JAVASCRIPT

JavaScript is a new scripting language which is being developed by Netscape.JavaScript is a compact, object-based scripting language for Web pages
JavaScript and Java
Although the names are almost the same, JavaScript isn't the same as Java. These are two different techniques for Internet programming. Java is a real programming language, and you can create real programs with it.JavaScript is a scripting language. You could even say that JavaScript is rather an extension to HTML than a separate computer language. It's so tightly integrated with HTML that you could call it "JavaScript markup language." JavaScript coders don't care too much about real programming, they just make different nice effects by inserting small JavaScript code fragments into their Web pages.

JavaScript can be inserted into a HTML file by using <SCRIPT> tag or can be created as a sepetate
.js file and can be inserted into the HTML

myscript.js

```
function popup() {
        alert("Hello World")
        }
```

Example : Using external JavaScript

```
File <html>
<head>
<SCRIPT LANGUAGE="JavaScript"
SRC="myscript.js"> </script>
</head>
<body>
<input type="button" onclick="popup()" value="Click
Me!"> </body>
</html>
```

Example :

```
<html>
<body>
<script
type="text/JavaScript"> <!--
document.write("Hello
World!") //-->
</script>
</body>
</html>
```

Note: The <!-- and --> tag as Old browsers will not understand the <SCRIPT> tags.

Dialog boxes
JavaScript has three kind of popup (dialog) boxes Alert box, Confirm box, and Prompt box.
Alert Box
An alert box is often used if you want to make sure information comes through to
the user. When an alert box pops up, the user will have to click "OK" to proceed.

```
<html>
<body>
<script type="text/javascript">
alert("Welcome to my
world!!!"); </script>
</body>
</html>
```

Confirm Box
A confirm box is often used if you want the user to verify or accept something.When a
confirm box pops up, the user will have to click either "OK" or "Cancel" to proceed. If the
user clicks "OK", the box returns true. If the user clicks "Cancel", the box returns false.

Example

```
<html>
<head>
<script type="text/javascript">
function show_confirm() {
        var r=confirm("Press a
        button"); if (r==true)
          {  document.write("You pressed OK!");
          }
        else
          {  document.write("You pressed Cancel!");
          } }
</script>
</head>
<body>
<input type="button" onclick="show_confirm()" value="Show confirm
box" /> </body>
</html>
```

Prompt Box
A prompt box is often used if you want the user to input a value before entering a
page.When a prompt box pops up, the user will have to click either "OK" or "Cancel" to
proceed after entering an input value.If the user clicks "OK" the box returns the input
value. If the user clicks "Cancel" the box returns null.

Example
```
<html>
```

```
<head>
<script type="text/javascript">



function disp()
{
var name=prompt("Please enter your
name","Sreenivas"); if (name!=null && name!="")
 {
 document.write("Hello " + name + "! How are you today?");
 }
}
</script>
</head>
<body>
<input type="button" onclick="disp()" value="Show prompt
box" /> </body>
</html>
```

Looping and Branching:

for loops allow a set of statements to be repeated or looped through a specified number of times for loop example:

```
for (i=1; i<=10; i++) {
  document.writeln("i=" + i);
  }
```

while loop allow a set of statements to be repeated or looped through until a certain condition is met.

while loop
example: i = 1;
```
while (i<=5) {
 document.write("\t"+i);
 i = i + 1;
 }
```

switch statement

Switch statements are used to select which statements are to be executed depending on a variable's value matching a label.

```
ch=window.prompt('Enter any number from 1 to
3'); switch (ch) {
 case '1': alert('Number entered is 1'); break;
 case '2': alert('Number entered is 2'); break;
 case '3': alert('Number entered is 3'); break;
 default: alert('Number entered is not between 1 to 3 ');
 }
```

JavaScript Functions

A function contains code that will be executed by an event or by a call to the function.

Syntax
```
function functionname(var1,var2,...,varX)
{
some code
}
```

Example
```
<html>
<head>
<script  type="text/javascript">
function product(a,b)
{
return a*b;
}
</script>
</head>
<body>
<script  type="text/javascript">
document.write(product(4,3));
</script>
</body>
</html>
```

Example

This is a very simple script. It opens up an alert message box which displays whatever is typed in the text box.

```
<HTML>
<HEAD>
<SCRIPT LANGUAGE="JavaScript">
 function MsgBox (textstring) {
alert (textstring) }

</SCRIPT>
</HEAD>
<BODY>
<FORM>
<INPUT NAME="text1" TYPE=Text>
<INPUT NAME="submit" TYPE=Button VALUE="Show
 Me" onClick="MsgBox(form.text1.value)">
</FORM>
</BODY>
</HTML>
```

Example: To Change Background Color of the page on button Click.

```
<HTML>
<HEAD>
<SCRIPT LANGUAGE="JavaScript">
function changecolor(code) {
   document.bgColor=code
}
</SCRIPT>
</HEAD>
<BODY>
<form>
<input type="button" name="Button1" value="RED" onclick="changecolor('red')">
<input type="button" name="Button2" value="GREEN"
onclick="changecolor('green')"> <input type="button" name="Button3"
value="BLUE" onclick="changecolor('blue')"> <input type="button"
name="Button4" value="WHITE" onclick="changecolor('white')"> </form>
</BODY>
</HTML>


<HTML>
<HEAD>
<SCRIPT>
function getSelect(s) {
  return s.options[s.selectedIndex].value
}
</SCRIPT>
</HEAD>
<BODY>
<FORM>
<SELECT NAME="list" SIZE=1 OnChange="location=getSelect(this)">
<OPTION value="#"> Choose a search engine
<OPTION value="http://www.jbiet.edu.in"> JBIET
<OPTION value="http://www.jbrec.edu.in"> JBREC
<OPTION value="http://www.bhaskarmedicalcollege.edu.in/">
BMC </SELECT>
<FORM>
</BODY>
</HTML>


<HTML>
<HEAD>
<script language="javascript">
function validate(value) {
 if (value<0)
   alert("Please input a value that
   \n"+ " is greater or equal to 0");
}
</script>
```

```
</HEAD>
<BODY>
Try inputting a value less than
zero <FORM>
  <INPUT TYPE="text"
onBlur="validate(this.value)"> </FORM>
</BODY>
</HTML>

<html>
<head>
<script
language="javascript">
function showElement()
{
 var txt=document.getElementById("txt");
 alert(txt.value);
 var
 t=document.getElementsByName("txt");
 alert(t.value);
}
</script>
</head>
<body>
<input type="text" name="txt" id="txt"><br><br>
<input type="button" value="Enter Text and Click Me"
onclick="showElement()"> </body>
</html>
```

JAVASCRIPT OBJECTS

   Genwral Ojects of JavaScript are Array, Date, Function,Math, String etc. Also we have Window ,History, Navigator , Document , Form Objects.

Date Object Methods:
```
var now = new Date();
document.writeln(now.getFullYear());
document.writeln(now.getMonth());
document.writeln(now.getDate());
document.writeln(now.getDay());
document.writeln(now.getTime());
document.writeln(now.getHours());
document.writeln(now.getMinutes());
document.writeln(now.getSeconds());
document.writeln(now.getTimezoneOffset());
document.writeln(now.toGMTString());
document.writeln(now.toLocaleString());
```

String Object:
```
var str="Hello world!";
```

```
document.write(str.toUpperCase());
```

```
document.write(str.toLowerCase());
document.write(str.substr(2,3));
document.write(str.charAt(1));
document.write(str.length);
document.write(str.replace("world", "hyderabad"));

var str1="Hello ";
var str2="world!";
document.write(str1.concat(str2));
```

Math Object

```
document.writeln(Math.abs(7.25));
document.writeln(Math.ceil(0.60));
document.writeln(Math.floor(0.60));
document.writeln(Math.round(0.49);
document.writeln(Math.cos(0));
document.writeln(Math.max(5,7));
document.writeln(Math.min(5,7));
document.writeln(Math.pow(2,3));
document.writeln(Math.random())); //returns a random number between
0 and 1. document.writeln(Math.sin(Math.PI/2));
document.writeln(Math.sqrt(9));
```

Document Object

```
document.writeln(document.title);
document.writeln(document.URL);
document.writeln(document.domain);
document.writeln(document.anchors.length); // will give no of anchor
elemets document.bgColor = "#FF00FF';
document.writeln(document.forms.length);
document.writeln(document.images.length);
```