**JAVA SCRIPT**

* Light weight programming language (client side)
* Integrated with HTML

**🡪 External and Internal JavaScript**

This is written in index.html

<head>

<script language="javascript" scr="validate.js" type="text/javascript">

</script >

</head>

[For check validation and when we load page what should be happen to handle such kind of event we use it]

**🡪Variable**

Var name='Ram'; // string

Age = 20; // integer

[We don't need to declare data type according to data it will automatically define datatype.]

**🡪Operators:-**

Arithmetic : - +, - , /, \*, ^, %

Comparison :- == , != , < , > ,<=,>=,!=, === ( To check value and data type if both are same then true otherwise false .)

Logical : - &&, ||, !

Assignment : - =, +=, -=, \*=

Increment / Decrement: - ++, --

Conditional : - ? :

String : - + (to join two string)

e.g. (?:)

var result=null;

var per=60;

if (per>32)

{

Result="pass";

}

Else

{

Result="fail";

}

OR

Result= (per>32)?"Pass":"fail";

Condition

True

Value

False

Value

**## Event (this is come with HTML)**

* On click
* On blur
* On change
* On focus
* On submit
* On load
* On keypress
* On keyup
* On keydown

e.g. :

x :

y :

Add

🡺when we click in add some event will run is known as on click event .

<form id="sum" name="sum">

Code which is written in html

X: <input name="x" id="x"/>

Y:<input name="y" id="y"/>

<input type="button" value="add" name="add" onclick="calculatesum();"/>

🡪**Code which we write in JavaScript**

<script language="javascript">

Function calculatesum()

{

Var x=document.getelementById('x').value;

Var y=document.getelementById('y').value;

Var sum=Parsefloat(x)+Parsefloat(y);

Document.getelementById('sum').value=sum;

}

</script>

**-- Complete program for Number Addition --**

**Number Addition**

**Top of Form**

|  |  |
| --- | --- |
| X: |  |
| Y: |  |
| Sum: |  |
|  | |

Bottom of Form

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<html>

<head>

<title></title>

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

<script language="javascript">

function calculateSum(){

var x=document.getElementById('x').value;

var y=document.getElementById('y').value;

var sum=parseFloat(x)+parseFloat(y);

document.getElementById('sum').value=sum;

}

</script>

</head>

<body>

<div id="wrapper">

<div id="header">

<h1>Number Addition</h1>

</div>

<div id="content">

<form name="sumForm" id="sumForm" action="" method="post">

<table width="50%" border="0">

<tr>

<td>X:</td>

<td><input type="text" name="x" id="x"/></td>

</tr>

<tr>

<td>Y:</td>

<td><input type="text" name="y" id="y"/></td>

</tr>

<tr>

<td>Sum:</td>

<td><input type="text" name="sum" id="sum" readonly="readonly"/></td>

</tr>

<tr>

<td colspan="2" align="left">

<input type="button" value="Add" name="add" onclick="calculateSum();" id="add"/>

<input type="button" value="Home" name="home" onclick="window.location='index.html'"/>

</td>

</tr>

</table>

</form>

</div>

<div id="footer">

<span class="footer-link">

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</span>

</div>

</div>

</body>

</html>

**[Note: - This program will print the result when we click in the add button but if we want the number without click the add button then we use onblur in text box area]**

**-- Using onblur and only do tab in text to add the number --**

<html>

<head>

<title></title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8"/>

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

<script language="javascript">

function calculateSum(){

var x=document.getElementById('x').value;

var y=document.getElementById('y').value;

var sum=parseFloat(x)+parseFloat(y);

document.getElementById('sum').value=sum;

}

</script>

</head>

<body>

<div id="wrapper">

<div id="header">

<h1>Number Addition</h1>

</div>

<div id="content">

<form name="sumForm" id="sumForm" action="" method="post">

<table width="50%" border="0">

<tr>

<td>X:</td>

<td><input type="text" name="x" onblur="calculateSum();" id="x"/></td>

</tr>

<tr>

<td>Y:</td>

<td><input type="text" name="y" onblur="calculateSum();" id="y"/></td>

</tr>

<tr>

<td>Sum:</td>

<td><input type="text" name="sum" id="sum" readonly="readonly"/></td>

</tr>

</table>

</form>

</div>

<div id="footer">

<span class="footer-link">

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</span>

</div>

</div>

</body>

</html>

**-- To print out in our page. --**

document. write ('hello');

**-- To make Dialog Box --**

1. Confirmation box

Var val=confirm ('Do you want to delete?');

If(val==true)

{

…..

}

Else

{

….

}

1. **Prompt : To show Input Popup**

Var val = prompt ('enter your name :');

Alert ('your name is ' + val);

OR

document.write("your name is + val);

1. **To Redirect page (To jump from one page to another page)**

Window. location="home.php";

1. **Page print**

Window print ();

**🡪Functions**

.focus ();

.length ();

.indexof ("@"); // to check where is @ symbol in id

.lastIndexof (','); // if there is two or more than two symbol to find last symbol.

.tolowercase ();

.touppercase();

.is NaN(); // not a number

**🡪Object:-**

Var todaydate=newDate();

todayDate.getDay();

todayDate.getmonth();

todayDate.gettime();

🡪var pi=Math.PI; // if we need PI value

🡪var sin30=Math.sin(30); // To know value of sin 30 .

Math.round();

🡪Target="\_blank"// To bring link in new tab.

🡪Document.getelementByID('ID') .value ; // To take value in text filed .

🡪result false ; // means exit(0) ; in javascript

🡪<input type="button"> // To put value of on click

🡪validate(this)// To send all form

🡪Var std\_name=frm.std\_name.value; // where std\_name is variable frm is an object and std\_name is name.

**## Project work of Above Example**

<html>

<head>

<title></title>

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

<script language="javascript">

//document.write('hello');

// var todayDate = new Date();

// var year=todayDate.getFullYear();

// var month=todayDate.getMonth();

// var day=todayDate.getDay();

// var date=year+"-"+month+"-"+day;

// alert(date);

// var retVal=confirm('Do you want to delete??');

// if(retVal==true){

// alert('You selected yes');

// }else{

// alert('you seleect no');

// }

// var retVal=prompt('Enter Username:');

// alert('Your name is :'+retVal);

</script>

</head>

<body>

**## Result sheet using JavaScript**

**🡪File of Index.html**

<html>

<head>

<title>My First Form</title>

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

<script src="validate.js" type="text/javascript" language="javascript"></script>

</head>

<body>

<div id="wrapper">

<div id="header">

<h1>Result Calculation</h1>

</div>

<div id="content">

<form name="result\_cal" id="result\_cal" action="" method="post">

<table width="60%" border="0">

<tr>

<td>Maths</td>

<td><input type="text" name="maths" id="maths" size="30" maxlength="5"/></td>

</tr>

<tr>

<td>Science</td>

<td><input type="text" name="science" id="science" size="30" maxlength="5"/></td>

</tr>

<tr>

<td>Nepali</td>

<td><input type="text" name="nepali" id="nepali" size="30" maxlength="5"/></td>

</tr>

<tr>

<td>Computer</td>

<td><input type="text" name="computer" id="computer" size="30" maxlength="5"/></td>

</tr>

<tr>

<td colspan="2" align="center">

<input type="button" name="calculate" id="calculate" value="Calculate" onclick="calculateResult();"/>&nbsp;&nbsp;&nbsp;

<input type="reset" name="reset" id="reset" value="Clear"/>

</td>

</tr>

<tr>

<td>Total Marks</td>

<td><input type="text" name="total\_marks" id="total\_marks" size="30" maxlength="7"/></td>

</tr>

<tr>

<td>Percentage</td>

<td><input type="text" name="per" id="per" size="30" maxlength="7"/></td>

</tr>

<tr>

<td>Result</td>

<td><input type="text" name="result" id="result" size="30" maxlength="20"/></td>

</tr>

<tr>

<td>Division</td>

<td><input type="text" name="division" id="division" size="30" maxlength="50"/></td>

</tr>

</table>

</form>

</div>

<div id="footer">

<span class="footer-link">

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</span>

</div>

</div>

</body>

</html>

**🡪File of Java script of Result (create new JavaScript file and give name validation)**

function calculateResult(){

var maths=document.getElementById('maths').value;

var science=document.getElementById('science').value;

var nepali=document.getElementById('nepali').value;

var computer=document.getElementById('computer').value;

if(maths=='' || isNaN(maths) || maths>100){

alert('Invalid Marks in Maths !!');

document.getElementById('maths').focus();

return false;

}

if(science=='' || isNaN(science) || science>100){

alert('Invalid Marks in Science !!');

document.getElementById('science').focus();

return false;

}

if(nepali=='' || isNaN(nepali) || nepali>100){

alert('Invalid Marks in Nepali !!');

document.getElementById('nepali').focus();

return false;

}

if(computer=='' || isNaN(computer) || computer>100){

alert('Invalid Marks in Computer !!');

document.getElementById('computer').focus();

return false;

}

var total=parseFloat(maths)+parseFloat(science)+parseFloat(nepali)+parseFloat(computer);

var per=(total/4);

var result=null;

if(maths>=32 && science>=32 && nepali>=32 && computer>=32){

result="Pass";

}else{

result="Fail";

}

var division=null;

if(result=="Fail"){

division="None";

}else{

if(per>=80){

division="Distinction";

}else if(per>=60){

division="First";

}else if(per>=45){

division="Second";

}else if(per>=32){

division="Third";

}else{

division="None";

}

}

document.getElementById('total\_marks').value=total;

document.getElementById('per').value=per;

document.getElementById('result').value=result;

document.getElementById('division').value=division;

}