Java script

Arrow function

1.const hello =() =>{

console.log("hey how are yoy")

return "hil"

}

let v= hello();

console.log(v)

o/p= hey how are yoy

2.const sum =(p,q)=>{

return p+q

}

let s=sum(5,3)

console.log(s)

o/p=8

3.using for loop write a program to print the marks of a students in an object. //for loop

let marks ={

harry:90,

shubham:9,

lovish:56,

monika:4

}

for(let i=0;i<Object.keys(marks).length;i++){

console.log("the marks of "+ Object.keys(marks)[i] + "are" +

marks[Object.keys(marks)[i]])

}

//For in loop

o/p= the marks of harryare90

the marks of shubhamare9

the marks of lovishare56

the marks of monikaare4

the marks of harryare90

shubham

the marks of shubhamare9

lovish

the marks of lovishare56

monika

the marks of monikaare4

while loop

4. let cn=43

let i

while(i!=cn){

console.log('try again')

i=prompt("enter a number")

}

console.log("you have entered a correct number")

o/p

try again

enter a number> 4

try again

enter a number> 5

try again

enter a number> 3

try again

enter a number> 43

you have entered a correct number

//write a function to find mean of 5 number

const mean=(a,b,c,d)=>{

return(a+b+c+d)/4

}

console.log(mean(4,5,4,5))

o/p

4.5

String

let name ="harry"

console.log(name.length)

console.log(name[0])

console.log(name[1])

console.log(name[2])

console.log(name[3])

console.log(name[4])

let frind='prakash'

console.log(frind)

o/p=

5

h

a

r

r

y

Prakash

Backtick

let boy1 ="pramod"

let boy2="nikhil"

// `` (backtick) we can use variable in backtick

let sentence =`${boy2} is a frind of ${boy1}`

console.log(sentence)

o/p=nikhil is a frind of Pramod

#we can insert variable directly in template literal this is called string interpolation

//escape sequence characters

let fruit= 'bana\'na'

console.log(fruit)

o/p=bana'na

String Methods

let name="harry"

console.log(name.length)//.length is a proporty

console.log(name.toUpperCase())//.toUpperCase() is a string function

console.log(name.toLowerCase())

console.log(name.slice(2,4))// harry(01234) it prints 2 to 3 that is rr

console.log(name.slice(2))

console.log(name.replace("har","per"))//if we try to replace Har to per it dosent happen because we are using har string in name the string sholud be same other wise it dosent replace

let name1=" darsh"

console.log(name1.trim())//remove space

o/p

5

HARRY

harry

rr

rry

perry

darsh

**String.prototype.includes()** it returns true or false

The **includes()** method performs a case-sensitive search to determine whether one string may be found within another string, returning true or false as appropriate.

const sentence = 'The quick brown fox jumps over the lazy dog.';

const word = 'The';

console.log(`The word "${word}" ${sentence.includes(word) ? 'is' : 'is not'} in the sentence`);

// Expected output: "The word "The" is in the sentence"

Arrays

let marks=[91,82,63,84,"not present"]

console.log(marks[0])

console.log(marks[1])

console.log(marks[2])

console.log(marks[3])

console.log(marks[4])//wiell be undefind because index 4 dose not exist

console.log("length of the marks is",marks.length)

marks[5]= 89//adding a new value to the array

marks[0]=96//changing the value of an array

console.log(marks)

o/p

91

82

63

84

not present

length of the marks is 5

[ 96, 82, 63, 84, 'not present', 89 ]

Array Methods

//.toString() Method

let num=[1,2,3,34,4]

let b=num.toString()//b is now a string

console.log(b)

//.join() Method

let c=num.join(" @")//c i now a string and add a ' @' to the all values

console.log(c)

//.pop() method(it pop out or remove the last value from the array)

let r= num.pop()

console.log(num,r)

o/p=1,2,3,34,4

1 @2 @3 @34 @4

[ 1, 2, 3, 34 ] 4

//.push() Method push returns the new array length

let num=[1,2,3,34,4]//real length is 5

r=num.push(56)//after push length became 6 and the vlaue is add at the end of the array

console.log(num)

o/p=[ 1, 2, 3, 34, 4, 56 ]

//.shift() Method remove first element and returns it

let num=[1,2,3,34,4]

let r=num.shift(0)

console.log(num,r)

o/p=[ 2, 3, 34, 4 ] 1

//.unshift() Method adds element to the beging and returns new array length

let num=[1,2,3,34,4]

let r=num.unshift(78)

console.log(num,r)

o/p=[ 78, 1, 2, 3, 34, 4 ] 6

//delete operator

let num=[1,2,3,4,5,6,7,8]

delete num[0]//delete is an operator

console.log(num,num.length)

o/p=[ <1 empty item>, 2, 3, 4, 5, 6, 7, 8 ] 8

//.concat() method join array to given array

let num=[1,2,3,4,5,6,7,8]

let a=[12,32,36,35,34,38,45]

let b=[25,58,5659,556,582,6]

let newarray=num.concat(a,b)//join array to given array

console.log(newarray)

console.log(a,num)

o/p=[

1, 2, 3, 4, 5, 6,

7, 8, 12, 32, 36, 35,

34, 38, 45, 25, 58, 5659,

556, 582, 6

]

[

12, 32, 36, 35,

34, 38, 45

] [

1, 2, 3, 4,

5, 6, 7, 8

]

//.sort() method is used to sort an array alphabetically

let compare =(a,b)=>{

return b-a

}

let num=[551,22,3,14,5,6,7,8,229,]

num.sort(compare)

console.log(num)

let name=["vini","saju","uday","ajit","lakshman"]

name.sort(compare)

console.log(name)

o/p=

[

551, 229, 22, 14, 8,

7, 6, 5, 3

]

[ 'vini', 'saju', 'uday', 'ajit', 'lakshman' ]

//.reverse() method

let num=[12,13,15,161,81,98]

console.log(num.reverse())

o/p=[ 98, 81, 161, 15, 13, 12 ]

//.splice() splice can be used to add new items to an array

//.slice() it slice out a pice from an array it creats a new array

let num=[12,13,15,16,81,98]

let deletedValues =num.splice(2,3,1025,1026,1027,1029)//delet 15 16 81 and replace with the number 1025,1026,1027,1029

console.log(num)

console.log("deleted valuse of above number "+ deletedValues)

const a=[1,2,3,4]

b=a.slice(1,3)

c=a.slice(2)

console.log(b)

console.log(c)

o/p=[

12, 13, 1025,

1026, 1027, 1029,

98

]

deleted valuse of above number 15,16,81

[ 2, 3 ]

[ 3, 4 ]

//Array.from() used to creat a array from any other object

let name="harry"

let arr=Array.from(name)

console.log(arr)

o/p=[ 'h', 'a', 'r', 'r', 'y' ]

For loop using in array

//for loop

let num=[7,12,22,43,45,65,78]

for(i=0;i<num.length;i++)

console.log(" position of the "+num[i]+ " is "+i)

//for each loop

let s= num[i]

num.forEach((s)=>{

console.log("squre of "+s+ " is "+s\*s)

})

o/p=position of the 7 is 0

position of the 12 is 1

position of the 22 is 2

position of the 43 is 3

position of the 45 is 4

position of the 65 is 5

position of the 78 is 6

squre of 7 is 49

squre of 12 is 144

squre of 22 is 484

squre of 43 is 1849

squre of 45 is 2025

squre of 65 is 4225

squre of 78 is 6084

//for..of loop

let num=[3,5,1,2,4]

for (let item of num){

console.log(item)

}

console.log("differnce between for...of, for and for..in loop")

//for loop

for (i=0;i<num.length;i++)

{console.log(num[i],i)}

//for...in loop

for (let e in num)

console.log(e)

o/p=3

5

1

2

4

differnce between for...of, for and for..in loop

3 0

5 1

1 2

2 3

4 4

0

1

2

3

4

//map() creat a new array by performing some opertion on each array element

let arr=[45,23,21]

let a=arr.map((value,index,array )=>{

console.log(value, index, array)

return value+1+index

})

console.log(a)

o/p=

45 0 [ 45, 23, 21 ]

23 1 [ 45, 23, 21 ]

21 2 [ 45, 23, 21 ]

[ 46, 25, 24 ]

//filter() method filters an array with values that passes a tes. Creats a new array

let arr=[45,23,21,0,3,5]

let a2=arr.filter((a)=>{

return a<10

})

console.log(a2)

console.log(arr)//filter method dosent modefiy the array

o/p=[ 0, 3, 5 ]

[ 45, 23, 21, 0, 3, 5 ]

//reduce() method reduces an array to asingle value

//factorial of 9

let arr=[1,2,3,4,5,6,7,8,9]

const reduce\_func=((h1,h2)=>{

return h1\*h2

})

let newarr=arr.reduce(reduce\_func)

console.log("factorial of 9 is "+newarr)

o/p=factorial of 9 is 362880

//creat an array of numbers and take input from the user to add numbers to this array

let arr=[1,2,3,4,5]

let a=prompt("enter a number")

a=Number.parseInt(a)

arr.push(a)

console.log(arr)

o/p=

enter a number> 12.232

[ 1, 2, 3, 4, 5, 12 ]

//keep adding numbers to the array in the above question until 0 is added to the array

let arr=[1,2,3,4,5]

let a;

do {

a=prompt("enter a number")

a=Number.parseInt(a)

arr.push(a)

}while(a!=0);

console.log(arr)

enter a number> 12

enter a number> 12 3

enter a number> 12.0255

enter a number> 0

[

1, 2, 3, 4, 5,

12, 12, 12, 0

]

//filter for number divisible by 10 from a given array

let arr=[5,6,10,25,20,35,30]

let n=arr.filter((x)=>{

return x%10 === 0

})

console.log(n)

o/p= [ 10, 20, 30 ]

//create an array of square of given numbers

let arr=[5,6,10,25,20,35,30]

let n=arr.map((x)=>{

return x\*x

})

console.log(n)

o/p= [

25, 36, 100,

625, 400, 1225,

900

]

//use reduce to calculate factorial of a given number from an array of first n natural numbers(n being number whose factorial needs to be calculated)

let arr=[1,2,3,4,5,6,7]

let n=arr.reduce((x1,x2)=>

{

return x1\*x2

})

console.log(n)

o/p= 5040

guess the number game

let secretNumber = Math.floor(Math.random() \* 100) + 1;

let guess;

let numGuesses = 0;

let score = 100;

while (numGuesses < 100) {

guess = prompt("Guess a number between 1 and 100:");

// Check if the guess is valid

if (guess === null) {

break;

}

guess = Number(guess);

if (isNaN(guess) || guess < 1 || guess > 100) {

alert("Please enter a valid number between 1 and 100.");

continue;

}

// Update the number of guesses and the score

numGuesses++;

score--;

// Check if the guess is correct, greater, or lesser

if (guess === secretNumber) {

alert("Congratulations, you guessed the secret number in " + numGuesses + " guesses! Your score is " + score + ".");

break;

} else if (guess > secretNumber) {

alert("The secret number is lesser than " + guess + ". Please try again.");

} else {

alert("The secret number is greater than " + guess + ". Please try again.");

}

}

if (numGuesses === 100) {

alert("Sorry, you didn't guess the secret number in 100 guesses. The secret number was " + secretNumber + ".");

}

Java script tag

Inside the html page writing script lick

<script>

Java script code can be write here

</script>

Or

Using external

<script src=” sript.js”> </script>

Console object

1. Console.log(“hie hell”)//out put a message to the console

2. Console.error(“hi hello”)//used for error

3. Console.assert()//used to assert:

Console.assert(5>53) ; o/p=assertion failed

Console.assert(5<53);o/p= do not show any thing

4. Console.clear()//clear the console

5. Console.table()//displays a tabular data

6. Console.warn()//used for warning

7. Console.info()//used for special information

8. console.time()// used for time

Etc.,

Aletrt(), prompt() & confirm()

In script.js

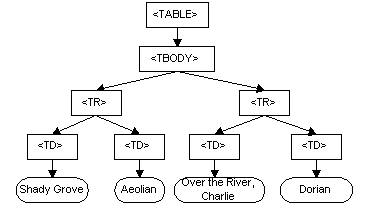
alert("hello your script works")//it show in mini window

let a=prompt("enter the valu a ")//take input from user

document.write(a)//print in the html page

**DOM DOCUMENT ORINTED MODLE**

The Document Object Model (DOM) is an application programming interface (API) for HTML and XML documents.



Searching the dom

Dom navigation properties are helpful when the elements are close to each other. If they are not close to each other, we have some more methods to search the dom

Document.getElementByid:this method is used to get the element with a given id attribute

Let span=document.getElementByid(‘span’)

Span.style.color=”red”

document.querySelectorAll:returns all elements inside an elemnt matching the given css selector

document.querySelector:returns the first element for the given css selector a efficient version of elem.querySelectorAll[0]

document.gerElementByTagName:returns elements with the given tag name

document .getElementsbyClassName:returns that have the given css class

document.getElementsByName:searches elements by the name attribute

matches, closest and contains methods:

three important methods to search the dom

1.elem.matches(css):to check if element matches the given css selector

2.elem.closest(css):to look for the nearest ancestor that matches the given css-selector. The elem itself is also checked

3.elemA.contains(element):returns true if elemB is inside elemA (a descendant of elementA) or when elemA == elemB

Inner html outer html

//let x, y, z;  // Statement

//x = 5;        // Statement 2

//y = 6;        // Statement 3

//z = x + y;    // Statement 4

//document.getElementById("demo").innerHTML ="The value of z is " + z + ".";

//document.getElementById("dem").innerHTML="hello world!";

//document.getElementsByTagName("nav");

//console.log(document.body.firstElementChild.nodeName)

//console.log(document.body.firstChild)

//console.log(document.body.textContent)convert websit into tex file In cosole

Html Attributes and their methods

                //attribute

let a=first.getAttribute("class")//in html page it shows the class name in console

console.log(a)//print class name in console

first.removeAttribute("class")//it remove class elemetn  in html

console.log(first.hasAttribute("class"))//this code says that true or false if class element is there it shows true else it shows false

console.log(first.hasAttribute("style"))//this is exaxple for above code i put style in palce class

first.setAttribute("hidden","true")//the first attribute was hidden which was true

first.setAttribute("class","true sachin")

console.log(first.attributes)//it shows all elements like NamedNodeMap {0: id, 1: class, id: id, class: class, length: 2}

                //data attribute

console.log(first.dataset)

console.log(first.dataset.game)

console.log(first.dataset.player)

insertAdjacentHTML, insertAdjacentElemet and insertAdjacentText

first.insertAdjacentHTML('beforebegin','<div class="test">beforebegni</div>');//the text beforebegin put in the html page

first.insertAdjacentHTML('beforeend','<div class="test">beforeend</div>');

first.insertAdjacentHTML('afterbegin','<div class="test">afterbegin</div>');

first.insertAdjacentHTML('afterend','<div class="test">agerend</div>');

first.remove()//it remove the first element

changing html classes using javascript

first.className="text-black red"//text which is black is going to white, if you remove this the tex show in black.

first.classList.remove("red")

first.classList.toggle("red")

first.classList.add("red")

first.classList.contains("red")

setInterval and setTimeout

document.write("hello")

const sum=(a,b,c)=> {

    console.log("yes i am running " +(a+b+c))

    }

    setTimeout(sum,1000,1,2,9)//after  only one second it will show the out put console.log() and add 1 ,2 and 9 and show 12

//setInterval(function(){

  //  alert("setinterval")

//},3000)//after every 3 second it shows the alert message continuosly

//let a=setTimeout(function(){

  //  alert("i am inside of settimeout")

//},5000)//it show the alert message in small box afer 5 seconds

//let b=prompt("do you want to run the settimout?")

//if("n"== b){

  //  clearTimeout(a)//stop the above timer excution

//}

//console.log(a)

introduction to browser events

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>attribute method</title>

  <link rel="stylesheet" href="style.css">

</head>

<body>

<div class="container" onmouseenter="console.log('mouse inside a comtainer')"

onclick="console.log('clicked in container')"><p>on mouseenter is event when mouse go over the container in

  console it showing mouse inside a container and onclick is event when click on the container it show in console

  that clicked in container

</p>

  <button onclick="alert('hello');let a=6;console.log(a)"> Click me </button>

</div>

Handling Browser Events

Html

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  <title>attribute method</title>

  <link rel="stylesheet" href="style.css">

</head>

<body>

  <div >

    <button id="btn">click me</button>

  </div>

  <script src="script.js"></script>

</body>

</html>

Javasript

let x=function(e){

    alert("heloo world-1")

}

let y=function(e){

    alert("heloo world-2")

}

btn.addEventListener('click',x)

btn.addEventListener('click',y)

let a=prompt("what is your favorite number?")

if(a=="2"){

    btn.removeEventListener('click',x)

}

Introduction to callback

html

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  <title>attribute method</title>

  <link rel="stylesheet" href="style.css">

</head>

<body>

<div id="first">heay i am first</div>

  <script src="script.js"></script>

</body>

</html>

Javascript

//sycronous programming

// let a=prompt("what is your name?");

// let b=prompt("what is your ange?");

// let c=prompt("what is your favorite color?");

// console.log(a + " is" + b +"year old and has" + c + "favorite color." );

//Asynchronous programming

// console.log("start")

// setTimeout(function(){

//     console.log("hey i am god")

// },3000)

// console.log("end")

//callbacks

function loadScript(src,callback){

    var script =document.createElement("script")

    script.src=src;

    script.onload=function(){

        console.log("loaded scritp with src:" +src)

        callback(null, src);

    }

    document.body.appendChild(script);

}

function hello(error,src){

    if(error){

        console.log(error)

        return

    }

    alert('hello world!' + src);

}

function goodmoring(src){

    alert('goodmorning' + src);

}

loadScript("https://cdn.jfgsdelivr.net/npm/bootstrap@5.2.1/dist/js/bootstrap.bundle.min.js",hello)

//promise is used to parllet execution

let promise = new promise(function(resolve,reject){

alert("helllo")

resolve(56)

})

console.log("Hello one")

setTimeout(function(){

console.log("hello two in 2second")

},2000)

console.log("my name is " + "hello three")

console.log(promise)

//promise used in===>console.log("google.com howmepage done")

//fetch google.com

//fetch data from the data api

//fetch pictures from the serer

//print downloading

//rest of the script

promise\_then\_and\_catch

html page

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  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>attribute method</title>

  <link rel="stylesheet" href="style.css">

</head>

<body>

<div id="first">heay i am first</div>

  <script src="script.js"></script>

</body>

</html>

Java script page

let p1 = new Promise((resolve, reject) => {

    console.log("promise is pending")

    setTimeout(() => {

        // console.log("I am a promise and I am resolved")

        resolve(true)

        reject(new Error("I am an error"))

    }, 5000)

})

let p2 = new Promise((resolve, reject) => {

    console.log("promise is pending")

    setTimeout(() => {

        // console.log("I am a promise and I am rejected")

        reject(new Error("I am an error"))

     }, 5000)

 })

//to get the value

 p1.then((value)=>{

    console.log(value)

 })

 //to catch the erroer

 p2.catch((error)=>{

    console.log("some error occurred in p2")

 })

 p2.catch((value)=>{

    console.log(value)

 },(error)=>{

    console.log(error)

 }

 )

Promise\_Chaining\_then()\_calls