

~~CAT-2~~
CSS link style

03/09/25.

<html>

<head>

<styles>

/* unvisited link */

a:link {

color: red;

}

/* visited link */

a:visited {

color: green;

}

/* mouse over link */

a:hover {

color: orange;

}

/* selected link */

a:active {

color: blue;

}

</style>

</head>

</body>

<p>
click me </p>

</body>

</html>

Rules

a: hover MUST come after a: link and a: visited.
a: active MUST come after a: hover.

②

```
<html>
<head>
<style>
.one {
    background-color: pink;
    text-align: center;
```

```
}
```

```
.one li
```

```
{
    display: inline;
    font-size: 20px;
    margin-right: 20px;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<ul class="one">
```

```
    <li><a href="#home"> Home </a></li>
    <li><a href="#about"> About us </a></li>
    <li><a href="#clients"> Our clients </a></li>
    <li><a href="#contact"> Contact us </a></li>
```

```
</ul>
```

```
</body>
```

```
</html>
```

O/P: Home About us Our clients Contact Us.

i) <style>

table {

border: 2px solid blue;

}

</style>

Fruits	
Apple	Red
Banana	Yellow

ii) <style>

table, th, td {

{

border: 2px solid blue;

}

th, thd

{

border: 3px dotted red;

}

Fruits	
Apple	Red
Banana	Yellow

iii) <style>

table, th, td {

{

border: 2px solid blue;

border-collapse: collapse;

width: 50%;

}

th {

height: 70px;

}

td {

height: 50px;

text-align: center;

vertical-align: bottom;

Fruits	color
Apple	Red
Banana	Yellow

Practice

<style>

table th, td

{ border: 2px solid blue;

border-collapse: collapse;

width: 50%;

padding: 25px;

th, td

}

th {

background-color: tomato;

height: 70px

color: white;

}

td {

height: 50px;

text-align: center;

}

</style>

9) <style>

table

{

border-collapse: collapse;

width: 50%;

padding: 25px;

}

th, td

{

red bg

Fruits	color
Apple	Red
Banana	Yellow.

```
text-align: left;  
height: 30px;  
border-bottom: 3px solid red;  
}  
tr:hover {  
background-color: coral;  
}  
</style>
```

Stripped tables

```
<style>  
table {  
border-collapse: collapse;  
width: 50%;  
padding: 25px;  
}  
th, td {  
text-align: left;  
height: 30px;  
border-bottom: 3px solid red;  
}  
tr:nth-child(odd) { background-color: lightgreen; }  
</style>
```

Responsive table

`<div style="overflow-x:auto;">`
`<table>`

⇒ display horizontal scroll bar.

Practice

Output:

Placeholder Text		
Placeholder Text		Placeholder
Placeholder		Placeholder
Placeholder	Placeholder	Placeholder
Placeholder	Placeholder	Placeholder
Placeholder	Placeholder	Placeholder
Total		Placeholder

Code:

```

<html>
<body>
<table>
<tr>
  <th colspan="3">Placeholder Text </th>
</tr>
<tr>
  <th rowspan="2">Placeholder Text </th>
  <th colspan="2">Placeholder Text </th>
</tr>
<tr>
  <th colspan="2">Placeholder Text </th>
</tr>

```

<tr>

<th> Placeholder </th>

<th> Placeholder </th>

</tr>

<tr>

<td> asdf </td>

<td> asdf </td>

<td> asdf </td>

</tr>

<tr>

<td> Total </td>

<td colspan="2"> asdf </td>

</tr>

</table>

</body>

</html>

05/02/85.

CSS lists

<html>

<head>

<style>

body {

background-color: coral;

}

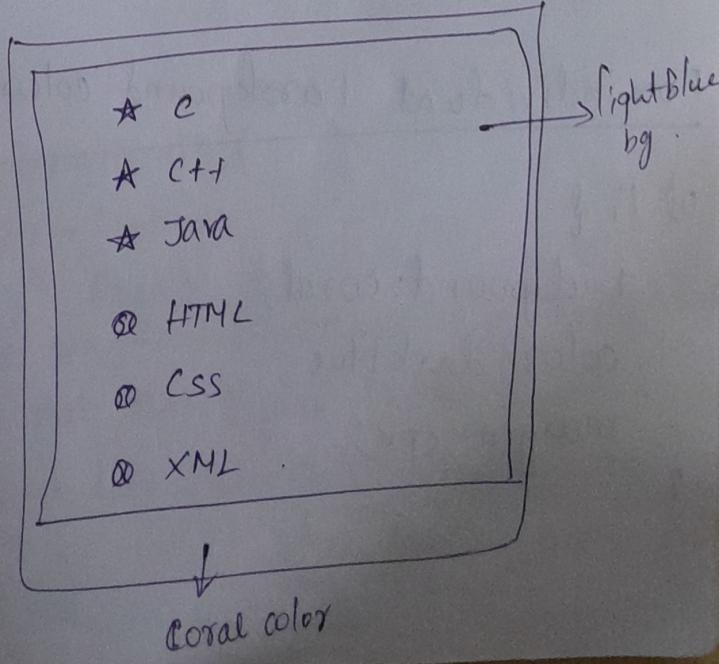
#myDN {

height: 200px;

background-color: lightblue;

```
.one {  
list-style-image: url('star.gif');  
}  
.two {  
list-style-image: url('ball.gif');  
}  
  
</styles>  
</heads>  
<body>  
<div id = "myDIV">  
<ul class = "one">  
<li>C</li>  
<li>C++</li>  
<li>Java </li>  
</ul>  
<ul class = "two">  
<li>HTML </li>  
<li>CSS </li>  
<li>XML </li>  
</ul>  
</div>  
</body>  
</html>
```

Output:



Prog - 2

```
<style  
&body{  
    background-color: coral;  
}  
  
#myDiv{  
    height: 300px;  
    background-color: lightblue;  
}  
  
.one {  
    list-style-type: decimal;  
}  
  
.three {  
    list-style-type: lower-roman;  
}  
  
.two {  
    list-style-type: lower-alpha;  
}
```

For individual background color for list:

```
ul li {  
    background: coral;  
    color: darkblue;  
    margin: 5px;  
}
```

Javascript → used for actions & reaction for the webpage

Program: Method 1

```
<html>
<body>
<script language = "javascript" type = "text/javascript">
    document.write("Hello world!");
</script>
</body>
</html>
```

Method 2: External

```
<script type = "text/javascript" src = "xxx.js"></script>
```

Variable declaration

let x = 5;
let y = 6

```
<script type = "text/javascript">
let money;
let name;
```

let lastname = "Roe", age = 30, job = "carpenter";

```
</script>
```

(case sensitive)

const x = 5;

const y = 6;

const z = x + y;

(fixed can't change)

Datatypes

- * Number → let length = 16;
- * String → let color = "yellow";
- * Booleans → let x = true;
- * Object → const person = {firstName: "john", lastName: "doe"};
- * Array object → const cars = ["saab", "volvo"]
- * Date object → const date = new Date ("2022-03-25")

JS Data type:

// Numbers

let length = 16;

let weight = 7.5;

// string

// Booleans

// Object

// Array object

// Date object

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Operators:

- i) Arithmetic operators: +, -, *, /, %, ++, --
- ii) Assigned operators: =, +=, -=, *=, /=, %=
- iii) Comparison operators: ==, !=, >>, <<, <=, >=
- iv) Logical operators: &&, ||, !
- v) Conditional operator: ? :

+ operation

txt1 = "what this obj";

txt2 = " nice day";

txt3 = "txt1" + "txt2";

==> value should be same and datatype also

e.g:

x === "5" \Rightarrow false

Condition Breaking:

- i) If statement
- ii) if-else statement
- iii) Switch statement

Conditional looping:

- for statement
- while statement
- do while statement

Code:

```
<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>
```

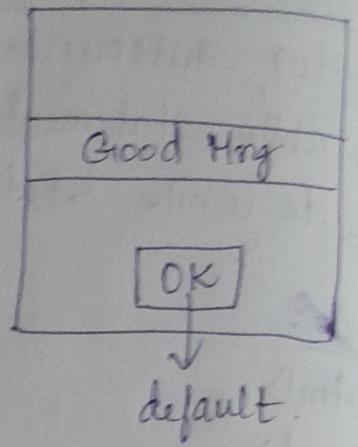
Popup Boxes

It has three kind.

- 1) Alert Box.
- 2) Confirm Box.
- 3) Prompt Box.

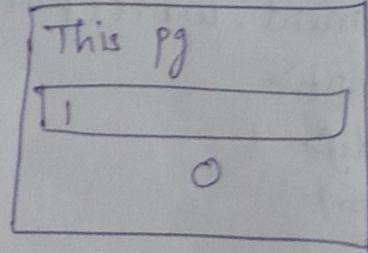
① Alert Box

```
<html>
<head> </head>
<body>
<h1> VIT </h1>
<script type = "text / Javascript">
    alert (" Good Mrg!")
</script> </body>
</html>
```



② Prompt box:

```
<html>
<head> </head>
<body>
<h1> VIT </h1>
<script>
    x = Prompt ("Enter your name", " ")
    alert ("Good mrg "+x)
</script>
</body>
</html>
```



③ Confirm Box

```
<html>
<head> </head>
<body>
<h1> VIT </h1>
<script>
    x = confirm ("Are you sure")
</script>
</body>
</html>
```

08/08/25.

Practice

I) Write a java script program using two user defined function (i) factorial ii) factors)

Code :

```
function factorial(n){
```

```
    let fact = 1;
```

```
    for (let i=1; i<=n; i++) {
```

```
        fact *= i;
```

```
}
```

```
    return fact;
```

```
{
```

```
function factors(n){
```

```
    let factorList = [];
```

```
    for (let i=1; i<=n; i++) {
```

```
        if (n % i == 0) {
```

```
            factorList.push(i);
```

```
}
```

```
}
```

```
    return factorList;
```

```
{
```

```
let num=5;
```

```
console.log("Factorial of ", num, "is: ", factorial(num));
```

```
console.log("Factors of ", num, "are: ", factors(num));
```

12/2/25

Searching through an array

<body>

<script>

```
var fruits = ["apple", "Banana", "Mango", "orange",  
             "papaya", "Apple"];
```

```
doc.write(fruits, index of ("Apple") + "<br>");
```

```
doc.write(fruits, index of ("Banana") + "<br>");
```

```
doc.write(fruits, index of ("Apple") + "<br>");
```

```
doc.write(fruits, index of ("Pineapple") + "<br>");
```

Ques 0 1 5 - 1

includes() → allows to check if an element is present in an array or not, returns boolean value.

<script>

```
let fruits = [1, 2, 3, 4, 5];
```

```
doc.write(fruits, includes ("mango") + "<br>");
```

```
doc.write(fruits, includes (5));
```

Splicing and slicing arrays:

→ Adding or Removing element at any position
→ The splice() methods adds new item in array

→ The slice() method slice out a piece of an array.

< script >

```
let fruit = ["Banana", "orange", "Apple", "Mango"];
doc.write ((fruit) + "<br>");
doc.write (fruit.splice(1) + "<br>");
let fruitsnew = ["Banana", "orange", "Apple", "Mango"];
document.write ((removed) + "<br>");
let removed = fruitsnew.splice(1, 3, "lemon", "kiwi");
doc.write (fruitsnew);
```

O/P:

B, O, A, M

O, A, M

O, A, M

B, C, K

slice:

< script >

```
let fruits = ["B", "O", "L", "A", "M"];
```

```
let x = fruit.slice[1] + "<br>";
```

```
doc.write (x);
```

```
let y = fruit.slice(1, 4);
```

```
doc.write (y);
```

</ script >

O, L, A, M

O, L, A

Javascript strings:

at
charAt (Position)
charCodeAt

<script>

```
let name = "have a nice day";
```

```
let letter = name.charAt(2);
```

```
doc.write((letter) + '<br>');
```

```
let l = name.charAt(-5);
```

```
doc.write((l) + '<br>');
```

```
doc.write(name.charCodeAt(l));
```

O/P:

v
e

97

</script>

Javascript string methods:

i) slice(start, end)

ii) Substring (start, end)

iii) substr (start, length)

<script>

```
let str = "A", "B", "k";
```

```
doc.write(str.slice(1-12, -6));
```

</script>

Slice (start, end)

<script>

```
let str = "AppleBananaKiwi";
```

```
document.write(str.slice(7, 13));
```

O/P:

nanaki;

</script>

```
<script>
```

```
let str = "Apple, Banana, kiwi";  
document.write(str.slice(-12, -6));
```

```
</script>
```

```
<html>
```

```
<body>
```

```
<script>
```

```
let str = "Apple, Banana, kiwi";  
document.write(str.substring(7, 11) + "<br>");
```

```
let str1 = "ABSDFFksks1";
```

```
doc.write(str1.toLowerCase() + "<br>");
```

```
let str2 = "Aa ssdfsdfgh1";
```

```
doc.write(str2.toUpperCase() + "<br>");
```

```
let str3 = "smile always";
```

```
doc.write(str3.substring(2, 5));
```

```
</script>
```

```
</body>
```

```
</html>
```

Finding greatest among 3 numbers using prompt
and alert Box

```
<html>
<body>
<script>
const num1 = parseFloat(prompt("Enter First number"));
const num2 = parseFloat(prompt("Enter second number"));
const num3 = parseFloat(prompt("Enter third number"));

let largest;

if (num1 >= num2 && num1 >= num3) {
    largest = num1;
}

else if (num2 >= num1 && num2 >= num3) {
    largest = num2;
}

else {
    largest = num3;
}

alert("Largest number");
```

</script>

</body>

html

</>

Sum of individual digits:

```
<html>
<body>
<script>
let num = 123 4, rem, sum = 0;
while (num)
{
    rem = num % 10;
    sum = sum + rem;
    num = math.floor(num/10);
}
document
de.write (sum);
</script>
</body>
</html>
```

Palindrome or not.

```
let a = 121, sum = 0, b, z = a;
while (a > 0)
{
    b = a % 10;
    sum = sum * a + b;
    a = parentInt (a / 10);
```

```
console.log(sum);
if (z == sum) {
    alert("Palindrome number:");
}
else {
    alert("not");
}
```

Factorial:

```
<html>
<body>
<script>
let fact = 1;
let i;
const n = parseInt(prompt("Enter number:"));
for (i=1; i <= n; i++)
{
    fact = fact * i;
}
alert("Factorial of num is:" + fact);
</script>
</body>
</html>
```

15/02/25

Java DOM → document object model

① Eg for getElementById.

```
<html>
```

```
<body>
```

```
<h2> JavaScript can change HTML </h2>
```

```
<p id = "p1"> Hello world! </p>
```

```
<script>
```

```
document. getElementById ("p1"). innerHTML = "New  
text!" ;
```

```
</script>
```

```
<p>The paragraph above was changed by a  
script. </p>
```

```
</body>
```

```
</html>
```

② Eg for array

```
<html>
```

```
<body>
```

```
<p id = "demo"></p>
```

```
<script>
```

```
var fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
document. getElementById ("demo"). innerHTML = fruits;
```

```
</script>
```

```
</body>
```

```
</html>
```

③ Output :

```
<html>
<head>
<title> Add Two Numbers using Textboxes </title>
</head>
<body>
<input type="text" id="number1" placeholder="Enter first
number">
<input type="text" id="number2" placeholder="Enter
second number">
<button onclick="addNumbers()"> calculate sum </button>
<p id="result"></p>
<script>
    function addNumbers()
{
    let num1 = parseFloat(document.getElementById('number1').value);
    let num2 = parseFloat(document.getElementById('number2').value);
    if (isNaN(num1) || isNaN(num2))
    {
        document.getElementById('result').innerHTML = 'Please
enter valid numbers';
        return;
    }
}
```

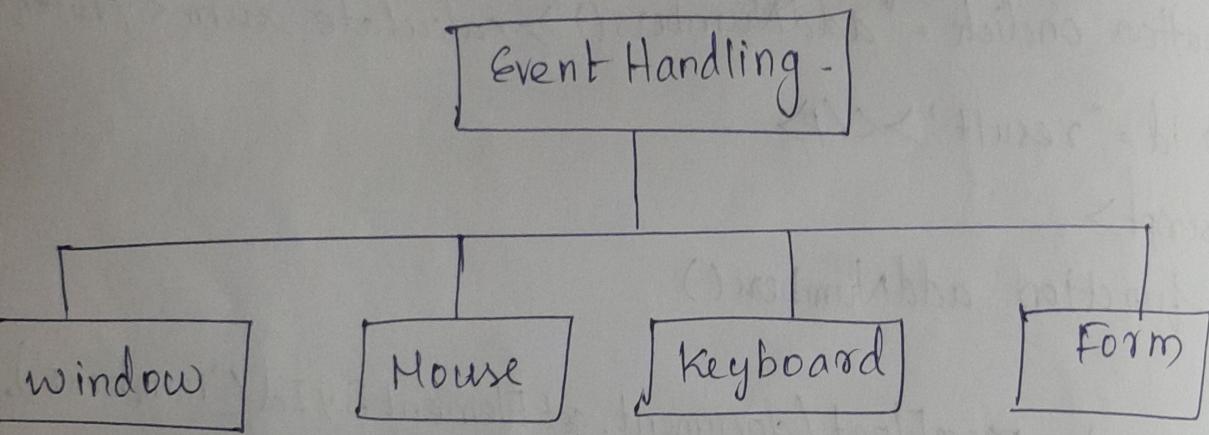
Q In javascript NaN is short for "Not a number". The isNaN() method returns true if a value is NaN.

```
let sum = num1 + num2;  
document.getElementById('result').innerHTML  
= 'The sum is : ' + sum;
```

{

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

Event handling categories:



17/02/25.

Practice

First Number: Second Number: Sum =

```
<html>
<head>
<script>
    function add()
    {
        let num1, num2, sum;
        num1 = parseInt(document.getElementById("first
            number").value);
        num2 = parseInt(document.getElementById("second
            number").value);
        sum = num1 + num2;
        document.getElementById("answer").value = sum;
    }
</script>
```

```
</head>
<body>
    <p>First Number:<input type="text" id="first number">
    </p>
    <p>Second Number:<input type="text" id="second number">
    </p>
    <button onclick="add()">Add Them </button>
    <p>Sum = <input type="text" id="answer"> </p>
</body>
</html>
```

Mouse event handling program:

<html>

<head>

<script type="text/javascript">

function message() {

 alert("you clicked me!")

}

function mmove() {

 document.getElementById("heading2").style.
 fontSize = "26px";

}

function mout() {

 document.getElementById("heading2").style.
 fontSize = "18px";

}

function OnMouseIn() {

 document.getElementById("one").style.borderColor =
 "4px solid blue";

}

function OnMouseOut() {

 document.getElementById("one").style.borderColor =
 "";

}

</script>

Q.F.:

onclick, ondblclick,

onmousedown

onmouseup

19/8/25

Practice using Javascript:

$6 = 1, 2, 3, 6$

\downarrow
Factors

$5! = 120$

\downarrow
Factorial

check: 151

\downarrow
Arm-strong

1, 2, 3 - one, two,
three

\downarrow
In words

Code:

```
<html>
<head>
<body>
<form>
<label> Enter Number </label>
<input type="number" id="num" required> <br>
<button> Factors </button>
<button onclick="factorial()"> Factorial </button>
<button onclick="Armstrong()> Armstrong </button>
<button onclick="Inwords()> Inwords </button>
</form>
<script>
function factorial () {
    let fact = 1 ;
    let i ;
    const n = parseInt(prompt("Enter number :"));
    for (i=1; i<=n; i++)
    {
        fact = fact * i ;
    }
    alert ("Factorial of num is :" + fact);
}</script>
```

```
<body>
<input type="button" onclick="msg() value="click once"/>
<p>
A function is called when the button is clicked.  

The function gives a message.
</p>
<br/>
<input type="button" value="Double Click" onclick="msg2()" value=""/>
<p>
A function is called when the button is double clicked.  

The function gives a message.
</p>
<br/>
<h3 onmousemove="mmove()" onmouseout="mouseout()" id="headings2">
when you move the mouse on this heading the size  

of the text will increase and when mouse out the  

text size will decrease.
</h3>
<br/>
<div id="one" style="background-color: pink; width: 200px;  

onmouseover="OnMouseIn()" onmouseout="OnMouseOut()"  

onmouseout="OnMouseOut()>
Move your mouse pointer into and out of this element!
</div>
<br/>
</body>
</html>
```

Mouse up and down

Event : onmousedown onmouseup .

Code:

```
<html>
```

```
<body>
```

```
<p id="myP" onmousedown="mouseDown()"  
onmouseup="mouseUp()">
```

The mouse Down() function sets the color of this
text to red .

The mouseUp() function sets the color of this
text to blue .

```
</p>
```

```
<script>
```

```
function mouseDown(){
```

```
document.getElementById("myP").style.color = "red";
```

```
}
```

```
function mouseUp(){
```

```
document.getElementById("myP").style.color = "blue";
```

```
}
```

```
</script>
```

```
</body>
```

Keyboard Events

- 1) Onkeypress
- 2) Onkeyup

onkey~~press~~ up

```

<html>
<head>
<script>
function myFunction(){
var x = document.getElementById("fname");
document.getElementById("fname").value = x.value.
    toUpperCase();
}

</script>
</head>
<body>
Enter your name : <input type="text" id="fname"
    onkeyup="myFunction()">

</body>
</html>

```

Onkey press

```

<html>
<head>
<script>
function myFunction () {
    alert ("You pressed a key, inside the output field");
}

</script>
</head>

```

```
<body>
<input type="text" onkeypress = "myFunction()">
</body>
</html>
```

08/08/25  10th

Form events:

onblur, onFocus, onSelect, OnInvalid, Onchange etc.

Code:

```
<html>
<head>
<title> Form Event </title>
</head>
<body>
<form action="1.html" method = "post" onSubmit =
"SubmitFunction()" on set = "resetfun()">
<label for=""> Name <label><input type = "text" id = "one"
onfocus = "focusfunction()" onblur = "blurfunction()"
on change = "onchangefunction()" onSelect = "selectfunction()"
oninvalid = "alert ('Please fill the first name:)' required>
<br><br>
<label for=""> class </label><input type = "text" id = ""><br>
<p> <strong> Note : </strong> Select any option in select
box to see how it works. </p>
<select onchange = "alert ('you have changed the selection!')>
<option> India </option>
<option> Pakistan </option>
<option> Bangladesh </option>
<option> Sri Lanka </option>
<option> Nepal </option>
```

```
</select>
<input type="submit">
    "reset">
```

```
</form>
<div id="test" style="border: 1px solid red; margin-top: 20px;"></div>
```

```
<script>
function focusFunction()
```

```
{ document.getElementById("one").style.backgroundColor = "coral";
/* Javascript Blur event */ }
```

```
function blurFunction()
```

```
document.getElementById("one").style.backgroundColor = "white";
/* JS input event */ }
```

```
function print()
```

```
var x = document.getElementById("two").value;
document.getElementById("test").innerHTML = "Your
name is :" + x;
```

```
3
function onChangeFunction()
```

```
{ var x = document.getElementById("one").value;
document.getElementById("test").innerHTML = "you changed:
" + x; }
```

```
3
/* Java select event */
```

```
function selectFunction()
```

```
{ alert("you selected some text."); }
```

```
3
function submitFunction()
```

```

{
var x = document.getElementById("one").value;
alert("Hello" + x);
alert('Form data will be submitted to the server');
function resetfunc() {
    alert('The form was reset');
}

```

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

Quiz:

O/P:

Quiz: Brown

Pizza Order Form

Customer Name Phone Number

Pizza choice	Quantity	Unit Price	Total Price
<input type="checkbox"/>	<input type="text"/>	<input type="text" value="12.00"/>	<input type="text"/>
<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text" value="10.00"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>	<input type="text" value="9.50"/>	<input type="text"/>
Total Order: <input type="text"/>			
<input type="button" value="Calculate Order Total"/>		<input type="button" value="Clear Order"/>	

Design the pizza ordering form as shown in the image. The user can order the pizza online through this form. When the user clicks the calculate order Total button do the following.

- * Verify that the customer's name and phone number are not blank. Display an appropriate message if either text box is empty or place the cursor in the appropriate text box.

05/3/25

Form Validation X ~~form compulsory~~

Name :

Password :

Mobile no :

Reg. no :

Email :

Program: O.B.Tech OBCA O.BSC

Courses: web tech software engineering
 Machine learning

Code:

```
<html>
<head>
<script>
```

```
function validate()
```

```
{
```

```
let name = document.getElementById("name").  
value ;
```

```
if (name == "")
```

```
    alert("Name field should not be empty");
```

```
else
```

```
{
```

```
if (!name.match(/^[A-Za-z]{6,15}\$/))
```

```
{
```

Pattern

```
    alert("Name can contain only lower and  
upper case alphabets between 6 to 15 characters");
```

```
}
```

```
}
```

```
let pwd=document.getElementById("pwd").value;
```

```
if(pwd=="")
```

```
    alert(" Password field should not be empty");
```

```
else
```

```
{
```

```
    if(!pwd.match(/^[A-Za-z0-9_-\.\.]{8,12}\$/))
```

```
{
```

```
    alert(" Password can contain alphabets, digits,  
underscore, hyphen, dot and between 8to12 characters");
```

```
underscore, hyphen, dot and between 8to12 characters");
```

```
}
```

```
}
```

```
let mno =document.getElementById("mno").value;
```

```
if(mno=="")
```

```
    alert("Mobile number field should not be empty");
```

```
else
```

```
{
```

```
    if(!mno.match(/^\d{10}\$/))
```

```
        alert("Mobile number shoud be exactly 10 digits");
```

```
}
```

```
let rno =document.getElementById("rno").value;
```

```
if ("rno==")
```

```
    alert("Registra number field cannot be empty");
```

```
else
```

```
{
```

```
    if(!rno.match)(/^{\d{2}}[A-Z]{3}{\d{3}}\$))
```

```
        alert("Invalid Register number");
```

```
}
```

```
let email= document.getElementById("email").value;
```

```
if (email == "")  
    alert("Email field cannot be empty");  
else  
{  
    if (!email.match(/^\w[A-Za-z0-9_\.]+\w@[A-Za-z]+\.  
                           [A-Za-z]{2,5}\$/))  
        alert("Invalid Email");  
}
```

//radio button validation.

```
let pgm = document.querySelector("form").program;  
let check = false;  
for (var i = 0; i < pgm.length; i++)  
{  
    if (pgm[i].checked)  
    {  
        check = true;  
    }  
}  
if (!check)  
{  
    alert("You should select one program");  
}
```

//end of radio button validation.

//checkbox validation.

```
let courses = document.querySelector("form").courses;  
check = false;  
let selected_courses = [];  
for (i = 0; i < courses.length; i++)
```

```
if(courses[i].checked){  
    check = true;  
    selected_courses.push(courses[i].value);  
}  
}
```

```
}  
if(!check){  
    alert("You should select any one course");  
}  
else{  
    alert(selected_courses);  
}  
}
```

```
</script>  
</head>  
<body>  
<form name="regform" onsubmit="validate()>  
Name:<input type="text" id="name"  
name="name"><br>  
Password:<input type="password" id="pwd"  
name="pwd"><br>  
MobileNo:<input type="text" id="mno"  
name="mno"><br>  
REGNo:<input type="text" id="rno"  
name="rno"><br>  
Email:<input type="text" id="email"  
name="email"><br>  
Program:<input type="radio" name="program"  
value="bit">B.Tech  
<input type="radio" name="program"  
value="bca">BCA
```

```
<input type="radio" name="program" value="bsc  
BSE <br><br>
```

Courses:

```
<input type="checkbox" name="courses"  
value="WT"> Web Tech .
```

```
<input type="checkbox" name="courses"  
value="SE"> Software Engineering .
```

```
<input type="checkbox" name="courses"  
value="ML"> Machine Learning <br><br>
```

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

```
</form>
```

```
</body>
```

```
</html>
```