19-10-2022

* Java script is a programming language which is used to develop a responsive web page.
* Java script can be programmed in 2 ways.

1. Internal java script
2. External java script

INTERNAL JAVA SCRIPT:

* We can write the internal java script in head part or body part of HTML document.
* We have to use script tag to write the internal java script.

Ex:

<!DOCTYPE html>

<html lang="en">

<head>

    <title>Document</title>

    <Style>

        BODY {

            background-color: red;

        }

    </Style>

</head>

<body>

    <SCRIPT>

        document.write ('jai balayya')

        alert('CSR')

    </SCRIPT>

</body>

</html>

EXTERNAL JAVA SCRIPT:

* In external java script we must be having 2 files, one is html file and another one is java script file , we have to link html file with java script file by using script tag.
* In the script tag we have to specify source attribute in which we have to give external java script URL with extension.

Ex:

Html file

<script src=” ./external.js”></script>

Java script file

document. getElementById(‘a’). innerHTML=”csr”

JAVA SCRIPT OUTPUT:

* In many ways we can have output in java script but each and every way have different purpose.

1. document.write()
2. Console.log()
3. alert()
4. innerHTML

1.document.write:

* we use document. write for testing purpose.
* In document. write we can not have CSS property and also if we use document.write it will automatically delete the parent page.

Ex:

<SCRIPT>

        document.write('jai balayya')

</SCRIPT>

2. console.log():

* We use console.log() for debugging purpose , it gives the output in browser console.

Ex:

console.log('csr1')

3.alert ():

We can use alert window in our webpage.

Ex:

alert('CSR')

4.innerHTML:

* We use innerHTML to have output in the same page inside html element.
* To have innerHTML we have to use

document.getElementById(‘id name’).innerHTML=”csr”

Ex:

<!DOCTYPE html>

<html lang="en">

<head>

    <STYLE>

        #a{

            color: red;

        }

        #b{

            color: blue;

            font-size:500px;

        }

    </STYLE>

    <title>Document</title>

</head>

<body>

    <H1 ID="a"></H1>

    <P ID="b"></P>

    <input type="button" value="print" onclick="window.print()">

    <script>

    document. getElementById('a'). innerHTML="CSR"

    document. getElementById('b'). innerHTML="csr"

    </script>

</body>

</html>

window.print:

We use window.print to print the webpage.

Ex:

<input type="button" value="print" onclick="window.print ()">

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Unary operator:

* To perform unary operations like increment or decrement we use ++ or --.

Ex:

document.write (--a “<br>”)

document.write(a+++ “<br>”)

document.write(a+ “<br>”)

document.write(a++ “<br>”)

Assignment operator:

|  |  |
| --- | --- |
| operator | description |
| = | Assign the value |
| += | It performs addition operation then assign the value |
| -= | It performs subtraction operation then assign the value |
| \*= | It performs multiplication operation then assign the value |
| /= | It performs division operation then assign the value |
| %= | It performs modulus operation then assign the value |
| \*\*= | It performs exponential operation then assign the value |

Ex:

<script>

        var a=10;

        var b=20;

        document.write(a+"<br>")

        a-=b

        document.write(a+"<br>")

        a\*=b

        document.write(a+"<br>")

        a/=b

        document.write(a+"<br>")

        a%=b

        document.write(a+"<br>")

        a=2

        b=2

        a\*\*=b

        document.write(a+"<br>")

    </script>

Comparison operator:

|  |  |
| --- | --- |
| operator | description |
| == | It compares the 2 values |
| === | It compares the 2 values along with data type |
| != | It compares the 2 values if the values are not equal it returns true |
| !== | It compares the 2 values along with data type if the value and data type are not same it returns true |
| > | It compares the 2 values and check 1st value is greater than 2nd value or not, and returns the value as true if it is greater |
| < | It compares the 2 value and checks 1st value is less than 2nd value or not and returns true if it is lesser |
| >= | It checks 1st value is greater than or equal to 2nd value or not |
| <= | It checks 1st value is less than or equal to 2nd value or not |

Ex:

 <script>

        var a=10;

        var b='10';

        document.write((a==b)+'<br>')

        document.write((a===b)+'<br>')

        document.write((a!=b)+'<br>')

        document.write((a!==b)+'<br>')

        document.write((a>b)+'<br>')

        document.write((a<b)+'<br>')

        document.write((a>=b)+'<br>')

        document.write((a<=b)+'<br>')

    </script>

Logical operators:

|  |  |
| --- | --- |
| operator | description |
| && | It performs logical and |
| || | It performs logical or |
| ! | It performs logical not |

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Function:

* function is a keyword.
* Syntax: function function\_name (parameters)

{

Implementations….

}

* A java script function is a block of code which performs a particular task.
* A java script function only executes when we call it. In functions we have function with parameters, function with return type.
* We should call the function by its name. function\_name ()

Ex:

<body>

    <script>

        function add(a,b,c)

        {

        var d=a+b;

        document.write(d+'<br>')

        }

        add(10,8)

        add(10,0)

    </script>

</body>

**Function with parameters:**

In function with parameter, we have to pass the value for parameter while calling the function inside the parenthesis.

We can directly have parameters without any declaration.

Ex:

<script>

        function car(name,model,wheels,engine,color)

        {

            document.write(`I love ${name} car with ${model} name with ${wheels} wheels with ${engine} engine in ${color} color`)

        }

        car('tesla','c',4,'twin cylinder’, ‘red’)

    </script>

Note:

Java script literals:

* In java script literals we use back tick inside the back tick we can use java script expressions and java script method and also we can use single quote or double quote.

**Function with return type:**

In function with return type, we return the value using return keyword.

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**Event handlers:**

**Onclick**

**Onmouseover**

**Onmouseout**

**Onmousedown:** To call the event when the mouse button is down.

**Onmouseup:** To call the event when the mouse button is released.

Ex:

<body >

    <input type="button" value="click here to see the secret onmousedown" onmousedown="fun ()" onmouseup="notfun ()"">

    <h1 id="a" ></h1>

    <script>

        function fun ()

        {

            document.getElementById('a').innerHTML='csr '

        }

        function notfun()

        {

            document.getElementById('a').innerHTML='anime'

        }

    </script>

</body>

**Oninput:** To call the event when the user gives input in the input box.

Ex1:

<body>

    <input id="a" oninput="fun()">

    <h1 id="b"></h1>

    <script>

        function fun()

        {

            var m=document.getElementById('a').value

            document.getElementById('b').innerHTML=m

        }

    </script>

</body>

Ex2:

<body>

<input type="password" id="password" placeholder="password" class="ip" oninput="password()">

<script>

    function password()

    {

        var a=document.getElementById('password').value

        var b=a.length

        if(b==0)

        {

            document.getElementById('status').innerHTML=''

        }

        else if(b>0&&b<=5)

        {

            document.getElementById('status').innerHTML='weak password'

        }

        else if(b>5&&b<=10)

        {

            document.getElementById('status').innerHTML='good password'

        }

        else if(b>10&&b<=15)

        {

            document.getElementById('status').innerHTML='strong password'

        }

        else

        {

            document.getElementById('status').innerHTML='excellent password'

        }

    }

</script>

</body>

**Onkeydown:** To perform the event when the user presses the button.

**Onkeyup:** To perform the event when the user release the button.

Ex:

<body onkeyup="fun()" onkeydown="notfun()">

<script>

        function fun()

        {

            document.getElementById('a').innerHTML='csr'

        }

        function notfun()

        {

            document.getElementById('a').innerHTML='anime'

        }

    </script>

</body>

**Onload:** To perform the event when the page loads.

Ex:

<body onload="fun()">

    <h1 id="a"></h1>

    <script>

        function fun()

        {

            document.getElementById('a').innerHTML='csr loves anime'

        }

    </script>

</body>

**CSS properties in JavaScript:**

* We use the CSS properties in JavaScript by using style method followed by we have to specify the CSS properties which must be following camel casing.
* To target the html element we must use document.getElementById.

Ex:

<body onload="fun()">

    <h1 id="a"></h1>

    <script>

        function fun()

        {

            document.getElementById('a').innerHTML='csr loves anime'

            document.getElementById('a').style.color='red'

            document.getElementById('a').style.backgroundColor='yellowgreen'

        }

        </script>

</body>

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**String:**

String is a collection of 0 or more characters written inside ‘ ’ or “ ” .

Ex1:

var a='I love you'

Ex2:

var b="good"

**String comparison:**

To compare 2 strings, we use comparison operator (==) or (===).

Ex:

<body>

    <form >

        <input id="un" placeholder="enter username">

        <br><br>

        <input type="password" id="pass" placeholder="enter passwod">

        <input type="button" value="signin" onclick="check()">

        <h1 id="a"></h1>

    </form>

    <script>

        function check()

        {

            var a='Jaibalayya'

            var pass=document.getElementById('pass').value

            if(a==pass)

            {

                document.getElementById('a').innerHTML='correct'

                document.getElementById('pass').style.border=' solid green'

                document.getElementById('a').style.color='green'

            }

            else

            {

                document.getElementById('a').innerHTML='wrong'

                document.getElementById('pass').style.borderBlockColor='red'

                document.getElementById('a').style.color='red'

            }

        }

    </script>

</body>

**String search:**

In string search, we have 4 types:

* startsWith: to check whether the string is starting with given value or not. It returns true/false.
* endsWith: to check the string ending with give value or not. It returns true/false.
* indexOf: indexOf method returns the index position of first occurrence of the given value.
* lastIndexOf: It returns the index position of the last occurrence of the given values index number.

Ex:

<body>

    <script>

        var a='I love you'

        document.write(a.startsWith('i')+'<br>')

        document.write(a.endsWith('ou')+'<br>')

        document.write(a.indexOf('ou')+'<br>')

        document.write(a.lastIndexOf('o')+'<br>')

    </script>

</body>

**String length:**

To find the length of a string we use string length method.

Ex:

document.write(a.length)

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**Set attribute:**

* To set an attribute by using JavaScript to an html element we use setAttribute method.
* Syntax: setAttribute (“attribute name”, “value”).

Ex:

<body>

    <input id="a" type="button" value="Subscribe" onclick="fun()">

    <script>

        function fun()

        {

            document.getElementById('a').setAttribute("value","Subscribed")

            document.getElementById('a').style.backgroundColor='grey'

        }

    </script>

</body>

**removeAttribute:**

* To remove an attribute from the html element we use removeAttribute method.
* Syntax: removeAttribute (“attribute name”)

Ex:

<body>

<form action="./welcome.html">

    <input id="password" type="password" placeholder="enter password" oninput="password()">

    <p id="status"></p>

    <input id="b" type="submit" disabled>

</form>

    <script>

    function password()

    {

        var a=document.getElementById('password').value

        var b=a.length

        if(b==0)

        {

            document.getElementById('status').innerHTML=''

        }

        else if(b>0&&b<=5)

        {

            document.getElementById('status').innerHTML='weak password'

            document.getElementById('b').setAttribute("disabled",'true')

            document.getElementById('status').style.color='red'

            document.getElementById('b').style.backgroundColor='red'

        }

        else if(b>5&&b<=10)

        {

            document.getElementById('status').innerHTML='good password'

            document.getElementById('b').removeAttribute('disabled')

            document.getElementById('status').style.color='orange'

            document.getElementById('b').style.backgroundColor='orange'

        }

        else if(b>10&&b<=15)

        {

            document.getElementById('status').innerHTML='strong password'

            document.getElementById('status').style.color='yellowgreen'

            document.getElementById('b').removeAttribute('disabled')

            document.getElementById('b').style.backgroundColor='yellowgreen'

        }

        else

        {

            document.getElementById('status').innerHTML='excellent password'

            document.getElementById('status').style.color='purple'

            document.getElementById('b').removeAttribute('disabled')

            document.getElementById('b').style.backgroundColor='purple'

        }

    }

    </script>

</body>

02-11-2022

**Array:**

* Array is a special variable in which we can store the multiple values.

Ex:

<body>

    <script>

        var anime=["naruto","bleach","one piece","demon slayer","haikyuu"]

        document.write(anime[0]+'<br>')

        document.write(anime)

    </script>

</body>

* In array first we can create the array then we can insert the values by following e;low example.

Ex:  
<body>

    <script>

        var student=[]

        student[0]="chandu"

        student[1]='10th class'

        student[2]='62'

        document.write(student[4]+'<br>')

        document.write(student[1]+'<br>')

        document.write("student name:"+student[0]+'<br>')

        document.write("standard:"+student[1]+'<br>')

        document.write("student roll no:"+student[2]+'<br>')

    </script>

</body>

**Array pop:**

To pop an element from the array we use array pop which follows Last-in-First-out method (LIFO).

**Array push:**

To add an element into the array we use array push which follows First-in-Last-out

Ex:

<body>

    <script>

        var car=['benz','bmw','MG']

        document.write(car+'<br>')

        car.pop()

        document.write(car+'<br>') // benz,bmw

        car.push('mg')

        car.push('tata')

        document.write(car+'<br>') //benz,bmw,mg,tata

    </script>

</body>

**Array sort:**

To sort the array in alphabetical order we use array sort.

**Array reverse:**

To reverse the array order we use array reverse.

Ex:

 <script>

        var a=['a','v','f','g','t','y','u','j','i','d','e','c','A','\*']

        a.sort()

        document.write(a+'<br>')

        a.reverse()

        document.write(a)

 </script>

**Random background colour:**