

Javascript:-

client side Scripting Language
(User side)

Case Sensitivity Language

Upper case and lowercase as different

It is a Interpreted Language

Any language can be divided into 2 types

1) Compiled Language

Runs at a time

Displays all errors in the program

eg:-C, C++, Java

2) Interpreted Language

Line-by-line execution

or

step by step execution

eg-Javascript, PHP

It can show only one error message at a time.
whenever we get an error the program execution stops there only.

It is a object oriented Language.

Uses of JavaScript-

1)form validation(checking the forms for errors is called form validation

success message ==>if of

error message ==>if errors are present

2)Popup ads:-

The ads that will open automatically depending upon the user action

3)Dynamic Pages-

User interaction pages

user can modify the content of the site at runtime.

Syntax of Javascript:-

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

(or)

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

we can javascript code in <head> tag as well as <body> tag
we can write the javascript code in external file(we have to save the file with .js extension)

```
<script type="text/javascript" src="path of the javascript file">  
</script>
```

History of Javascript:-
It was invented by Brendon Eich in the year 1994 at netspace navigator.
Initial name was livescript or mocha.
but in the year 1996 officially they have declared the names as
Javascript
ECMA ==>European computer Manufacturing association

DURGASOFT

www.durgasoft.com

Printing statement:-

document.write("")

eg:-

document.write("welcome");

o/p ==>welcome

Note:-

we can use all html tags and css properties but we should use them inside the document.write double quotations only.

Comments:-

User Understanding Purpose.

They will never print in the o/p

2 ways of comments

1)single line comment //

2)multi line comment /* */ I

```
<html>
<head>
<title>Sample Example</title>
<script type="text/javascript">

document.write("<h2>Welcome To JavaScript</h2>");
document.write("<font size=7 color=blue>How are you</font><br>");

</script>
</head>
<body>

<script language="javascript">

document.write("<img src=111.jpg width=450 height=300>");

</script>

</body>
</html>
```

variables:-

variables are used to store the data.

Datatypes:-

- | | |
|------------|---|
| 1) int | numbers |
| 2) float | decimal |
| 3) char | single character ==> '' |
| 4) string | collection of characters ==> words ==> "" |
| 5) Boolean | true or false |
| 6) NULL | empty |

Syntax:-

var variablename=value;

eg:-

```
var a=10;  
var b=15.445;  
var c='@';  
var sname="Ranjit Kumar";
```

Keywords:-
Reserved words or predefined words. Every keyword will do some task or work.

eg:- var, if, else, for, while, do, function, ...

Rules for Variable Names:-

1) starting position should not be a number

var 1a X

var a1

2) we cannot use any other special characters except underscore

var a.b,a b,a@b,a-b X

var a_b

3) We cannot use keywords as names

```
<html>
<head>
<title>Variables Example</title>
<script type="text/javascript">

//Variable Declaration
var a=60;
var b=15.4545;
var fname="Ranjit";
var lname="Kumar";

//Printing the variables
document.write("<h2>");
document.write("A value : "+a+"<br>");
document.write("B value : "+b+"<br>");
document.write("Full Name : "+fname+" "+lname+"<br>");

</script>
</head>
<body>5552627,7207212428
```

< >

variable.html

*

```
1 <html>
2 <head>
3 <title>Variable example</title>
4 <script type="text/javascript">
5
6 //Variable Declaration
7 var a=60;
8 var b=15.54676;
9 var fname="Subbu";
10 var lname="Bandi"
11
12 // printing the variables
13 document.write("<h2>");
14 document.write("A value "+ a <br>);
15 document.write("B value "+ b <br>);
16 document.write("Full Name " + fname + " " + lname + <br>);
17
18 </script>
19
20 </head>
21 <body>
22
23
24 <body>
25 </html>
```

Operators:-

They are used to perform operations on variables.

1) Arithmetic operators:-

They are used for arithmetic calculation purpose

+,-,*,/,%,++,--

/ ==> division ==> quotient

% ==> Modulus Division ==> Remainder

eg:-

$30/7 \Rightarrow 4.2$

$30\%7 \Rightarrow 2$

Increment Operator(++)

The value of the variable will be increased by +1

Post Increment(a++)

First stores the value of the variable, then increases the variable value.

Pre Increment(++a)

First increases the value of the variable, then stores the increased value

Decrement Operator(--)

The value of the variable will be increased by -1

Post Increment(a--)

First stores the value of the variable, then decreases the variable value.

Pre Increment(--a)

First decreases the value of the variable, then stores the decreased value

eg:-

var a=10;

b=a++; b=10

a=11

c=++a; c=12

a=12

d=a--; d=12

a=11

e=--a; e=10

a=10

var x=5;

x++ (+) ++x (+) x-- (+) --x

$$5 + 7 + 7 + 5 = 24$$

```
1 <html>
2 <head>
3 <title>Operators Example</title>
4 <script type="text/javascript">
5
6 //Variable Declaration
7 var a=parseInt(prompt("Enter Number"));
8 var b=parseInt(rompt("Enter Number"));
9 var result;
10 // parseInt It is used for converting into numbers.
11 //prompt It is used for taking data at runtime.
12
13 // printing the variables
14 document.write("<h2>");
15 document.write("A value "+ a + <br>);
16 document.write("B value "+ b + <br>);
17
18 result = a + b;
19 document.write("Addition : " + result + <br>);
20
21 result = a - b;
22 document.write("Subtraction : " + result + <br>);
23 result = a * b;
24 document.write("Multification : " + result + <br>);
25 result = a / b;
26 document.write("Division : " + result + <br>);
27 result = a % b;
28 document.write("Remainder : " + result + <br>);
29 </script>
30 </head>
31 <body>
32
33 <body>
34 </html>
```

2) Relational operators:-

They are used for comparison purpose.

They are used for condition checking

whenever we are using relational operators we will get o/p either true or false.

>, >=, <, <=, ==(equal to), !=(Not Equal)

3) Logical Operators:-

To check the multiple conditions

AND(&&)

c1	c2	o/p
T	T	T
T	F	F
F	T	F
F	F	F

when all conditions are true then only we use AND

OR(||)

c1	c2	o/p
T	T	T
T	F	T
F	T	T
F	F	F

when any one condition is true we use OR

NOT(!)

Reverse the condition

T ==> F

F ==> T

eg- a=60 b=40

$!(a>b) \Rightarrow !(60>40) \Rightarrow !(T) \Rightarrow F$

Conditional Statements

4 types of conditional statements

- 1)if
- 2)if else
- 3)nested if
- 4)if else if or else if

1)if:-

```
IF(condition){  
    statements;  
}
```

It will checks the condition

IF condition is true, statements will be executed.

IF condition is false, statements will be skipped

2)IF Else:-

```
IF(condition){  
    statement1;  
}  
Else{  
    statement2;  
}
```

It will checks the condition

IF condition is true, statement1 will be executed.

IF condition is false, statement2 will be executed.

3)Nested IF:-

IF condition inside another if condition

```
IF(condition1){  
    IF(condition2){  
        IF(condition3){  
            statement1;  
        }  
        statement2;  
    }  
    statement3;  
}  
Else {  
    statement4;  
}
```

statement1 ==> condition1,condition2,condition3 all are true then statement1 will be executed.

statement2 ==> condition1,condition2 should be true and condition3 should be false then statement2 will be executed.

statement3 ==> condition1 should be true and condition2 should be false then statement3 will be executed.

statement4 ==> condition1 should be false then statement4 will be executed.

4) IF ELSE IF or ELSE IF:-
IF condition inside else part

```
IF(condition)
{
    statement1;
}
Else{
    if(condition2)
    {
        statement2;
    }
    else
    {
        if(condition3)
        {
            statement3;
        }
        else
        {
            statement4
        }
    }
}
```

```
<html>
<head>
<title>Conditional Statements</title>
<script type="text/javascript">
    var a = parseInt(prompt("Enter Number"));
    var b = parseInt(prompt("Enter Number"));

    document.write("<h2>");
    document.write("A value : " + a + "<br>");
    document.write("B value : " + b + "<br>");

    // example 1 of if

    if(a > b){
        document.write("A value is Bigger");
    }

    if(a < b){
        document.write("B value is Bigger");
    }
    if(a == b){
        document.write(" A value is Equals to B value")
    }

</script>
</head>
<body>

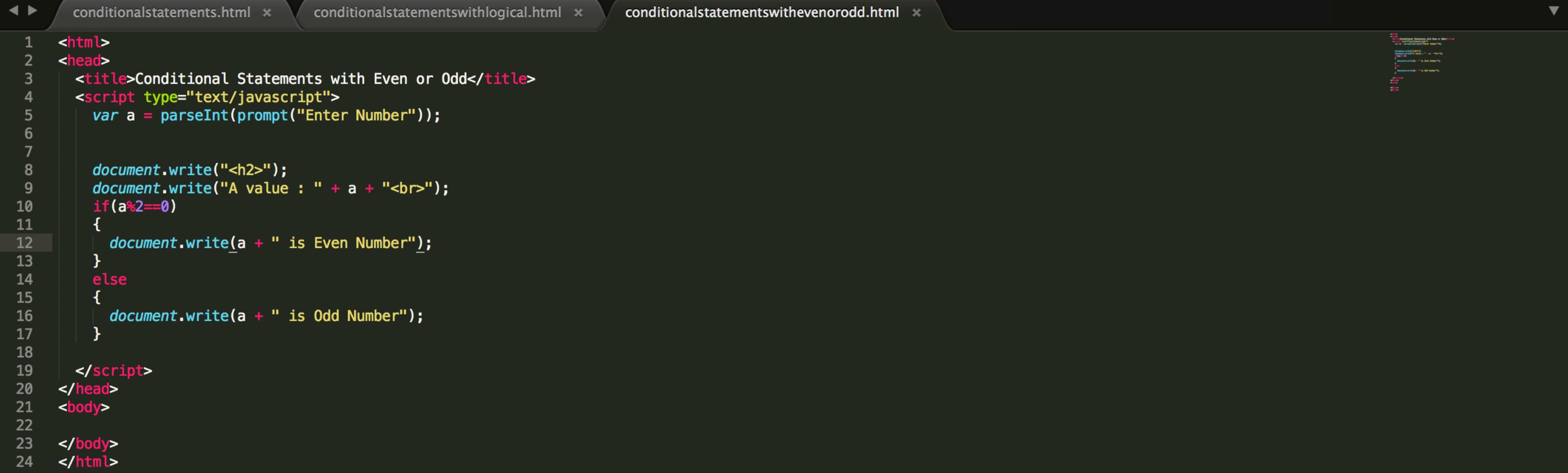
</body>
</html>
```

```
1 <html>
2 ▼ <head>
3     <title>Conditional Statements</title>
4 ▼ <script type="text/javascript">
5     var a = parseInt(prompt("Enter Number"));
6     var b = parseInt(prompt("Enter Number"));
7
8     document.write("<h2>");
9     document.write("A value : " + a + "<br>");
10    document.write("B value : " + b + "<br>");
11    if(a == b){
12        document.write("Both are equals");
13    }
14    else
15    {
16        if(a > b){
17            document.write("A value is Bigger");
18        }
19        else{
20            document.write("B value is Bigger");
21        }
22    }
23
24    </script>
25 </head>
26 <body>
27
28 </body>
29 </html>
```

```
1 <html>
2 <head>
3     <title>Conditional Statements</title>
4     <script type="text/javascript">
5         var a = parseInt(prompt("Enter Number"));
6         var b = parseInt(prompt("Enter Number"));
7         var c = parseInt(prompt("Enter Number"));
8
9         document.write("<h2>");
10        document.write("A value : " + a + "<br>");
11        document.write("B value : " + b + "<br>");
12        document.write("C value : " + c + "<br>");
13        if(a == b)
14        {
15            if(a==c)
16            {
17                document.write("All are same");
18            }
19        }
20    }
21
22    else
23    {
24        if(a > b)
25        {
26            if(a>c)
27            {
28                document.write("A value is Bigger");
29            }
30            else
31            {
32                document.write("C value is Bigger");
33            }
34        }
35        else
36        {
37            if(b>c)
38                document.write("B value is Bigger");
39            else
40                document.write("C value is Big");
41        }
42    }
43
44}
45
46    </script>
47</head>
48<body>
49
50</body>
51</html>
```

```
conditionalstatements.html * conditionalstatementswithlogical.html *
1 <html>
2 <head>
3     <title>Conditional Statements with logical</title>
4     <script type="text/javascript">
5         var a = parseInt(prompt("Enter Number"));
6         var b = parseInt(prompt("Enter Number"));
7         var c = parseInt(prompt("Enter Number"));
8
9         document.write("<h2>");
10        document.write("A value : " + a + "<br>");
11        document.write("B value : " + b + "<br>");
12        document.write("C value : " + c + "<br>");
13
14        if(a==b && a==c)
15        {
16            document.write("All are same");
17        }
18        else
19        {
20            if(a>b && a>c)
21            {
22                document.write("A is Bigger");
23            }
24            else
25            {
26                if(b>c)
27                    document.write("B is Bigger");
28                else
29                    document.write("C is Bigger");
30            }
31        }
32    </script>
33 </head>
34 <body>
35
36 </body>
37 </html>
```

```
conditionalstatements.html * conditionalstatementswithlogical.html * conditionalstatementswithevenorodd.html *
1 <html>
2 <head>
3   <title>Conditional Statements with Even or Odd</title>
4   <script type="text/javascript">
5     var a = parseInt(prompt("Enter Number"));
6
7
8   document.write("<h2>");
9   document.write("A value : " + a + "<br>");
10  if(a%2==0)
11  {
12    document.write(a + " is Even Number");
13  }
14  else
15  {
16    document.write(a + " is Odd Number");
17  }
18
19  </script>
20 </head>
21 <body>
22
23 </body>
24 </html>
```



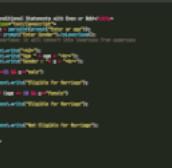
```
< ◀ ▶ conditionalstatementswithnegativeorpositive.html *>

1 <html>
2 <head>
3   <title>Conditional Statements with Even or Odd</title>
4   <script type="text/javascript">
5     var a = parseInt(prompt("Enter Number"));
6
7
8   document.write("<h2>");
9   document.write("A value : " + a + "<br>");
10  if(a>0)
11  {
12    document.write("A is +ve Number");
13  }
14  else
15  {
16    if(a<0)
17    {
18      document.write("A is -ve Number");
19    }
20  else
21  {
22    document.write("A is ZERO");
23  }
24
25  }
26
27 </script>
28 </head>
29 <body>
30
31 </body>
32 </html>
```



genderandmarrage.html *

```
1 <html>
2 <head>
3   <title>Conditional Statements with Even or Odd</title>
4   <script type="text/javascript">
5     var age = parseInt(prompt("Enter ur age"));
6     var g = prompt("Enter Gender").toLowerCase();
7     // toLowerCase: it will convert into lowercase from uppercase
8
9     document.write("<h2>");
10    document.write("Age " + age + "<br>");
11    document.write("Gender : " + g + "<br>");
12
13    if(age>=21 && g=="male")
14    {
15      document.write("Eligible for Marriage");
16    }
17    else if (age >= 18 && g=="female")
18    {
19      document.write("Eligible for Marriage");
20    }
21    else
22    {
23      document.write("Not Eligible for Marriage");
24    }
25
26  </script>
27 </head>
28 <body>
29
30 </body>
31 </html>
```



```
<html>
<head>
<title>Conditional Statements with Even or Odd</title>
<script type="text/javascript">
    var sname = prompt("Enter ur name");
    var s1 = parseInt(prompt("Enter Subject1 Marks"));
    var s2 = parseInt(prompt("Enter Subject2 Marks"));
    var s3 = parseInt(prompt("Enter Subject3 Marks"));
    var s4 = parseInt(prompt("Enter Subject4 Marks"));
    var s5 = parseInt(prompt("Enter Subject5 Marks"));
    var s6 = parseInt(prompt("Enter Subject6 Marks"));

    var tot=s1+s2+s3+s4+s5+s6;

    var per=tot/6;

    document.write("<h2>");
    document.write("Student Name "+sname+ "<br>");
    document.write("Subject1 Marks : "+s1+"<br>");
    document.write("Subject2 Marks : "+s2+"<br>");
    document.write("Subject3 Marks : "+s3+"<br>");
    document.write("Subject4 Marks : "+s4+"<br>");
    document.write("Subject5 Marks : "+s5+"<br>");
    document.write("Subject6 Marks : "+s6+"<br>");
    document.write("Total Marks : "+tot+"<br>");
    document.write("Percentage : "+per+"<br>");

    if(s1<35 || s2<35 || s3<35 || s4<35 || s5<35 || s6<35)
    {
        document.write("<br>Failed<br>");
    }
    else
    {
        document.write("<br>Passed<br>");
        if(per>=85)
        {
            document.write("A+ Grade");
        }
        else if(per<85 && per>=65)
        {
            document.write("A Grade");
        }
        else if(per<65 && per>=50)
        {
            document.write("B Grade");
        }
        else
        {
            document.write("C Grade");
        }
    }
</script>
</head>
<body>
|</body>
</html>
```

```
1 Loops:-  
2 Repeated Execution of statements or group of statements we use loops  
3  
4 3 types of loops  
5  
6 1)while  
7 2)do while  
8 3)for  
9  
10 any loop will have 4 steps in common  
11 1) initialization  
12 | ex: i=1;  
13 2)condition checking  
14 3)statements  
15 4)updation(increment or decrement)  
16  
17 while loop syntax:-  
18  
19 initialization;  
20 while(condition)  
21 {  
22     statements;  
23     updation;  
24 }  
25 checks the condition, if condition is true statements will be executed and updation will be done after updation again it will check the condition if it is true again process continues  
26  
27 do while loop syntax:-  
28 initialization;  
29 do  
30 {  
31     statements;  
32     updation;  
33 }  
34 while(condition);  
35  
36 first initialization  
37 do block  
38 after do checks the condition if it is true continues otherwise stops  
39  
40
```

```
41 for loop syntax:-  
42  
43 for(initialization;condition;updation)  
44 {  
45     statements;  
46 }  
47  
48 Nested for loops:-  
49  
50 for loop inside another for loop  
51  
52 for(initialization;condition;updation)  
53 {  
54     for(initialization;condition;updation)  
55     {  
56         statements;  
57     }  
58     statements;  
59 }  
60 outer loop indicates rows  
61 Inner loop indicates columns  
62  
63 |
```

```
< > dowhileloops.html x whileloops.html x ▼  
1 <html>  
2 <head>  
3     <title>Conditional Statements with while loop</title>  
4     <script type="text/javascript">  
5     var i=1; //initialization.  
6     while(i<=5) //condition  
7     {  
8         document.write("<h2>Welcome</h2>"); //statements  
9         i++; // updation  
10    }  
11    </script>  
12  
13 </head>  
14 <body>  
15 </body>  
16 </html>
```

dowhileloops.html

```
1 <html>
2 <head>
3   <title>Conditional Statements with do while loop</title>
4   <script type="text/javascript">
5     var i=6; //initialization.
6     do
7     {
8       document.write("<h2>Welcome</h2>"); //statements
9       i++; // updation
10    }
11   while(i<=5); //condition
12   </script>
13
14 </head>
15 <body>
16 </body>
17 </html>
```

```
forloop.html * untitled ● ▲▼  
1 <html>  
2 <head>  
3   <title>Conditional Statements with for loop</title>  
4   <script type="text/javascript">  
5     var i; //declaration  
6  
7     for(i=0;i<=100;i++) // (initialization;condition;updation)  
8     {  
9       document.write(i+" &ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp");  
10    }  
11  </script>  
12 </head>  
13 <body>  
14 </body>  
15 </html>
```

```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i; //declaration
6     var count = 0;
7     for(i=1;i<=100;i++) // (initialization;condition;updation)
8     {
9       document.write(i+" &ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp");
10      count++;
11
12      if(count == 10)
13      {
14        document.write("<br>");
15        count=0;
16      }
17
18    }
19   </script>
20 </head>
21 <body>
22
23 </body>
24 </html>
```



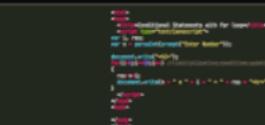
```
< > forloopsum.html ● ▼  
1 <html>  
2 <head>  
3   <title>Conditional Statements with for loop</title>  
4   <script type="text/javascript">  
5     var i, sum =0;  
6     var n = parseInt(prompt("Enter Number"));  
7  
8     document.write("<h2>");  
9     for(i=1;i<=n;i++) // (initialization; condition; updation)  
10    {  
11      sum+=i;  
12    }  
13    document.write("Sum of the numbers: "+sum);  
14  </script>  
15 </head>  
16 <body>  
17  
18 </body>  
19 </html>
```

```
< > forloopsum.html *
```

```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i, sum =0,esum =0,osum =0;
6     var n = parseInt(prompt("Enter Number"));
7
8     document.write("<h2>");
9     for(i=1;i<=n;i++) // (initialization;condition;updation)
10    {
11      sum+=i;
12      if(i%2==0)
13      {
14        esum+=i;
15      }
16      else
17      {
18        osum+=i
19      }
20    }
21    document.write("Sum of the numbers: "+sum + "<br>");
22    document.write("Even Numbers Sum: "+esum + "<br>");
23    document.write("Odd Numbers Sum: "+osum + "<br>");
24  </script>
25 </head>
26 <body>
27
28 </body>
29 </html>
```

forloopmultification.html *

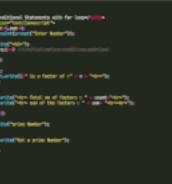
```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i, res;
6     var n = parseInt(prompt("Enter Number"));
7
8     document.write("<h2>");
9     for(i=1;i<=10;i++) // (initialization; condition; updation)
10    {
11      res=n*i;
12      document.write(n + " x " + i + " = " + res + "<br>");
13    }
14    </script>
15  </head>
16  <body>
17
18  </body>
19 </html>
```



```
< > forloopfactorials.html *
```

```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i, fact=1;
6     var n = parseInt(prompt("Enter Number"));
7
8     document.write("<h2>");
9     for(i=n;i>=1;i--) // (initialization; condition; updation)
10    {
11      fact*=i;
12    }
13    document.write("Factorial :" + fact+"<br>");
14  </script>
15 </head>
16 <body>
17
18 </body>
19 </html>
```

```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i, count=0,sum=0;
6     var n = parseInt(prompt("Enter Number"));
7
8     document.write("<h2>");
9     for(i=1;i<=n;i++) // (initialization;condition;updation)
10    {
11      if(n%i==0)
12      {
13        count++;
14        document.write(i+" is a factor of :" + n + "<br>");
15        sum+=i;
16      }
17    }
18    document.write("<br> Total no of factors : " + count+"<br>");
19    document.write("<br> sum of the factors : " + sum+ "<br><br>");
20
21    if (count==2)
22    {
23      document.write("prime Number");
24    }
25    else{
26      document.write("Not a prime Number");
27    }
28  </script>
29 </head>
30 <body>
31
32 </body>
33 </html>
```



< >

nestedforloop.html *

The screenshot shows a code editor window with the file 'nestedforloop.html' open. The code displays a nested for loop structure. The outer loop iterates from i=1 to i=5. For each iteration of the outer loop, the inner loop iterates from j=1 to j=i. The output is generated using document.write, resulting in a series of lines where each line contains the value of j followed by five spaces. The code editor interface includes a top bar with back and forward navigation buttons, a tab for the file, and a status bar at the bottom.

```
1 <html>
2 <head>
3   <title>Conditional Statements with for loop</title>
4   <script type="text/javascript">
5     var i, j;
6
7     for(i=1;i<=5;i++)
8     {
9       for(j=1;j<=i;j++)
10      {
11        document.write(j+" &ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp");
12      }
13      document.write("<br>");
14    }
15
16  </script>
17 </head>
18 <body>
19
20 </body>
21 </html>
```

Functions:-

I

Block of code which can be executed n no of times
They can be divided into 2 types

- 1) user defined functions
- 2) pre defined functions

Pre defined functions:-

- 1) string
- 2) Date
- 3) Math

functionsample.html *

```
1 <html>
2 <head>
3   <title>String Functions</title>
4   <script type="text/javascript">
5
6     var s1="welcome to the class";
7     document.write("<h2>");
8     document.write("String Length : "+ s1.length+"<br>");// including space
9     document.write("Character At : "+ s1.charAt(8)+"<br>");
10    document.write("Index of : "+ s1.indexOf("e")+"<br>");
11    document.write("Last Index of : "+s1.lastIndexOf("e")+"<br>");
12    document.write("Upper Case : "+s1.toUpperCase()+"<br>");
13    document.write("Lower Case : "+s1.toLowerCase()+"<br>");
14    document.write("Bold : "+s1.bold()+"<br>");
15    document.write("Italics : "+s1.italics()+"<br>");
16    document.write("Font Color : "+s1.fontcolor("red")+"<br>");
17    document.write("Font size : "+s1.fontSize("7")+"<br>");
18
19
20   </script>
21 </head>
22 <body>
23
24 </body>
25 </html>
```



```
< datefunction.html *>

1 <html>
2 <head>
3     <title>Date Functions</title>
4     <script type="text/javascript">
5         var d1=new Date;
6         document.write(d1 +"<br>");
7         document.write("Date : "+d1.getDate()+"<br>");
8         document.write("Day : "+d1.getDay()+"<br>");
9         document.write("Year : "+d1.getFullYear()+"<br>");
10        document.write("Hours : "+d1.getHours()+"<br>");
11
12        var t1=d1.getHours();
13        if(t1<12)
14        {
15            document.write("<h2>Good Moring</h2>");
16        }
17        else if(t1>=12 && t1<16)
18        {
19            document.write("<h2>Good Afternoon</h2>");
20        }
21        else if(t1>=16 && t1<19)
22        {
23            document.write("<h2>Good Evening</h2>");
24        }
25        else
26        {
27            document.write("<h2>Good Night</h2>");
28        }
29    </script>
30 </head>
31 <body>
32
33 </body>
34 </html>
```

```
mathfunction.html  x
```

```
1 <html>
2 <head>
3   <title>Math Functions</title>
4   <script type="text/javascript">
5     document.write("Pi value : "+Math.PI+"<br>");
6     document.write("Square root of 2 : "+Math.SQRT2+"<br>");
7     document.write("Absolute value : " +Math.abs(-80)+"<br>"); // it will convert into positive value from negative value.
8     document.write("Ceil value : "+Math.ceil(15.66)+"<br>"); // it will make it to the next number .
9     document.write("Floor Value : "+Math.floor(15.66)+"<br>"); // it will make it bellow number.
10    document.write(" Round off : "+Math.round(12.3)+"<br>"); // it will make nearest number.
11    document.write("Maximum Value : "+Math.max(10,5,6,8,9,12,15,4)+"<br>");
12    document.write("Minimum Value : "+Math.min(10,5,6,8,9,12,15,4)+"<br>");
13    document.write("Power Value : "+Math.pow(2,5)+"<br>");
14  </script>
15 </head>
16 <body>
17
18 </body>
19 </html>
```

```
<html>
<head>
<title>Functions</title>
<script type="text/javascript">
```

User Defined functions:-

```
function functionname(arguments)
{
statements;
return value;
}
```

arguments ==>parameters ==>variable which we take in functions
return ==>it is used to return some value from the function|

```
</script>
</head>
<body>
</body>
```

```
< > userdefinefunction.html *
```

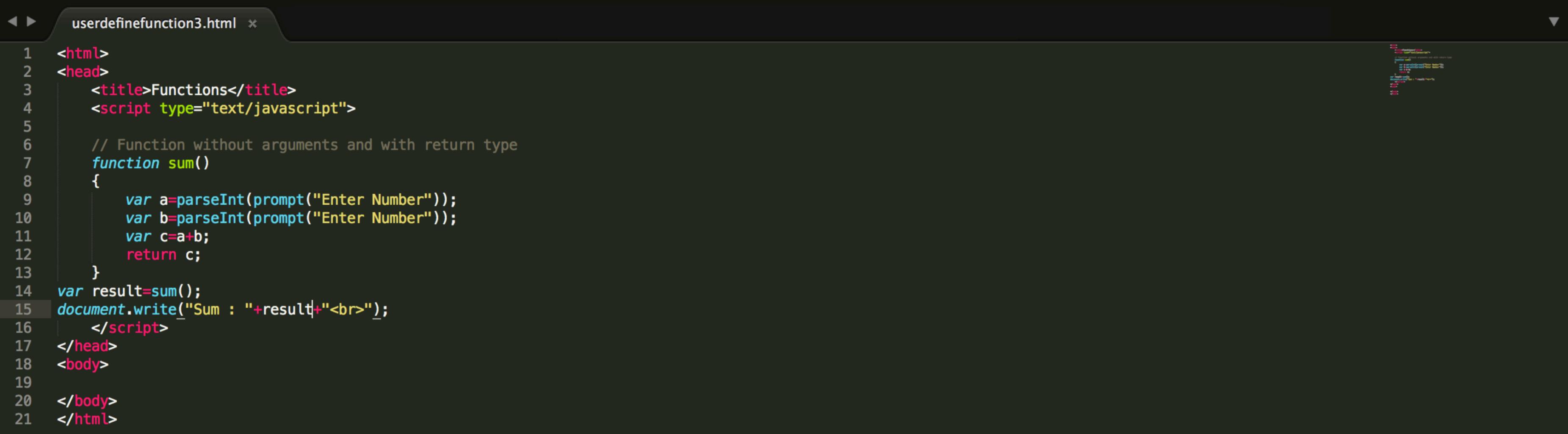
```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5
6     // Function without arguments and without return type
7     function display()
8     {
9         document.write("<h2>welcome</h2>");
10    }
11    display();
12    display();
13    display();
14    display();
15
16    </script>
17 </head>
18 <body>
19
20 </body>
21 </html>
```

```
< > userdefinefunction2.html *
```

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5
6         // Function with arguments and without return type
7         function add(a,b)
8     {
9         var c=a+b;
10        document.write("<h2>Addition : "+c+"<br>");
11    }
12    add(50,40);
13    add(80,70);
14    add(250,150);
15    </script>
16 </head>
17 <body>
18
19 </body>
20 </html>
```

< > userdefinefunction3.html *

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5
6     // Function without arguments and with return type
7     function sum()
8     {
9         var a=parseInt(prompt("Enter Number"));
10        var b=parseInt(prompt("Enter Number"));
11        var c=a+b;
12        return c;
13    }
14    var result=sum();
15    document.write("Sum : "+result+"  
");
16    </script>
17 </head>
18 <body>
19
20 </body>
21 </html>
```



```
userdefinefunction4.html ✘
```

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5
6     // Function with arguments and with return type
7     function total(a,b)
8     {
9         var c=a+b;
10        return c;
11    }
12 var result=total(70,80);
13 document.write("<h2>Addition : "+result+"<br>");
14 document.write("<h2>Addition : "+total(150,80)+"<br>");
15     </script>
16 </head>
17 <body>
18
19 </body>
20 </html>
```

◀ ▶ userdefinenestedfunction5.html ●

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5 // Nested Function(function calling another function)
6     function display(a,b)
7     {
8         document.write("<h2>I am from Display</h2>");
9         show();
10    }
11
12    function show()
13    {
14        document.write("<h2>I am from show</h2>");
15        hello();
16    }
17    function hello()
18    {
19        document.write("<h2>I am from hello</h2>");
20    }
21    display();
22 </script>
23 </head>
24 <body>
25
26 </body>
27 </html>
```

```
1 Action or Events
2
3 Mouse Events:-_
4
5 onclick()
6 ondblclick()
7 onmouseover()
8 onmouseout()
9 onmousedown()
10
11 Key board Events:-|
12
13 onkeypress()
14 onkeyup()
15 onkeydown()
16
17 <body> tag ==> onload()
18
19 <form> tag ==> onsubmit()
20
21 textboxes,textarea ==> keyboard events, onfocus(),onblur()
22
23 <select> tag ==> onchange()
```

Action or Events
Mouse Events:
onload()
ondblclick()
onmouseover()
onmouseout()
onmousedown()
onmouseup()
onmousemove() ==> mouse events, onmousedown(),onmouseup()
onmousemove() ==> mouse events

```
userdefinenestedfunction5.html • // syntax for popup Ads creation  
1 // syntax for popup Ads creation  
2  
3 Popup Ads Creation  
4  
5 window.open("path","windowname","Parameters");  
6  
7 path ==> path of the ad  
8 windowname ==> some window name  
9 parameters ==> height,width,scrollbar ==>1/0
```

◀ ▶

popupadd.html

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5
6         function show()
7     {
8         var r=confirm("Do u want to see Ad");
9         if(r==true)
10            window.open("http://www.google.com","w1","width=350,height=250,scrollbar=0");
11        else
12            alert("Pressed Cancel Button");
13    }
14 </script>
15 </head>
16 <body>
17
18 <button onclick="show();">
19     CLICK HERE
20 </button>
21
22 </body>
23 </html>
```



The screenshot shows a code editor interface with a tab labeled 'popupadd.html'. The main area displays the following HTML and JavaScript code:

```
<html>
<head>
    <title>Functions</title>
    <script type="text/javascript">
function show()
{
    var r=confirm("Do u want to see Ad");
    if(r==true)
        window.open("http://www.google.com","w1","width=350,height=250,scrollbar=0");
    else
        alert("Pressed Cancel Button");
}
</script>
</head>
<body>
<button onclick="show();">
    CLICK HERE
</button>
</body>
</html>
```

The code includes a confirmation dialog ('Do u want to see Ad') that, if accepted, opens a new window with Google's homepage. If rejected, it shows an alert message. A button in the body triggers this function.

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5 // we have implemented only for addition
6     function add()
7     {
8         var a=parseInt(f1.t1.value);
9         var b=parseInt(f1.t2.value);
10        var c=a+b;
11        document.getElementById("sample").innerHTML="Addition : " + c;
12    }
13
14    </script>
15 </head>
16 <body>
17
18 <form name="f1">
19 <table align="center">
20 <tr>
21 <td>Enter number</td>
22 <td><input type="text" name="t1" size=10></td>
23 </tr>
24 <tr>
25 <td>Enter number</td>
26 <td><input type="text" name="t2" size=10></td>
27 </tr>
28
29 <tr>
30 <td colspan=2 align="center">
31 <input type="button" name="b1" value="Addition" onclick="add();">
32 <input type="button" name="b2" value="Minus">
33 <input type="button" name="b3" value="Multiply">
34 <input type="button" name="b4" value="Division">
35 </td>
36 </tr>
37 </table>
38 </form>
39 <div id="sample" style="text-align: center;font-size: 28px;color:blue">
40 </div>
41 </body>
42 </html>
```

```
1 <html>
2 <head>
3     <title>Functions</title>
4     <script type="text/javascript">
5 // we have implemented for addition,minus,Multipication,Division
6     function add()
7     {
8         var a=parseInt(f1.t1.value);
9         var b=parseInt(f1.t2.value);
10        var c=a+b;
11        document.getElementById("sample").innerHTML="Addition : " + c;
12    }
13
14    function sub()
15    {
16        var a=parseInt(f1.t1.value);
17        var b=parseInt(f1.t2.value);
18        var c=a-b;
19        document.getElementById("sample").innerHTML="Subtraction : " + c;
20    }
21
22    function mul()
23    {
24        var a=parseInt(f1.t1.value);
25        var b=parseInt(f1.t2.value);
26        var c=a*b;
27        document.getElementById("sample").innerHTML="Multipication : " + c;
28    }
29
30    function div()
31    {
32        var a=parseInt(f1.t1.value);
33        var b=parseInt(f1.t2.value);
34        var c=a/b;
35        document.getElementById("sample").innerHTML="Division : " + c;
36    }
37
38    </script>
39 </head>
```

```
40 <body>
41
42 <form name="f1">
43 <table align="center">
44 <tr>
45 <td>Enter number</td>
46 <td><input type="text" name="t1" size=10></td>
47 </tr>
48 <tr>
49 <td>Enter number</td>
50 <td><input type="text" name="t2" size=10></td>
51 </tr>
52
53 <tr>
54 <td colspan=2 align="center">
55 <input type="button" name="b1" value="Addition" onclick="add();">
56 <input type="button" name="b2" value="Minus" onclick="sub();">
57 <input type="button" name="b3" value="Multiply" onclick="mul();">
58 <input type="button" name="b4" value="Division" onclick="div();">
59 </td>
60 </tr>
61 </table>
62 </form>
63 <div id="sample" style="text-align: center; font-size: 28px; color: blue">
64 </div>
65 </body>
66 </html>
67
68
```

```
1 <html>
2 <head>
3     <title>Forms</title>
4     <script type="text/javascript">
5         function total()
6     {
7         var ch=f1.courses.selectedIndex;
8         if(ch==0)
9             f1.tfee.value="";
10        if(ch==1)
11            f1.tfee.value=2500;
12        if(ch==2)
13            f1.tfee.value=3500;
14        if(ch==3)
15            f1.tfee.value=4000;
16        if(ch==4)
17            f1.tfee.value=12500;
18        if(ch==5)
19            f1.tfee.value=8500;
20    }
21
22    function conc(i)
23    {
24        if(i==1)
25            f1.cfee.value=300;
26        if(i==2)
27            f1.cfee.value=400;
28        if(i==3)
29            f1.cfee.value=500;
30        if(i==4)
31            f1.cfee.value=600;
32    }
33
34    function due()
35    {
36        var total=parseInt(f1.tfee.value);
37        var dis=parseInt(f1.cfee.value);
38        var paid=parseInt(f1.pfee.value);
39        var due=total-(dis+paid);
40        if(due>=0)
41        {
42            f1.dfee.value=due;
43        }
44        else
45        {
46            alert("Invalid Amount");
47        }
48    }
49
50     </script>
51 </head>
52
```



```
54 <body>
55
56 <form name="f1">
57 <table align="center">
58 <tr>
59   <td>Course</td>
60   <td>
61     <select name="courses" onchange="total();">
62       <option> -----select-----
63       <option>MS-OFFICE
64       <option>Accounts
65       <option>DTP
66       <option>Multimedia
67       <option>Web Designing
68     </select></td>
69 </tr>
70
71 <tr>
72   <td>Total Fee</td>
73   <td><input type="text" name="tfee" readonly></td>
74 </tr>
75 <tr>
76   <td>Caste</td>
77   <td><input type="radio" name="r1" onclick="conc(1);">OC
78   <input type="radio" name="r1" onclick="conc(2);">BC
79   <input type="radio" name="r1" onclick="conc(3);">SC
80   <input type="radio" name="r1" onclick="conc(4);">ST
81 </tr>
82 <tr>
83   <td>Concession Fee</td>
84   <td><input type="text" name="cfee" readonly></td>
85 </tr>
86 <tr>
87   <td>Paid Fee</td>
88   <td><input type="text" name="pfee"></td>
89 </tr>
90 <tr>
91   <td>Due Fee</td>
92   <td><input type="text" name="dfee" readonly></td>
93 </tr>
94 <tr>
95   <td colspan=2 align="center">
96     <input type="button" name="b1" value="Calculate" onclick="due();">
97   </td>
98 </tr>
99 </table>
100 </form>
101
102 </body>
103 </html>
104
105
```

```
1 <html>
2 <head>
3     <title>Forms</title>
4     <script type="text/javascript">
5         function validate()
6     {
7         var uid=f1.t1.value;
8         var pass=f1.t2.value;
9         var cpass=f1.t3.value;
10        var email=f1.t4.value;
11        var atpos=email.indexOf("@");
12        var dotpos=email.lastIndexOf(".");
13        var add=f1.t6.selectedIndex;
14        var mno=f1.t7.value;
15
16        if(uid.length==0 || uid==" ")
17        {
18            alert("Please Enter username");
19            return false;
20        }
21        else if(pass.length==0 || pass==" ")
22        {
23            alert("Please Enter password");
24            return false;
25        }
26        else if(cpass.length==0 || cpass==" ")
27        {
28            alert("Please Enter Confirm password");
29            return false;
30        }
31        else if(pass!=cpass)
32        {
33            alert("Both Passwords should be Same");
34            return false;
35        }
36        else if(email.length==0 || email==" ")
37        {
38            alert("Please Enter Email Id");
39            return false;
40        }
41        else if(atpos<1 || (dotpos-atpos)<=2)
42        {
43            alert("Invalid Email Id");
44            return false;
45        }
46        else if(add.length==0 || add==" ")
47        {
48            alert("Please Enter address");
49            return false;
50        }
51        else if(city==0)
52        {
53            alert("Please select any city");
54            return false;
55        }

```



```
56     else if(mno.length != 10)
57     {
58         alert("Invalid Mobile No");
59         return false;
60     }
61     else
62     {
63         return true;
64     }
65 }
66 </script>
67 </head>
68
69 <body>
70
71 <form name="f1" onsubmit="return validate();" action="success.html">
72 <table align="center">
73 <tr>
74     <td>User Name</td>
75     <td><input type="text" name="t1"></td>
76 </tr>
77 <tr>
78     <td>Password</td>
79     <td><input type="password" name="t2"></td>
80 </tr>
81 <tr>
82     <td>Confirm Password</td>
83     <td><input type="password" name="t3"></td>
84 </tr>
85 <tr>
86     <td>Email Id</td>
87     <td><input type="text" name="t4"></td>
88 </tr>
89 <tr>
90     <td>Address</td>
91     <td><textarea name="t5" rows=5 cols=20></textarea>
92 </tr>
93 <tr>
94     <td>City</td>
95     <td><select name="t6">
96         <option>----select-----
97         <option>Hyderabad
98         <option>Chennai
99         <option>Mumbai
100        </select> </td>
101    </tr>
102    <tr>
103        <td>Mobile</td>
104        <td><input type="text" name="t7"></td>
105    </tr>
106    <tr>
107        <td colspan=2 align="center">
108            <input type="submit" name="b1" value="Register">
109        </td>
```

