

## Javascript:-

>. Javascript is a high level general purpose dynamic type procedural object oriented and interpreted programming language

## What is compiler ?

> It is read whole code at a time then convert into low level

## Interpreter?

> It is a kind of software

## Variable:-

>. Variable is a memory location that hold some value  
It is a container that hold some value

Syntax:-

L.s.	=	Rs
Define Variable		assign data

## How to run javascript code?

We can run js code in three way

1. By using console
2. By script tag (<script>..</script>)
3. By using Node js

## #How to Script tag in html:-

>.By three way we can apply script tag in html

1. Inline
2. Internal
3. External

## # Input/Output statement:-

### 1.Output statement in js:

A. Document.write(".....")

## #Node js

> It is run time environment I.e used for run the js code outside the browser  
It is work like a compiler and interpreter

## #output statement in js:-

- >. 1. By using console.log( )[display data In browser]  
2. In HTML element.innerHTML[tag]  
3. Document.write( )

4. For alert generation we use window.alert()  
\* alert()
5. For data display in box we use value() [value(input box)]  
These all are show data in frontend

## #displaying data by id

>. <h1 id="head"> hi how are you </h1>

By js :-

```
document.getElementById("head").innerHTML="Welcome"
```

```
<pre id="ro"></pre>  
<pre id="pr"></pre>
```

```
let num1=23  
let num2=23  
let sum=num1+num2  
document.getElementById("ro").innerHTML="sum of two  
number"+sum
```

```
let num4=123  
let num5=234  
let sum1=num4+num5
```

```
document.getElementById("pr").innerHTML="sum of two
```

```
numbe"+sum1
```

Create there empty paragraph tag and two heading tap provide the id selector

Display data by using js

Write a program to add the two number and display the result in pre tag ivy using id selector

**NOTE:-** If you want to display string and variable both in single line in js we are using plus(+)

## #displaying data by Class:-

```
<div class="c c1"></div>  
<div class="c c2"></div>  
<div class="c c3"> </div>
```

```
document.getElementsByClassName("c")[0].innerHTML="welcome"
```

```
document.getElementsByClassName("c")[0].innerHTML="welcome"  
document.getElementsByClassName("c")[1].innerHTML="Rohit"  
document.getElementsByClassName("c3")[0].innerHTML="kumar"
```

```

    let num8=123
    let num9=234
    let sum5=num4+num5
    document.getElementsByClassName("c3")[3].innerHTML="sum of
two num"+sum5

```

Question = Write a program to perform multiplication add sub per div modulus

Display all data in h1 pre p q

## Input statement:-

- 1.prompt()
- 2.from form element
3. From eventlistener()
4. Inline event listener()]
5. Using confirm alert

## 1.Prompt:-

```

const prompt=required("promt-sync")()
let a=Number(prompt("Enter the number"))
let b=Number(prompt("Enter the number"))
let s=a+b
console.log("sum of two number=",s)

```

## 2.from form element:-

We can take data from user from form tag by busing **.value**

**document.getElementById.value** (It will take data from user by default string formate

```

function add(){
    // document.getElementById("sum1").value="45" for output
    a=document.getElementById("sum1").value
    b=document.getElementById("sum2").value
    sum=a+b
    document.getElementById("sum3").value=sum
}

```

Number method is used for convert string into integers

```
a=Number(document.getElementById("sum1").value)
b=Number(document.getElementById("sum2").value)
sum=a+b
document.getElementById("sum3").value=sum
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Document</title>
</head>
<body>
  <label>Number1</label>
  <input type="text" id="d1" autocomplete="off">
  <br>
  <br>
  <label>Number1</label>
  <input type="text" id="d2" autocomplete="off" >
  <br>
  <br>
  <button type="submit" onclick="add()">Sumbit</button>
  <br>
  <br>
  <label>result</label>
  <input type="text" id="res">
```

```
<script>
  function add(){
    let a=Number(document.getElementById("d1").value)
    let b=Number(document.getElementById("d2").value)
    let sum=a+b
    document.querySelector("#res")[0].value=sum
    document.getElementById("d1").value=""
    document.getElementById("d2").value=""
  }
}
```

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

How to move cursor from Input box (d1) to box(d2) by clicking enter:-

`Document.getElementById("d1").addEventListener("keypress",function(msg){})`

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-
scale=1.0">
  <title>Document</title>
</head>
<body>
  <label>Number1</label>
  <input type="text" id="d1" autocomplete="off">
  <br>
  <br>
  <label>Number1</label>
  <input type="text" id="d2" autocomplete="off" >
  <br>
  <br>
  <button type="submit" onclick="add()" id="d3">Sumbit</button>
  <br>
  <br>
  <label>result</label>
  <input type="text" id="res">
```

```
<script>
  function add(){
    let a=Number(document.getElementById("d1").value)
    let b=Number(document.getElementById("d2").value)
    let sum=a+b
    document.querySelector("#res")[0].value=sum
    document.getElementById("d1").value=""
    document.getElementById("d2").value=""
  }
}
```

```
document.getElementById("d1").addEventListener("keypress",function
(msg){
  if (msg.key==="Enter"){
    document.getElementById("d2").focus()
```

```

    }
}

//
document.getElementById("d2").addEventListener("keypress",function
(psg){
    //    if(psg.key==="Enter"){
    //        document.getElementById("d1").focus()
    //    }
    // })
}

document.getElementById("d2").addEventListener("keypress",function
(psg){
    if(psg.key==="Enter"){
        document.getElementById("d3").focus()
    }
})

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

```

Output:-

Number1

Number1

Sumbit

result

Caption

By arrow key:

## Identifier:-

>Any name in js is known as identifier

It may be variable , function, class , module

>Name can be any alphanumeric (A-Z),(a-z) ,(0-9) and special symbol

> Name can not start with digit

>space are not allow

>Reserve key word are not used for Identifier

>Name can be start with underscore

## Note:-

> Reserve key word are token that have special meaning in javascript

## Variable::

> Variable is memory location that hold some value

>It work like a container

## Variable contain four properties:-

1. Name
2. Data type
3. Location
4. Size

Example-

a=10

b="Rohit"

## How to declare variable :-

We can declare variable in js in four way

1. Automatically
2. Let
3. Var
4. Const

### 1. automatically:-

>If you are creating without let, var, and constant I.e is known as Automatically

> It scope is global means we can access through out the the program

> pahle variable declare karne ke baad baad me value assign nhi kr site hai

## NOTE:-

In javascript we are using curly bracket

## 2.Let:-

- >let scope may be global and local
- > If you are declaring variable by using let outside
- > If you are declaring variable by using let inside a block it will behave like a means we can not
- > we can not declare same name of variable with let
- > we can declare variable name and later we can assign the value

## 3.Const:-

- > pahle variable declare karne ke baad baad me value assign nhi kr site hai

## Operator:-

- >Operator is a symbolic representation I.e used for perform the various operation

### Types of operator:-

1. Arithmetic operator
2. Assignment operator
3. Comparison or relational operator
4. Logical operator
5. Bitwise operator
6. Type operator
7. Ternary operator

### 1. Arithmetic operator:

>

## Arithmetic Operators

Operators	Meaning	Example	Result
+	Addition	4+2	6
-	Subtraction	4-2	2
*	Multiplication	4*2	8
/	Division	4/2	2
%	Modulus operator to get remainder in integer division	5%2	1
++	Increment	A = 10; A++	11
--	Decrement	A = 10; A--	9

Caption



## 2. Assignment operator:-

> It is used for assign the value in a variable

### Assignment Operators

Operator	Example	Equivalent Expression
=	$m = 10$	$m = 10$
+=	$m += 10$	$m = m + 10$
-=	$m -= 10$	$m = m - 10$
*=	$m *= 10$	$m = m * 10$
/=	$m /= 10$	$m = m / 10$
%=	$m \% = 10$	$m = m \% 10$
<<=	$a <<= b$	$a = a << b$
>>=	$a >>= b$	$a = a >> b$
>>>=	$a >>>= b$	$a = a >>> b$
&=	$a \&= b$	$a = a \& b$
^=	$a \wedge= b$	$a = a \wedge b$
=	$a  = b$	$a = a   b$

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Caption

Example:=-

let a=100

let a=a+10

let a+=10

Here a is work like variable

## 3. Comparison or relational operator:-

### Relational Operators

Operators	Meaning	Example	Result
<	Less than	$5 < 2$	False
>	Greater than	$5 > 2$	True
<=	Less than or equal to	$5 <= 2$	False
>=	Greater than or equal to	$5 >= 2$	True
==	Equal to	$5 == 2$	False
!=	Not equal to	$5 != 2$	True
===	Equal value and same type	$5 === 5$	True
		$5 === "5"$	False
!==	Not Equal value or Not same type	$5 !== 5$	False
		$5 !== "5"$	True

> it is used for compare the value

“==“:-

If two variable is same but data is different then result will be same

It is comparison statement

“===“:-

> If two variable may be same but data type is also same then result will be true

If two variable value is same but data type is different the result will be false

## 4. Logical operator :-

> Its works on truth table and provide result in boolean data type

# Logical Operators

Meaning	Example
Logical and	$(5 < 2) \&\& (5 > 3)$
Logical or	$(5 < 2) \ \  (5 > 3)$
Logical not	$!(5 < 2)$

> OR operator

## 5. Bitwise operator:-

> bitwise operator perform the bitwise operation on operands , Its wrks on truth table

> It give real value not in boolean data type

1. And operator

2. OR operator

3. Not operator
4. X-OR operator

Operator	Description
&	bitwise AND
	bitwise OR
^	bitwise exclusive OR
<<	shift left
>>	shift right
~	one's complement

Caption

## Truth table:-

AND			OR		
0	0	0	0	0	0
0	1	0	0	1	1
1	0	0	1	0	1
1	1	1	1	1	1

  

XOR			NOT	
0	0	0	0	1
0	1	1	1	0
1	0	1		
1	1	0		

Caption

