its content.

→ `border="10"` :- specifies width of border.



## Homework

①

examination schedule	
1st Setting	2nd Setting

②

Project Group.		
Group	Student	Faculty
G1		

### Anchor Tag <a>

It is used to create hyperlink to a resource (Webpage, pdf file, doc file, txt file).

### Attribute of Anchor Tag :-

#### Href (Hyperlink Reference)

- It is an attribute of <a> tag
- It defines the address of the file you want to link.
- = sign always connects attribute to a value.
- Value should be in " " .

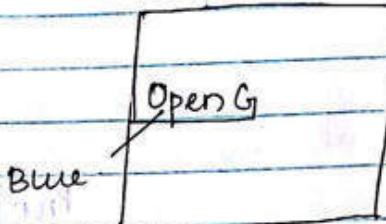
\* <html>

<body>

<a href = "http://www.google.com" > Open G  
\* </a>

</body>  
</html>

\* progl.txt  
\* abc.pdf



### TARGET

- It allows you to determine where the link will open.

<a href = "progl.txt" target = "blank" > Open tt </a>

keyword to open a new browser

### ACCESS KEY

- It is also an attribute of anchor tag. It provides hot key for accessing the link.

File Open

hot keys

<a href = "progl.txt" target = "blank" accesskey = "o" > Open tt </a>



# *Internet And Web-Technologies*

Topic:

***Basic HTML Using Images Links***

Contributed By:

***Rahul Ranjan***

\* IMAGE:-

- It is used to place an image on the web page.
- `<Img>` tag is used to set an image on the web page.
- Images are not part of the web page file.
- They are separate files which are inserted into the page where it is used by the browser.

ATTRIBUTES OF IMAGE TAG :-

- ① Size
- ② Title
- ③ Alignment
- ④ Border Size
- ⑤ source (SRC)

- ① Size defines the width and height of an image.
- ② Title is used for tool tip (i.e. small information in narrow format where title cursor is over the image).
- ③ Alignment You can align your image where it is necessary but by default it is left.
- ④ Border Size shows the border of an image.
- ⑤ SOURCE (SRC) provides the address of an image.

\* `<html>`

`<body>`

`<img source = "pic.gif" align = "right">`



OR

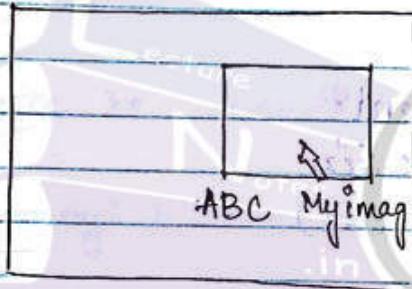
```
<img src = "pic.gif" align = "right" />
```

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

\* `<html>`

```
<body>
```

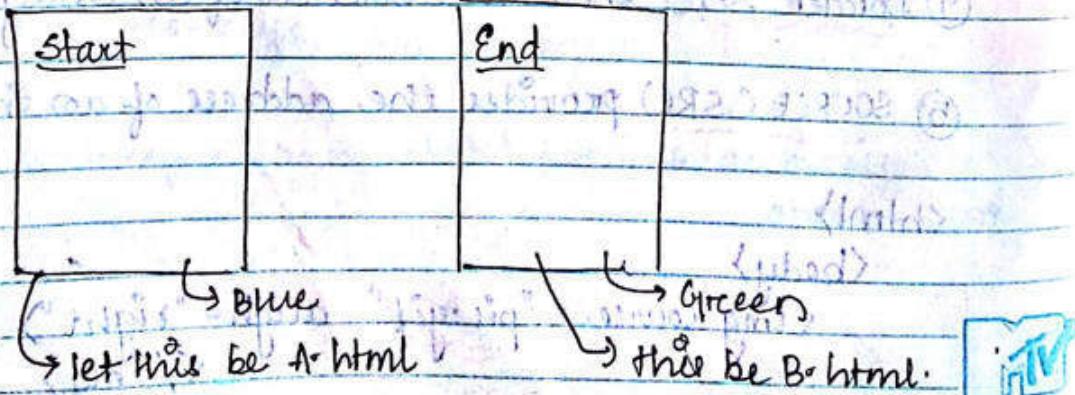
```
<img src = "pic.gif" align = "right"  
width = "200" height = "100"  
border = "1" title = "My image">  
ABC </img>
```



- Create a hyperlink

```
<html>  
<body>  
<a href = "A.html">  
ABC <img src = "pic.jpg" /> ABC </img> </a>
```

- \* Opening a link in another window



```

<html>
  <body bgcolor = "blue">
    <a href = "B.html"> start </a>
  </body>
</html>
<html>
  <body bgcolor = "Green">
    <a href = "A.html"> End </a>
  </body>
</html>

```

- \* Now save both the programs in a single folder.

### \* FRAME :-

- It can display one or more than one html document in the same browser window.
- Each html document is called FRAME and each frame is independent of others.
- <frameset> tag is used to divide browser window.
- <body> tag is not required.

### ATTRIBUTES OF FRAMESET TAG :-

- ① Rows
- ② Columns
- ③ Frame border
- ④ Border color
- ⑤ Nosize
- ⑥ Name

## ① Rows

It divides browser window row wise

\* A. html : name

<html>

<frameset rows = "30%, 70%">

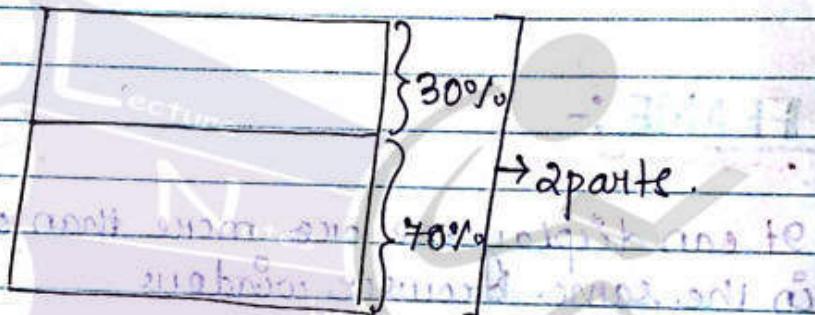
</frameset> (inside) - divided into

</html> (inside) - body < "math.html" >

OR

<frameset rows = "30%, 60%, \*>

ability to define no. of rows and rest goes to



Components of <frameset> tag :-

### ① Frame

A. html

<html>

<frameset rows = "30%, \*">

<frame src = "http://www.rediff.com">

<frame src = "B.html">

</frameset>

</html>

\* Divide row-wise according to the no. of colors you know.

A.html

```
<html>
<frameset rows = "30%, 20%, 40%">
  <frame src = "col1.html">
  <frame src = "col2.html">
  <frame src = "col3.html">
</frameset>
</html>
```

- Now in another file keep the colors.

col1.html

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

col2.html

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

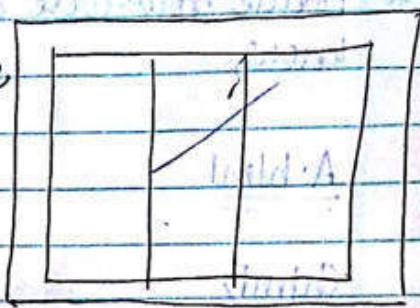
col3.html

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

```

<html>
  <frameset cols="33%, 33%, 33%">
    <frame src = "a.html">
    <frame src = "b.html">
    <frame src = "c.html">
  </frameset>
</html>

```



```

<html>
  <frameset cols="30%, 40%, 30%">
    <frame src = "a.html" bgcolor="Orange">
    <frame src = "b.html" bgcolor="DarkBlue">
    <frame src = "c.html" X>
  </frameset>
</html>

```

\* //to design Indian Flag

a.html

```

<html>
  <body bgcolor="Orange">
  </body>
</html>

```

b.html

```

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

```

c.html

```

<html>
  <body bgcolor="green">
  </body>
</html>

```

Add these above files into a single file.

<html>

```

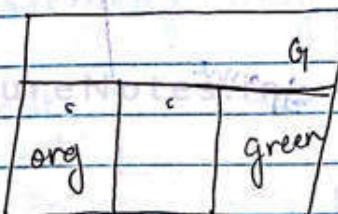
  <frameset rows="30%, 40%, 30%">
    <frame src = "a.html">
    <frame src = "b.html">
  </frameset>

```



```
<frame src = "c.html">  
</frameset>  
</html>
```

\*



→ This is called as Nested frame set i.e. frame inside other frame set.

(using the Indian flag code)

```
<html><frameset rows="30%"><frame src="a.html"><frame src="b.html"><frame src="c.html"></frameset></html>
```

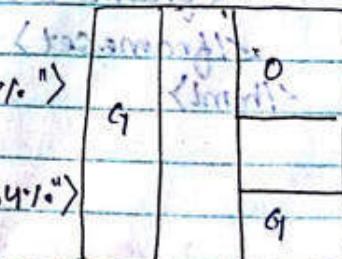
```
<html><frameset cols="33.33333333333333%"><frame src="a.html"><frame src="b.html"><frame src="c.html"></frameset></html>
```

```
<html><frameset rows="33.33333333333333%"><frame src="a.html"><frame src="b.html"><frame src="c.html"></frameset></html>
```

\*

<html>

```
<frameset cols="30%, 30%, 40%">  
<frame src = "a.html">  
<frame src = "b.html">  
<frame set rows="34%, 32%, 34%">  
<frame src = "a.html">  
<frame src = "b.html">  
<frame src = "c.html">  
</frame set>  
</frameset>  
</html>
```



OPEN THE LINK PAGE in Frame :-

Frame A

Frame B

Frame C

## leftframe.html

```
<html>
<body><br>
<a href = "a.html", target = "sframe">frameA</a>
<a href = "b.html" target = "sframe">FrameB</a>
<a href = "c.html" target = "sframe.">FrameC</a>
</body>
</html>
```

~~File for division~~ ~~in the~~ ~~Ministry~~

```
<html>
<frameset cols="25% 75%">
<frame src="Leftframe.html">
<frame src="b.html" name="sframe">
</frameset>
</html>
```

## INLINE TAG

It is used for formatting

In html; the very finest level of formatting we can achieve using INLINE TAG.

<b>- Bold

<i>- Italic

<big>- Enlarge the Text.

<small>- Smaller Text.

<strong>- Bold the text

<tt>- teletype text. etc.

<ins>

<ins> <del> - Insertion and deletion. It is used to edit the html page. It is an alternate of <u> tag.

<u>- underline

<s>- strike off.

<u> and <s> is not supported in future browser.

Eg:

```
<html>
  <body>
    My favorite color is <del> blue </del>.
    <ins> red </ins>
  </body>
</html>
```

Output: My favorite color is blue red.



d.html

```
<html>
```

```
  <body background = "brown">  
    </body>
```

```
</html>
```

	O	BAR JULIA
b	W	BAR JULIA
	G	BAR JULIA
	W	BAR JULIA

Flag.html

```
<html>
```

```
  <frameset cols="20% * " >  b1 = <div>  
    <frame src = "d.html" />  div1 = <div>  
    <frameset rows = "20% 20% 20% * " >  
      <frame src = "a.html" />  div2 = <div>  
      <frame src = "b.html" />  div3 = <div>  
      <frame src = "c.html" />  div4 = <div>
```

```
    <frame src = "b.html" />  div5 = <div>  
  </frameset>  div6 = <div>  
</frameset>  div7 = <div>  
</html>  div8 = <div>
```

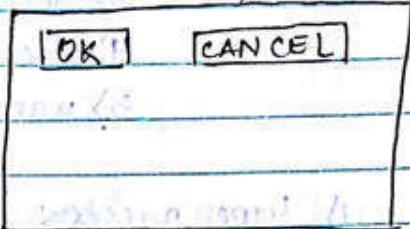
## FORM TAG

- Website use forms to collect information from user and transmit that information to a server for processing.
- HTML form is used to pass the data to a server.
- You can have more than one HTML form in single page.
- Don't put one form in another form (nester form).
- There are <sup>primarily</sup> 4 elements is used within form tag:
  - ① <input>
  - ② <select>

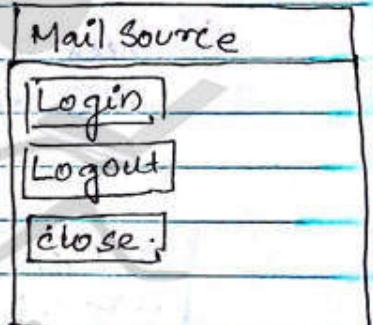
③ <text area>

④ <button>

```
<html>
  <body>
    <form>
      <input type="button" value="OK">
      <input type="button" value="cancel"><br>
    </form>
  </body>
</html>
```



```
<html>
  <body>
    <form>
      <input type="button" value="Login"><br>
      <input type="button" value="Logout"><br>
      <input type="button" value="Close"><br>
    </form>
  </body>
</html>
```



1) <input>

It's used for input.

Doesn't require closing.



→ Attributes of input tag

- 1) type
- 2) value
- 3) size
- 4) checked
- 5) name.

- 1) type passes the type of control (button, radio, checkbox, reset, submit etc)
- 2) value set the initial value or label to the control
- 3) size accept the integer value that determines how many character applicable in text field
- 4) checked passes Yes or No if it is applicable in radio button and checkbox.

### DESIGNING OF TEXT FIELD IN WEB PAGE:-

- Basically used for accepting i/p.

```
<html>
  <head><title>Registration</title></head>
  <body>
    <form>
```

Registration

Enter Name	<input type="text"/>
Enter RegNo	<input type="text"/>
<input type="button" value="Send"/>	<input type="button" value="Exit"/>

Enter Name <input type

= "text" size = "30" /><br>

Enter RegNo <input type = "text" size = "30" /><br>

<input type = "button" value = "Send" />

<input type = "button" value = "Exit" />



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

9th April 2018

### CHECK BOX:-

- It allows the user to select multiple options at a time.
- Input tag is used for designing checkbox.
- It passes type equivalent to checkbox i.e. attribute to input tag.

<table border="1"> → Attribute

<tr> ] → Element

<td>

</table>

function

```
<html>
<body><form>
<u> Subject List </u><br>
<input type="checkbox" checked="Yes" /> INIT<br>
<input type="checkbox" /> OS<br>
<input type="checkbox" /> CD<br>
<input type="checkbox" /> POM<br>
```

Subject List

INIT

OS

CD

POM

<input type="checkbox" /> OS<br>

<input type="checkbox" /> CD<br>

<input type="checkbox" /> POM<br>

</body>

</form>

</html>

### RADIO BUTTON:-

- Input tag is used to design radio button.
- It passes type equivalent to radio.

→ Name attribute is compulsory for i/p tag

```
<html>
  <body>
    <form>
      <u> Gender </u> <br>
      <input type="radio" name="g" /> Male <br>
      <input type="radio" name="g" /> Female <br>
    </form>
  </body>
</html>
```

Gender

- Male
- Female

→ Name is used for grouping at a time one can be selected

#### DROPDOWN LIST:-

→ It is also called as selection list.

→ In selection list user can select one option out of many options / set of option.

→ <select> tag is used to design dropdown list.

→ <option> tag is element of <select> tag ; it provides option to dropdown list.

→ It is singleton tag.

Disadvantage: user can't see all options of dropdown list at a time.

```
<html>
  <body>
    Font size <br>
    <form>
```

Font size  
Size ▾

1
2



```

<select>
  <option> size
  <option> 1
  <option> 2
  <option> 3
  <option> 4
</select>
</form>
</body>
</html>

```

### RESET BUTTON

- It allows the user to clear their web form.
- Reset button should be inside `<form>` tag.
- It is automatically associated with form elements.
- It is also design with `<input>` tag.
- It passes time equivalent to reset, in place of button.

```

<html>
  <body>
    <form>
      <form>
        Name <input type = "text" size = "10">
      <br>
      Regno <input type = "text" size = "10">
      <br>
      <input type = "button" value = "OK">
      <input type = "button" value = "Reset">
    </form>
  </body>
</html>

```

Name:	<input type="text"/>
Regno:	<input type="text"/>
OK	Reset

Redgno <input type = "text" size = "10"> <br>  
 <input type = "button" value = "OK"> <br>  
 <input type = "button" value = "Reset">  
 </form>  
 </body>  
</html>

### TEXT AREA :-

- It is similar to text field.
- It can accept multiple line at a time.
- It is used to design comment field, feedback field, blog etc in web page.
- <Text area> tag is used to design comment field.
- Closing tag is required.
- Vertical scroll bar (by default) is available.

### Attributes :-

1. cols no. of columns visible in text area

2. rows no. of rows visible in text area

```
<html>
```

```
<body>
```

```
<form>
```

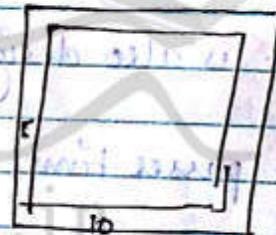
```
<text area cols="10" rows="5">
```

```
</text area>
```

```
</form>
```

```
</body>
```

```
<html>
```



### UPLOAD

- It provides interface that allows user to select local file and upload it to web server.
- An upload image is rendered with 2 parts.
  - Blank text field
  - A browse button.

- <input> tag is used to design upload field.

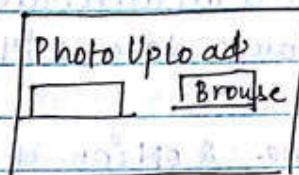
→ It passes type equivalent to file.

```
<html>
  <body>
    <form>
```

photo upload <br>

<input type = "file" />

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



10th April 2016

### Attributes Of Form Tag :-

- ① Action → Post (By Default) (Using URL)
- ② Method → Get (Not using URL)
- ③ enctype.

Action is used to determine where to send data.

#### 1) Action:-

- It specifies url (uniform resource locator) to which form data will be submitted.
- We would specify url of a program on a server or an e-mail address.

Eg; <form action = "data.asp">

, asp - active server page

- server side coding.

jsp - java server page

cgi - common gateway interface.

PHP - Pre-formatted Hypertext



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## 2) Method :-

- It is an attribute of form tag; It determines how form data will be submitted.
- The option of this attribute is:-
  - Get and Post
- The default option is Get.
- Get :-
  - It appends the form data into the url.
  - Server receives url + data.

## • Post :-

- It sends the data separately.
- It is considered as the preferred option.

## 3) Enctype : (Encryption Type)

- It specifies the format of the data being submitted.
- It specifies an encoding protocol known as multipurpose Internet Mail Extension [MIME].
- MIME ensures that data doesn't become corrupted when transmit across the internet.

Eg; `<form action="data.asp" method="get" enctype="plain/text">`



# *Internet And Web-Technologies*

Topic:  
*The Internet And WWW*

Contributed By:  
*Rahul Ranjan*

## INTERNET:-

- Network of networks.
- It is a global system that consist of millions of public, private, academic, govt, business network of local to global scope.
- Internet allows all the computer connected to it to exchange the inf. with one another.
- Protocol is required for communication.

## Application of Internet :-

- i) Electronic shopping
- ii) Online Banking
- iii) Video and Audio conferencing
- iv) Education
- v) Cloud computing
- vi) Search Engine

## WWW (World Wide Web):-

- It is a huge collection of pages of information linked to each other around the globe.
- Every page is a combination of text, picture, audio, video, animation and hyperlink.
- Burness Lee is the father of WWW.

## Webpage :-

- It is a collection of normal text, picture, video, clip, audio clip and hyperlink.
- It can be designed with html, xml, javascript etc.

HTML - design structure  
Javascript - validate the field  
XML is advance version of HTML.

### Website :-

- It is a collection of interlink webpage.
- Website is accessed through URL.
- URL is a global address of web document on WWW.
- URLs are unique in nature they don't have to copy.
- URL is also developed by Berners Lee.
- There are 2 parts in URL:
  - Protocol
  - Resource Name.

Eg of URL:  $\text{http://www.google.co.in}$  → Resource Name  
                  ↓  
                  Protocol

- Website is categorised according to their function:-
  - i) Personal Website
  - ii) commercial website
  - iii) Government Site
- There are 2 types of websites:-
  - i) static - information site
  - ii) Dynamic - interactive site.

11th April 2016

### Web Application :- (Web App)

- You can run web application into the browser.
- It is accessed through URL.
- There are 2 types of Web app:-
  - i) Service Oriented
  - ii) Presentation Oriented.

#### 1) Service Oriented Application :-

- It is used to implement web service.

- It is coded using CGI, JSP, ASP

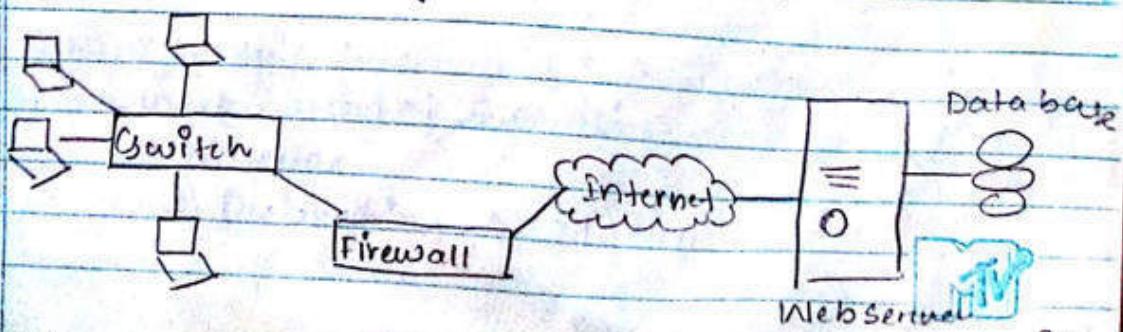
#### ii) Presentation Oriented Web Application :-

- It provides client side service.

- They are coded using HTML, XML, Javascript etc.

### WEB ARCHITECTURE :-

- www follow 2 tier architecture as a
- 2 tier architecture is a combination of web server and web client.
- Web server produce and deliver info; web client retrieve and display the information



## Web Browser

- It is a software used to display HTML document.
- Mosaic is 1st web browser.
- It is introduced in 1993; next browser is netscape navigator → Internet explorer.

## Web Server

- It is a software which maintains the web application.
- It responds to client request and also accept the client data.
- It runs on port no 80.

Name of web server:-

i) IIS (Internet Inf. Server)

• It is a part of Microsoft.

ii) Apache / Tomcat

iii) Microsoft Personal Web Server



# *Internet And Web-Technologies*

Topic:  
*CSS*

Contributed By:  
*Rahul Ranjan*

## CSS (Cascade Style Sheet)

- Style Sheet is a composed set of style rules written in specified format.
- This set of rule instruct to the browser how to present the html document.
- Style define how to display html.
- Style tag is a component of css.

```
<html>
  <body>
    <h1> Hello Trident </h1>
    <h1> Hello Trident </h1>
    <h2> Hello Trident </h2>
    <h2> Hello Trident </h2>
```

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

Output:

Hello Trident  
Hello Trident  
Hello Trident  
Hello Trident

```
<html>
  <head>
    <style>
      h1 {text-align: center;} ← CSS coding
    </style>
  </head>
```

Syntax of style Rule  
It is a combination of 2 parts:-

1) Selector

2) Declaration



hi {color: red; }  
  |   |    |\  
  Selector   Property   value

h2, h1 {color: red; text-align: center; }

Selector :-

→ It determines the elements to which rule is applied.

Declaration :-

→ It specifies the exact property, value to be applied to the element (tag).

To change the background using CSS :-

```
<style> </style>
body {background-color: green; }
```

Steps for Adding CSS to HTML :-

1. Write contents of webpage using HTML.
2. In head tag add CSS using `<style>` tag.

Properties :-

i) color :- Changing the text color; value equivalent to all colors.

ii) text-align :- changing alignment of text; value = center, right, left.

iii) font-family :- changing the font type  
value = all font name.



v) Background - image :- Setting background of the image.

v) Font - style :- changing the font style value = static, oblique and normal

vi) font - weight :- Setting the font weight like bolder, lighter.

passing value = normal, bold, bolder, light, lighter, 100, 200, ..., 900.

vii) Background - color :- Setting background color of webpage.

viii) word - spacing :- Set the space b/w the word.

ix) letter - spacing :- Setting space b/w characters.

x) text - decoration :- Decorate the text.

passing value = blink, none, underline, overline, line-through.

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xi) text - transform :- It is used to convert the text capital to small and vice versa, capitalised or title based form.

text-transform: capitalize; - convert all in title case  
lowercase; - lowercase.  
uppercase; - uppercase.  
none; - normal form.

There are 4 techniques used to implement CSS in web page:-

- ① Embedded / Internal style sheet . (S)
- ② External Style Sheet . (E)
- ③ Imported style sheet . (I)
- ④ Inline style sheet . (I)

① EMBEDDED / INTERNAL STYLE SHEET:-

- In this method style info placed under the style tag in the head section of html page.
- It is also called embedded style sheet.

```
<html>
<head>
  <style>
    h1 {text-align: center; }
    h2 {color: red; }
    h3 {color: green; text-align: right; }
  </style>
</head>
<body>
  <h1> Trident </h1>
  <h2> CSE </h2>
  <h3> Semester. </h3>
</body>
```

Trident

CSE

Semester.

```
<html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
h1 {text-align: center; }
```

```
text-color: blue; text-
```

```
transform: capitalize;
```

```
text-decoration: underline; }
```

capital, center, blue, underline

h1 StudentList

h2 Btech

h2 Mtech

h2 Ma right, blink

Bca

```

n3. & rotate-text-decoration: blink, text-align: right;
    text-transform: capitalize; </style>
<html>
  <head>
    <body>
      <h1> Student List </h1>
      <h2> Btech </h2>
      <h2> Mtech </h2>
      <h3> Mca </h3>
      <h3> Bca </h3>
    </body>
  </html>

```

## ⑪ EXTERNAL CSS :-

- In this case style info is written in separate file and is referenced by html document.
- It is useful when same style is applied on different html document.
- It implies faster response because browser download only html document.
- <link> tag is used for external CSS.

### Attributes of <link> tag :-

→ i) rel: (relation)  
It defines the type of style sheet, it defines the relationship between linked file and html document.

→ ii) type:  
The type of target link.

iii) href:  
Target file of link.

→ In this technique <style> tag is not required.

→ You can put only one tag & one link tag in head section.

mystyle1.css :-

```
h1 {color: orange; text-align: center;}
```

h1	Hello India	Orange
h2	Hello India	Green
	Hello India	Blue

```
h2 {color: Green; text-align: center;}
```

```
h3 {color: Blue; text-align: center;}
```

<html>

<head>

```
<link rel="stylesheet" type="text/css" href="mystyle1.css"/>
```

</head>

<body>

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

```
<h2> Hello India </h2>
```

```
<h3> Hello India </h3>
```

</body>

</html>

mystyle2.css

```
h1 {color: orange; text-transform: capitalize; text-decoration: blink;}
```

```
h2 {color: Green; text-transform: lowercase; text-decoration: blink;}
```

```
h3 {color: Blue; text-transform: title; text-decoration: blink;}
```

- (iii) IMPORTED CSS :-
- In this method import a style sheet using @Import statement.
  - Import statement always used within `<style>` tag.

- 1st create the css file.

`style1.css`

```
h2 { text-align: center; font-weight: bold; font-decoration: underline; }
```

`h2 Hello Student`

`h2`

`Hello Student`

`center, blue,`

`bold, underline,`

`blink`

`h3 Hello Student`

`h3`

`Hello Student`

`center, blue,`

`bold, underline,`

`blink`

```
h1 { text-align: center; font-color: blue; font-decoration: underline; }
```

`h1 Right, red`

`underline,`

`text-decoration: blink; }`

```
h3 { text-align: right; color: red; text-decoration: underline; }
```

`h3`

`Hello Student`

`right, red`

`underline,`

`text-decoration: blink; }`

css Demo.html

```
<html>
  <head>
    <style>
      @import url(style1.css);
```

```
  </style>
</head>
```

```
<body>
```

```
  <h2>Hello Student</h2>
```

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

```
  <h3>Hello Student</h3>
```

```
</body>
```

```
</html>
```

- After saving run `style1.css` for me O.P.

We can use multiple import statement inside tag

#### IV INLINE STYLE SHEET:-

- In this technique style info incorporated directly into html tag.
- We can easily modify the style of particular element.

```
<html>
```

```
<body>
```

```
  <h1 style = "text-transform : uppercase;">
```

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

```
  <h2 style = "color : Green;">
```

```
    Hi Student </h2>
```

```
</body>
```

```
<html>
```

capital

h1 Hello Student

h2 Hi Student

Green

#### CLASS ATTRIBUTE:-

→ It is used to specify the style class to which the element belongs.

→ Classes could be reference in html with the class attribute.

```
<p class = a> This is webpage </p>
```

```
<p class = b> This is my webpage </p>
```

a {text-transform: uppercase;}

b {text-decoration: blink;}

Order Rules:-

Inline (Highest)

Internal



External



Imported

LectureNotes.in

Browsers default Style. (Lowest):-

<span> tag :-

- It is a fine inline tag; it is used as a selector in style sheet and it also accept the style, class and id attribute.
- It is similar to **<strong>** and *<em>* in html; but it doesn't carry a structural meaning.

<html>

<head>

<style>

• first {color: red;}

<style>

<head>

<body>

<p> This is first <span class=first> css based web page. </span> with html </p>

<body>

</html>

O/P This is first css based web page with html

Red color





# *Internet And Web-Technologies*

Topic:  
*JAVA Script*

Contributed By:  
*Rahul Ranjan*

in April 2016

## JAVA-SRIPT

- It is a scripting language, compilation not required.
  - Java is programming lang. Java script is scripting language.
  - It is used to develop client side program.
  - <Script> tag is used for Java script programming.
  - It is embedded in HTML document.
  - Java script, enable browser can interpret Java script code.
  - Java script can be used to validate form data.
  - Java script is used for client side validation.
  - It is an object orient language.
  - Java script can read and write the HTML document.
  - Java script can validate form data before it is submitted to a server.
  - This activity processing. Same time the server time pass.
- and Java Script Programming Fundamental :-
- If offer some programming capability found in most programming languages -

① String "abc"

It is enclosed in "", It contains a list of characters.



② Number 4.5, 2, 20.

// we can take any no. it can be Integer / real.

③ Boolean

true, false

1 logical true or false.

④ NULL

null

LITERALS:-

var a = "String";

→ string literal

var b = 2.5;

→ number literal

var c = 2;

→ integer literal

var found = true;

→ boolean literal.

var a = null;

→ Java script supports 5 primitive type of value it also support array and object.

Primitive type:-

→ These are type that can assign a single literal value.

① undefined

② string

③ Number

④ Boolean

⑤ Null.

① undefined-

Variable is undefined if no value has been assigned to it.

Eg; var a;



To print a statement in webpage; document.write ("Hello Student")

```
<html>
  <body>
    <script language = "javascript">
      document.write ("Hello Student");
    </script>
  </body>
</html>
```

→ Save using .html extension.

\* 

```
<html>
  <body>
    <script language = "javascript">
      document.write ("Anamika \n");
      document.write ("CSE - B \n");
      document.write ("6th sem \n");
    </script>
  </body>
</html>
```

Output: 10 Anamika

```
var a = 10;
document.write (a + "Anamika");
```

Output: Anamika

```
var a ;
document.write (a + "Anamika");
```

### (ii) String :-

→ Always enclosed with double quotes.

Eg;

- var a = "Hello";  
document.write(a + "student");

O/p: Hello . Student

- var a = "Hello";  
document.write(a + 'Hello "student");

O/p : Hello "Student".

- document.write ("Hello" + " " + "India").

O/p : Hello  
India

### (iii) Number :-

→ Number literal may hold integer or real no.

→ Double quote doesn't differentiate integer / real no.

- var a = 10;

document.write ("a = " + a);

O/p: a = 10

### (iv) Boolean :-

→ It can have only 2 values

① true

② false

Eg; var a = 10 > 20;

document.write ("a = " + a);

- a = false.



## JAVA SCRIPT OPERATOR:-

→ It supports vast no. of operators, operator is used to find the result of expression.

→ There are 5 types of operators

- (i) Arithmetic
- (ii) Assignment
- (iii) Relational
- (iv) Logical
- (v) Bitwise

### (i) Arithmetic :-

→ used for normal mathematical operations

(eq; +, -, \*, /, %)

var a = 10 - 20;

document.write ("a = " + a);

OP: a = -10

var a = "2" - 1;

(OP: 1 = 0)

var a = "B" - 1;

OP: NaN (not a Number)

We can use "**<br>**" for a new line.

17th April 2016

Var res =  $3 - "1"$ ;  $\Rightarrow 2$

Var res =  $"3" - "2"$ ;  $\Rightarrow 1$

Var res =  $"3.5" - 1$ ;  $\Rightarrow 2.5$

Var res =  $"2B" - 1$ ;  $\Rightarrow NaN$

$2 * "3"$ ;  $\Rightarrow 6$

$2 * 6$ ;  $\Rightarrow NaN$

$0 * 1.5$ ;  $\Rightarrow 0$

$0 / 0$ ;  $\Rightarrow 0$

$0 \% 2$ ;  $\Rightarrow 0$

$NaN \% 0$   $\Rightarrow NaN$

### (II) ASSIGNMENT :-

→ It is used to assign value to variable.

→ Value shift from right to left direction.

Eg; var a = 10;

$a += 10$ ;

$a = a + 10$ ;

### (III) RELATIONAL OPERATOR

→ It returns true or false;

>, <,  $\geq$ ,  $\leq$ ,  $= =$ ,  $!=$

$= = =$  : used in javascript comparison.

Var res = 10 < 50;

Var res = 10 < 50;

document.write(res); true

Var res = 10 == 50;

document.write(res); false.



`var res = 10; res == 100;` → `False`

`var res = false == 0;` → `True`

- If string operands are used then Javascript engine try to convert them into numeric value. If conversion is possible otherwise it returns `NaN`.
- `==` No conversion is performed during comparison.

`var res = 5 == 5;` → `True`

`var res = "5" == 5;` → `False`

`var res = "5" == "5";` → `True`

`var res = "5" == "5";` → `True`

## ⑧ BITWISE OPERATOR: -

`>>` - Shift bit value in right direction

`<<` - Shift bit value in left direction

`&` = Bitwise AND

`|` = OR

`^` = XOR

## CONTROL STATEMENT

Controlling execution sequence of program.

There are 3 types

i) For loop

ii) while

iii) do-while

i) For loop :-

→ It contains 3 statement.

i) initial value.

ii) condition / termination point

iii) Update expression (any mathematical exp).

→ Replace the repeated code by loop , reduce the program size.

Syntax : - for (initial value; condition; update exp)  
          {  
          }  
            
          If more than one statement  
          {  
          }

e.g. Print 1-10 using JavaScript code :

```
<html>
  <body>
    <script language = "javascript">
      var i;
      for (i = 1; i <= 10; i++)
        document.write("  " + i);
    </script>
  </body>
</html>
```



Print table of 5.

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">
```

```
      var i
```

```
      for (i=1; i<=1; i++)
```

```
        document.write (" " + i*5);
```

```
    </script>
```

```
  </body>
```

```
</html>
```

→ for (i=1; i<=10; i+=i+1; i++) // increment the value of i. by 2.

## ii) WHILE LOOP

→ It is a entry control loop.

→ It execute block of statement as the matched condition is true.

→ It also contains 3 statement.

- initial
- condition
- update exp.

Syntax:- initial val; ①

while (condt);

②

update exp; ③

1) Print 1 - 10.

```
<html>
  <body>
    <script language = "javascript">
      var i = 1;
      while (i <= 10)
        document.write(" " + i);
        i++;
    </script>
  </body>
</html>
```

2) Print all even no. b/w 50 - 30

```
&gt; <html>
  <body>
    <script language = "javascript">
      var i = 50;
      while (i >= 30)
        document.write(" " + i);
        i -= 2;
    </script>
  </body>
</html>
```



"Even no. b/w 49 - 80."

<html>

<body>

<script language = "javascript">

while (i <= 30) var i = 19;

{

if (i % 2 == 0)

document.write (" " + i);

i--;

}

</script>

</body>

</html>

### III) DO-WHILE LOOP:-

→ It is exit control loop condition always written at end of loop body.

→ condition always end with ;

→ If condition is false atleast one execution is there.

Syntax: Initial value

( do      ) ;

{

①    =

{

② update expression;

{ while (cond);

③ }

Since here the condition is at end hence it is called as exit control loop.

Eg,

<html>

<body>

<script language="javascript">

var i=5;

do

{

document.write(i);

i++;

while (i<=10)

</script>

</body>

</html>

Output : 5 6 7 8 9 10.

2 April 2013

ARRAY:-

→ It is a type of data structure which keeps heterogeneous data.

→ Java script array is sometime called associative array.

→ In associative array, in place of numeric index we can put string index.

Eg:

var arrc = [5, 6, 7, 10];

document.write(arrc[0]); = 5

To print all the elements.

for (var i=0; i<4; i+1)

document.write(arrc[i]);

Output :

5 6 7 10.



```
var num = [1, "ABC", B, 'E'];
document.write(num[stud[i]]);
```

O/P 1 ABC B E

```
var vowel = ['a', 'e', 'i', 'o', 'u']
```

```
var list = ["ABC", "XYZ", "DEF"]
```

```
var mark = [8.5, 7.5, 6.5]
```

// Program to store 50-40 in an array point only odd numbers.

```
<html>
  <body>
    <script language = "javascript">
      var num = [50, 49, 48, 47, 46, 45, 43, 42, 41, 40]
      var i;
      for (var i=0; i<10; i++)
      {
        if (num[i] % 2) == 1
          document.write(num[i]);
      }
    </script>
  </body>
</html>
```

Eg. of associative array

```
var stud = [];
stud[roll] = 100;
stud[name] = "ABCD";
stud[marks] = 8;
document.write("Roll = " + stud)
```

`("Name: = " + stud.name),  
("Mark = " + stud.mark);`

- In java script array is a type of object; we can also find the length of array using arrayname.length.

`, document.write ("Length = " + stud.length); - 0  
var stud = [10, 40, 50];  
document.write ("length = " + stud.length); - 3`

### sort() :-

- It is a predefined method it always work with array object
- It sort the element in ascending order.

Eg; `var num = [5, 2, 4, 1, 6].`

`num.sort();`

`for (var i=0; i < num.length; i++)  
document.write (" " + num[i]);`

### reverse() :-

- It is used to reverse the content of an array.
- It always work with array type object.

`var num = [5, 2, 4, 1, 6]`

`num.reverse();`

O/p. 6, 1, 4, 2, 5



concat()

It is used to concat the elements.

Eg; var a = [3, 5, 7], b = [9, 11] c = [13, 15, 17]  
concat

var d = a.concat(b);

for (var i = 0; i < d.length; i++)  
document.write(" " + d[i])

O/P 3 5 7 9 11 13 15 17

var d = a.concat(b, c, 20, 21, 22);

O/P 3 5 7 9 11 13 15 17 20 21 22

join()

- Joining the delimiter in array like ":"
- Array is not modified.

Eg; var a = [3, 5, 7, 9]

a.join(":");

O/P. 3:5:7:9

20th April 2013.

### DYNAMIC ARRAY:-

- You can create dynamic array using constructor.
- Array() constructor is providing the memory space during run time.
- In JavaScript array is a type of object.

Eg; `var arr = new Array();`  
    ↑ name of array  
`document.write(arr.length); op = 0.`  
`arr[0] = 10.`  
`document.write(arr.length); op = 1.`

`arr[1] = "ABC";`  
`document.write(arr.length); op = 2`  
`1st element = 10`  
`2nd element = ABC`

### USER DEFINED FUNCTION:-

Function :-

→ A large prog. divided into small module according to requirement. Each module is called function

OR

→ Function is a self contain block of statement which perform a specific task.

→ Functions are of 2 types

    → Library / Predefined  
    → User defined

→ Function keyword is used in function definition; it is compulsory.

→ ELEMENTS OF USER DEFINED FUNCTION:-

- ① Function Definition
- ② Function call.

① FUNCTION DEFINITION:-

→ It defines the function or working part of user defined function

→ You can use once in a program!

Nested func<sup>n</sup> def<sup>n</sup> is not allowed.

## ⑪ FUNCTION CALL :-

→ It calls the user defined function or connect to func<sup>n</sup> body / def<sup>n</sup>.

→ function call statement need a multiple time.

\* <html>

<body>

<script language = "javascript">

function show() {

func<sup>n</sup>

def<sup>n</sup>

document.write("Hello Student");

show(); // function call.

</script>

</body>

</html>

To print the statement 10 times we can call the funct<sup>n</sup> twice.

⑫ WAP to print 10 to 1

<html>

<body>

<script language = "javascript">

function print()

{

for var i = 10; i ≥ 10; i--

document.write(i);

}

print();

</script>

```
</body>
</html>

/* Odd Numbers
<html>
<body>
<script language="javascript">
    function odd()
    {
        for (var i=10; i>1; i--)
            if (i%2 == 0)
                document.write(i);
    }
    odd();
</script>
</body>
</html>
```

/\* Find sum of 2 no. using user defined function.

```
<html>
<body>
<script language="javascript">
    function sum(n1, n2)
    {
        document.write("sum = " + (n1+n2));
    }
    sum(10, 30);
</script>
</body>
</html>
```

// calculate simple interest

<html>

<body>

<script language = "javascript">

function si (p, r, t)

{

document.write ("Simple = " + (P \* R \* T) / 100))

}

S1 (100, 2, 3);

</script>

<body>

<html>

// square of a number

<html>

<body>

<script language = "javascript">

function square (n). // Passing arg. and returning  
{  
value.

return (n \* n);  
}

document.write ("Square = " + square (10));

</script>

<body>

<html>

// Factorial of a number

<html>

<body>

<script language = "javascript">

function factorial (num);

var fact = 1;

for (var i = 1; i <= num; i++)

{  
return;

f = f \* i;

}

```
return f;  
document.write ("Factorial = " + factorial (5));  
</script>  
</body>  
</html>
```

### LIBRARY FUNCTION :-

#### 1. write()

→ It is used to display contents in webpage.

→ It always work document object.

Eg; var a=10;

document.write(a); Output = 10.

document.write("a"); Output = a.

document.write((a+10)); Output = 20.

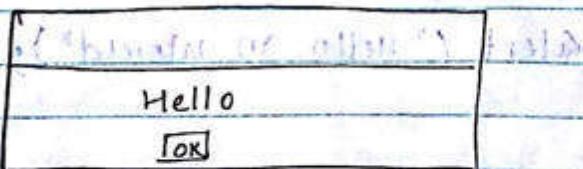
document.write ("a = "+a); Output = a=10.

#### 2. alert()

→ It is used to design an alert window.

→ Displays the content in dialogue box.

Eg; alert ("Hello");



### 3. Pop-up box

- It is used to show or create an show a component to user.
- It is available on the top of window.
- There are 3 types of pop-up box:-
  - 1) alert.
  - 2) confirm
  - 3) prompt.
- 1) alert pop-up box:-
- alert method is used to create alert popup box.
- It contains message and one control button.
- The label of button is 'OK'.

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">
```

```
      alert ("Hello World");
```

Hello World

OK

```
  </script>
```

```
  </body>
```

```
</html>
```

To print Hello World in different line :-

```
Alert ("Hello \n World");
```

//

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">
```

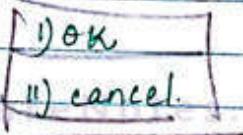
```
      alert ("Name: Anamika Nayak \n  
      Rollno: 1501289009");
```



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

2) Confirm pop-up box :-

- It shows confirmation dialogue box which contains 2 button



→ We can create confirmation pop-up box with the help of predefined method `confirm()`.

→ It returns 0 (cancel) and 1 (ok).

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">  
      confirm("Do u want to delete");  
    </script>
```

```
  </body>
```

```
</html>
```

// Program if press OK then it print GOOD if cancel then it print "Too Bad".

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">  
      var n = confirm("Are u ok");
```

```
      if (n)
```

```
        alert("Good");
```

```
      else
```

```
        alert("Too Bad");
```

```
    </body>
```

```
</html>
```



3) prompt pop-up box

→ It is also predefined method or function.

→ User can give i/p using html document using prompt method.

→ Prompt pop-up box contain 3 control

i) text-field

ii) OK Button

iii) Cancel Button

<html>

<body>

<script language = "javasCript">

var n = prompt();

document.write("Hello" + n);

alert("Hello" + n);

</script>

</body>

</html>

A rectangular dialog box with a thin black border. Inside, there is a single-line text input field. Below it are two buttons: 'OK' on the left and 'Cancel' on the right.

II Print 1-10 numbers using 10 i/p; the upper limit is given by user.

<html>

<body>

<script language = "javasCript">

var n = prompt();

for (var i = 1; i <= n; i++)

document.write(" " + i);

</script>

</body>

</html>

A rectangular dialog box with a thin black border. At the top, it says "Enter range". Inside, there is a single-line text input field containing the number "10". Below the input field are two buttons: 'OK' on the left and 'Cancel' on the right.

`var n = prompt ("Enter Range", "Enter numeric");`

↓                    ↓  
Heading / title      Default value  
part of text field    part of text field.

// To accept your name and print "Welcome Your Name" 10 times.

`<html>`

`<body>`

`<script language = "javascript">`  
`var n = prompt ("Anurima", "Enter your name");`  
`for ( var i = 1; i <= 10; i++)`  
`document.write ("Welcome " + n);`

`</script>`

`</body>`

`</html>`



# *Internet And Web-Technologies*

Topic:  
*Exception Handling*

Contributed By:  
*Rahul Ranjan*

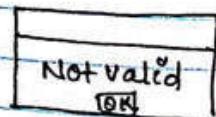
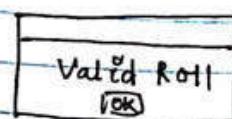
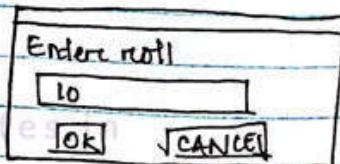
## EXCEPTION HANDLING

- Exception is run-time abnormal condition which terminates execution of a program.
- Errors that occur while script are processing information.
- Exception handling code handles run-time errors.
- It handles with appropriate message.
- It is used in data validation.
- The javascript exception handling mechanism is built around a group of program execution:-
  - ↳ try, catch, finally.
  - ↳ throw

23rd April 2013

// WAP to check valid roll no. using exception handling code. I/P is given through prompt pop-up box.

```
<html>
  <body>
    <script language = "javascript">
      var n = prompt("Enter roll");
      try {
        if (n <= 0)
          throw "Not Valid";
        else
          alert ("Valid Roll");
      }
      catch (e)
      {
        alert (e);
      }
    </script>
  </body>
```



H.W // Prog. to accept a character & check the char is vowel or not.

```
<html>
  <body>
    <script language="javascript">
      var a = prompt("Enter a character")
      try {
        if (a == 'a' || a == 'e' || a == 'i' || a == 'o' || a == 'u')
          throw "Not vowel";
        else
          alert("vowel");
      }
      catch (e)
      {
        alert(e);
      }
    </script>
  </body>
</html>
```

H.W // Prog. to check symbol.

```
<"> is not a special symbol
("234567890" is not a symbol)
```



11 WAP to check exception number 0 where 1st operand = 15 and 2nd operand is given by user using prompt.

```
<html>
  <body>
    <script language = "javascript">
      var n1 = 15
      var n2 = prompt ("Enter value")
      try {
        if (n2 == 0)
          throw "cannot divide by zero"
        else
          alert ("result = " + (n1/n2))
      }
      catch (e)
      {
        alert (e);
      }
    </script>
  </body>
</html>
```

11 WAP to check roll no. of our section.

```
<html>
  <body>
    <script language = "javascript">
      var n = prompt ("Enter roll number")
      try {
        if ((n >= 1) && (n <= 75))
          throw "Student of CSE B"
        else
          alert ("not a student of CSE B")
      }
    </script>
  </body>
</html>
```

```
catch(e) {  
    alert(e);  
}  
</script>  
<body>  
</html>
```

## JAVA SCRIPT OBJECT :-

- 1) → JavaScript is an object based programming lang.
- 2) → An object based programming lang allow you to define your own object and make your own variable style.
- 3) → JavaScript have so many built-in object and every object have some property:
  - 1) String
  - 2) Date
  - 3) Array
  - 4) Math

### 1) STRING OBJECT :-

- String object contains string manipulation method.
  - 1) length :- calculate length of string
    - It always accessed using string object

Eg. var str = "Hello";

```
document.write("Length = " + str.length);  
// Output : Length = 5
```

#### 2) toUpperCase() :-

- It converts characters in upper case form.



Eg; var str = "Hello";  
document.write(str.toUpperCase());  
HELLO.

iii) charAt () :-

• It prints me individual characters according to index value.

Eg; var str = "Hello";  
document.write(str.charAt(0));  
H.

II WAP to accept your name using PROMPT print individual character in separate line.

```
<html>
  <body>
    <script language = "javascript">
      var n = prompt ("Enter your name");
      document
      for (var i = 0; i < n.length; i++)
        document.write ("  
" + n.charAt(i));
    </script>
  </body>
</html>
```

\* 1 Reverse

```
<html>
  <body>
    <script language = "javascript">
      var n = prompt ("Enter your name"); var r = " ";
      for (var i = n.length - 1; i >= 0; i--)
        r += n.charAt(i);
      alert(r);
    </script>
  </body>
</html>
```



```
        alert(r);
    </script>
</body>
</html>
```

24th April 2013

#### IV) charCodeAt()

→ It prints the ASCII value or Unicode.

→ It always work with string type object.

→ It takes index value i.e. integer.

Eg; var str = "Hello World".  
 ^ 1 2 3 4 5 6  
 var c = str.charCodeAt(6);  
 document.write(c);

O/P: 87 (ASCII value of W)

#### II) Accept your name using prompt and ASCII code.

```
<html>
```

```
<body>
```

```
    <script language = "javascript">
```

```
        var n = prompt("Enter Name");
```

```
        for(var i=0; i<length·n; i++)
```

```
            var c = str.charCodeAt(i);
```

```
            document.write(c);
```

```
&
```

```
    </script>
```

```
</body>
```

```
</html>
```



### v) IndexOf()

→ It is used to search a string (1st occurrence).

→ It also pass index value where searching will start.

Eg; var str = "Hello World";

var i = str.indexOf("World");

O/p : 6

If searching not found it returns -1.

var str = "Hello World";

var i = str.indexOf("L", 6); → starting index.

O/p : 9.

### vi) LastIndexOf() :-

→ It returns index of searching element.

→ It gives last occurrence index value.

Eg; var str = "Hello World";

str.l = str.lastIndexOf("l");

O/p : 9.

### vii) Slice() :-

→ Extract the substring according to index value.

→ It passes starting index, last index (optional).

var str = "Hello World",

var str1 = str.slice(0, 5);

document.write(str1);

O/p: Hello.



viii) split(): -

→ It splits the content string into an array of substrings delineated by delimiters.

Eg; var str = "Hello World";

var str1 = str.split(" ");

document.write(str1[0]);

O/P: H

var str1 = str.split("space");

document.write(str1[0]);

O/P: Hello.

ix) toLowerCase(): -

→ Converting all characters in smaller case.

Eg. var str = "Hello",

document.write(str.toLowerCase());

O/P hello.

x) match(): -

→ It prints the matching character or string.

→ It is used in validation.

→ It always work with `String` object.

Options:- (can be passed as an argument)

i) g: get all matches. (Get line from multiple line).

ii) m: search over multiple lines

iii) i: case sensitive search.

- \* Searching element is passed in array.
- \* Create new dynamic object.

Eg; var str = "Hello World";  
 var c = str.match(/L/);

var c = str.match(/L/g); O/P - 3

## 2) DATE OBJECT:-

- It is a pre-defined object.
- It is useful to store current date and time.
- Date object is created by help of predefined constructor Date().

Eg; <html> //default constructor  
 <body>  
 <script language = "javascript">  
 var d = new Date();  
 document.write(d);  
 </script> → It prints current day name,  
 </body> month, date, year and  
 </html> time.

## 2) Date ("Month dd, YYYY, hh:mm:ss");

var d = new Date ("Dec 12, 1992, 04:15:30");

- It creates the date object of specific year, month and time.

## 3) Date ("Month, dd, yyyy");

- It creates date object of specific day, month, year.

30 - January  
01 - February ---- 11 - Dec.

var d = new Date ("Dec, 02, 1992");

25th April 2013

4) Date ("yy, mm, dd, hh, mm, ss");

It creates the obj. of specified year, month, day, time.

Eg; var d = new Date ("80, 01, 26, 5, 40, 0");

5) Date (yy, mm, dd)

It creates the object of specified date

var d = new Date (93, 02, 22);

#### METHODS OF DATE OBJECT :-

(i) getYear() :-

→ It is a predefined method of date object.

→ It prints year in 4 digit.

document.write (d.getYear()); — 2013

(ii) getMonth() :-

→ It prints month in numeric form.

→ It also work with date object.

document.write (d.getMonth()); — 03

(iii) getDate() :-

→ It prints date in 2 digit.

→ It work with date object.



Eg; document.write(cd.getDate());

(iv) getHours(): -

→ It prints the hour.

document.write(cd.getHours());

(v) getMinute(): -

→ It prints the minute part from date object.

document.write(cd.getMinutes());

(vi) getSecond(): -

→ It prints the second part from date object.

document.write(cd.getSeconds());

3) MATH OBJECT:-

→ It is predefined.

→ It allows to perform mathematical operation in web

document.

→ Math obj. includes several methods and constants.

var n = Math.PI.

document.write(n);

Output :- 3.141592653589793

METHODS OF MATH OBJECT:-

i) sqrt().

Calculate square root of a no. using math object.

document.write(Math.sqrt(4)); - 2

ii) round():-

It prints the round value.

document.write(Math.round(2.9)); — 3

iii) random():-

It prints the random number b/w 0-1.

document.write(Math.random());

iv) floor():-

It prints the base value.

document.write(Math.floor(3.5)); — 3

v) ceil():-

It prints the nearest integer.

document.write(Math.ceil(4.5)); — 5

vi) pow():-

It calculates the power it passes 2 argument base and exponent.

document.write(Math.pow(4, 2)); 16

vii) log()

It returns the natural logarithm.

document.write(Math.log(0)); -infinity

viii) constant

CONSTANT

Math.PI;

Math.SQRT2;

Math.SQRT1\_2; "square root of 1/2"

Math.LN; value of natural log e.

Math.LN10;

Math.LOG2E; // Base 2 log E.g 1.44

Math.LOG10E;

#### 4) ARRAY OBJECT :-

It is also predefined object there are some predefined method works with array object.

(i) length()

It prints the length.

(ii) reverse()

It prints the reverse.

(iii) sort()

Prints in ascending order.

(iv) concat()

combine the contents of 2 or more array

#### 5) BOOLEAN OBJECT :-

→ It always keep 2 values true/false.

Creation of boolean object :-

var b = new Boolean(0);

↳ constructor

!-True.

Boolean(1)

Boolean(null)

Boolean(NaN)

May 2013.

## USER DEFINED OBJECT

- An object is a special kind of special kind of data with properties and methods.
- Properties and methods are accessed through ('.') .
- Object constructor is defined to create an object .

Creation of object:-

```
Object();
<script language = "JavaScript">
    var stud = new Object();
    / Userdefined Object          Predefined constructor
    /                               \
    stud.name = "ABC";           } Properties.
    stud.roll = 100;             }
    stud.branch = "CSE";         }
```

document.write("Name = "+stud.name);  
</script>

## VALIDATION :-

- JavaScript can be used to validate data in HTML form ; before send of the contents to server .
- Form data that typical checked by javascript could be 1st empty field and valid e-mail add
- 3rd Valid date
- 4th check numeric data etc.

Fetching Data From HTML Doc (Text Field, Button, checkbox etc) :-

→ id / ID attribute is used in validation.

→ id / ID is unique identifier in web page.

Eg: `<input type = "text" id = "t1" />`

"t1" is the unique name for text field

**Method Name :-**

① `getElementById()`

→ This method is used to fetch data by ID.

→ It always work with document.

→ It always return address or reference of HTML field.

**Value Property :-**

Fetch exact value through the reference

`<html>`

`<body>`

`<script language = "javascript">`

`function show()`

`{`

`var s = document.getElementById("t1");`

`var str = "Hello" + s.value;`

`alert(str);`

`}`

`</script>`

`<body>`

`</html>`

Enter Name

Hello:



Enter Name <input type = "text" id = 't1' />  
<br> <input type = "button" value = "show" onclick = "show()" />

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

WAP to check the empty field.

```
<html>
```

```
<body>
```

```
    <script language = "javascript">
        function show()
    {
```

```
        var s = document.getElementById('t1');
        if (s.value.length == 0)
            alert("Re-enter Name");
        else
            alert("Hello " + s.value);
    }
```

```
</script>
```

Enter Name <input type = "text" id = 't1' />  
<br> <input type = "button" value = "show()" onclick = "show()" />

```
</body>
```

```
</html>
```

### REGULAR EXPRESSION:-

→ It is a very powerful tool for performing pattern matching.

Eng:

→ It is implemented in JavaScript.

→ There are 2 techniques to design regular exp:-

✓ Literal Syntax

a) Using constructor - Reg Exp()



## (1) LITERAL SYNTAX

exp

/ (s) /

/ ea/e/i/o/u /

/ [a - z] /

① [a - z] + ② ending of string

scanning  
start from  
starting of  
string

abcd - true

Abcd - False

abCD - False

Desc

Matches all the strings containing e.

Matches all string containing vowels.

It matches small alphabet.

/ [0 - 9] /

It matches all the no.

123A - True

A 123 - False

/ [abcd] /

Starting letter of string must be a / b / c / d .

• / [a - z, A - Z, 0 - 9, \_ ] /

It matches all small case alphabet, upper case alphabet, nos. and \_.

WAP using javascript to valid email address.

`<html>`

```

<body>
    <script language = "javascript">
        function show()
        {
            var exp = /^[a-zA-Z0-9!@#_]+$/;
            var str = document.getElementById('t1').value;
            if(str.match(exp))
                alert("Valid Email");
            else
                alert("Invalid Email");
        }
    </script>
    Enter email <input type = "text" id = 't1' />
    <br> <input type = "button" value = "show" onclick = "show()" />
</body>
</html>

```

change background color of html page using javascript

`<html>` COLOR SYSTEM

`<body>`

```
<script language = "javascript">
```

```
function change()
```

`{`

```
document.bgcolor = "Green";
```

`}`

[GREEN]

`</script>`

```
<input type = "button" value = "Green" onclick = "change()"/>
```

1) WAP to accept roll no. using text field print appropriate message.

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">
```

```
      function change()
```

```
{
```

```
  var exp = /10-97/;
```

```
  var str = document.getElementById('t1').value;
```

```
  if (str.match(exp)).if (exp > 0)
```

```
    alert ("Valid Roll");
```

```
  else
```

```
    alert ("Invalid Roll");
```

```
  }
```

```
  </script>
```

```
Enter Roll <input type = "text" id = 't1' />
```

```
<br> <input type = "button" value = "change" onclick = "change()" />
```

```
</body>
```

```
</html>
```

2) On writing color in text field and click on change button then background color will change.

```
<html>
```

```
  <body>
```

```
    <script language = "javascript">
```

```
      function change()
```

```
{
```

```
  var str = document.getElementById('t').value;
```

```
  document.backgroundColor = str;
```

```
}
```

```
  </script>
```

```
Enter color <input type = "text" id = 't' />
```

```
<br> <input type = "button" value = "change"
```

```
  onclick = "change()", />
```

```
</body>
```

```
</html>
```



# *Internet And Web-Technologies*

Topic:  
*Data Conversion*

Contributed By:  
*Rahul Ranjan*

# DATA CONVERSION

There are 3 predefined method used in conversion of data.

1) parseInt()

It convert data in integer form.

2) parseFloat()

It convert data in float form.

3) toString()

It convert data in string form.

{html}

{body}

<script language = "javascript">

var n = parseInt("123");

document.write(n);

</script>

Var n = parseInt("5aa"); 5

("ada"); NaN.

var n = parseFloat("2.5"); 2.5

("5a"); 5

Var n = 7.5;

n.toString();

document.write(n); "7.5".

11 Digital clock: Display the clock in text field.

<html>

<body>

<script language = "javascript">

function ctime()

{

var d = new Date();

var h = d.getHours();

var m = d.getMinutes();

var s = d.getSeconds();

var ct = h + ":" + m + ":" + s;

document.getElementById("t1").value = ct;

setInterval("ctime()", 1000);

}

</script>

<input type = "text" id = "t1" /> <br>

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

</body>

</html>



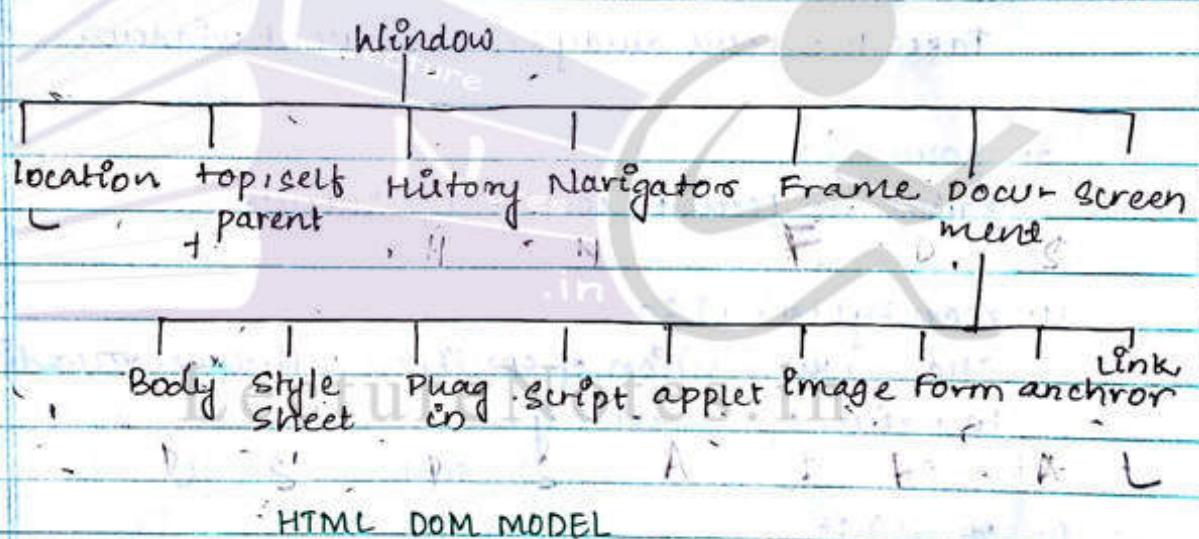
# *Internet And Web-Technologies*

Topic:  
***DOM***

Contributed By:  
***Rahul Ranjan***

## HTML DOM

- DOM stands for Document Object Model.
- JavaScript allows us to access the contents of webpage.
- The components of webpage are represented as objects.
- All the objects organized in a hierarchical structure that structure is called DOM.
- The top level object is window and the structure.



### WINDOW:

- The window object has many useful properties that may be used to get info about window.
- It also provides many useful methods that may be used to perform specific task.

Object name	Properties	Method
document	bgColor	write()

## Methods of window object :-

1. close() :-  
Closing the browser window.

Eg. `function winClose(){  
    window.close();  
}`

It will be placed inside script.  
`input type = "button" value = "close" onclick =`

2. blur() :-

Take me focus away from current window.

3. focus() :-

Give me focus to specified window.

4. moveBy(x, y) :-

Change me position of specified window according  
to value of x and y.

5. open() :-

Used for opening a new window.

`open("http://google.co.in");` \*specified  
`*open("specified window")`

`open("url", "specified window", "toolbar = no, menuBar = no, width = 250, height = 400");`

## " Moving window using button "

<html>

```
<body>
<script language = "Java
script">
```

```
var i=10, j=10;
function openwin ()
```

```
{
```

```
wfn1 = window.open (" ", " ", "width = 180; height
= 200").
```

```
}
```

```
function movein ()
```

```
{
```

```
wfn1.moveTo(i, j);
```

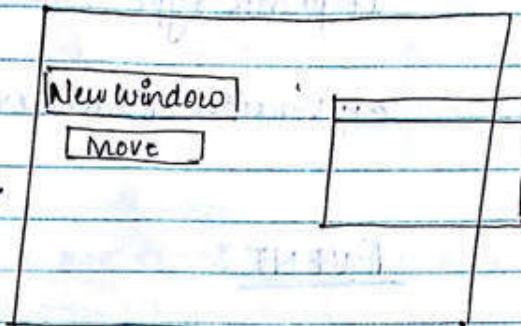
```
wfn1.focus();
```

```
i = i+5;
```

```
j = j+5;
```

```
}
```

```
</script>
```



### NAVIGATOR

- child obj. of window

contains inf. about client browser such as its  
name and version.

### Property of navigator

- i) appCodeName

It prints internal name of browser.

```
document.write(navigator.appCodeName);
```

- ii) appName

Prints name of browser.



cpuClass

It prints type of CPU.

appVersion Prints version of browser.

### EVENT :-

- It makes HTML page dynamic communication is possible using event).
- The set of task that may perform on webpage is called interactive event / event.
- There are 2 types of event :-
  - 1) Interactive (click, submit, keypress)
  - 2) Not Interactive (load)

### List of Events :-

Event name	Occurs when	Applicable to
onclick	mouse is clicked	Button, radio button, checkbox
onfocus	element get focus	text area, select, text field.
onload	pages / Images load	window, image
onsubmit	html form is submitted	HTML form
onkeypress	key is pressed	text area, document
ondblclick	user double click document	document, image, length

EVENT OBJECT :-

If it is a predefined object.

In javascript event is represented as a global object called event object.

The event object encapsulates the state of an event such as location the mouse pointer and left or right button. It also tracks the keyboard.

Property of Event Object.

clientX : Prints the x-coordinate

clientY : Prints the y-coordinate

keyCode : prints the key code.

`document.write(event.clientX);`

// Program to print x and y coordinates of mouse click event.

```

<html>
  <body onclick = "show()>
    <script language = "javascript">
      function show()
      {
        alert ("x = " + event.clientX + " y = " + event.clientY);
      }
    </script>
  </body>
</html>
```



```

<html>
  <body onclick="show()>
    <script language="javascript">
      function show()
      {
        alert(document.bgcolor="green");
        alert("Anamika");
      }
    </script>
  </body>
</html>

```

### Inner HTML :-

- Provides dynamic contents in webpage.
- It is a property of HTML DOM.
- Using Inner HTML we can make much more interactive webpage.
- When you use inner html we can change contents of page without refreshing.

```

<html>
  <body>
    <p id="E"></p>
    <script language="javascript">
      function f1()
      {
        document.getElementById('E').innerHTML = "Hello India";
      }
      function f2()
      {
        document.getElementById('E').innerHTML = "Hi India";
      }
    </script>
  </body>
</html>

```

The diagram illustrates the effect of changing the inner HTML of the paragraph element. On the left, there are two buttons: 'Click' and 'Click Me'. When the 'Click' button is pressed, the text 'Hello India' appears in the paragraph. When the 'Click Me' button is pressed, the text changes to 'Hi India'.

document.getElementById('t').innerHTML =  
"Hi India";

<script>

<input type="button" value="click" onclick="f1()">

<input type="button" value="clickMe" onclick="f2()">

</body>

</html>

II. WAP. do print manel y axis at top of web at mouse click.

<html>

<body onclick="show()>

<script language="javascript">

<h1 id="t"></h1>

function f1()

{

document.getElementById('t').innerHTML  
= "m = " + event.clientX + " y = " +  
event.clientY;

}

</script>

</body>

</html>

OR

var m = event.clientX + " " + event.clientY;

document.getElementById('t').innerHTML = m;

## DHTML

(Dynamic Hyper Text Markup Lang.)

- It is a combination of html, javascript, document object model and css.
- DHTML give you more control over the HTML elements and allow them to change at anytime without returning to webserver.

### FEATURES:-

1. Changing the tag and property.
2. Real time positioning
3. Dynamic font.
4. Data Binding.