

Class 1

29/Jan/24

- * JavaScript was invented in 1995. Brenden
- * It was developed for Netscape 2, ECMAScript
- * in 1997
- * After 2015 (major change) this called ECMAScript
ES2015/ES6.

Uses -

- * Client side / browser (jQuery, etc)
 - * Website Server (Node.js, express.js)
 - * Mobile Development (Hybrid App) (frameworks)
 - * Software Development (Electron.js, React-vsc)
- * Pop up. * Information alert. * Front covered

- * 1st we open vsc. we make HTML file
- * To connect our js into HTML we use (script) tag.
We want already we need to write at `<script>`

between <script> alert("Hello") </script>

- * script hum kahan bhi likh sakte hai tile ~~par~~ main body main kahan bhi
- * Agar hum head section main wapis Hello likhe gaye toh js phle wo read karega joh phle ya shrive main likha hogा.
- * JS ki alog file bani baegi kyun ke hu us main zada likh sakte hai.
like :- script.js or ~~link~~ link kr denge yeh HTML sey.
- * sabsey acha hata hai ke ~~jaan~~ </body> ke tag sey phle usko hum likhe.
- * <script src= "script.js" > ase krte hai

Defer is use for tell HTML To read script file in last but yeh baki organization main use nahi holi.

Agapopup agaya to jab tak us ka jawab nahi dete toh wo agaye execute nahi hagey়ি

Inspect par jakr hum console main jayi gya to humhe apne errors ko pechansakhte hain

In console we can write coding /maths etc like $2+4+5=9$. it will give answer

23/Jan/24 Class 2 Variable || Rules / Declaration

- * Variable is a container. iska mtlb yeh hi ke memory main ek jagah reserve krra
- * F12 click krte hi inspect khuljaye ge.
- 3 ways to declare in js. our variable
 - 1) let
 - 2) var
 - 3) const
- ECMA script sey phle "var" use hota tha variable ke liye lekin 2015 main yeh old version tha. ECMA us aye to use use me let or const use hote hain
- var ka use yeh ~~hota~~ thaa ke yeh bare bare declare hojata tha.

like var abc,

var bz 4; (Yeh iska weak point huet)

but in let wo baar baar declare nahi hot

Const means fixed iski value change nahi
hosakhlgi.

like const pi = 3.142,

2 diff bw let and Const

in let ~~reas~~ ^{and} const main agar hum koi value
dete hai like abc to yeh accept nahi
karega

let ~~pi~~ main phle declare krega phu baal
main value assign hongi - lekin const
main agar hum value nahi likhte toh
wo error dega

- Const ko value dene lazmi hai.
- Const abc = "Hello"; or sath ki humne.
abc = "Hie"; likha toh error ayege.
- Magar hum let name = "hina"; or sath
hi name = "mahnish"; karegaye toh issue
kes nahi aye ge.
- Data type
 - ① Number
 - ② string
 - ③ boolean
 - ④ null
 - ⑤ Array
 - ⑥ objects
 - ⑦ undefined

• variable Rules.

- ① Case sensitive hote hain like abc likha
or Abc toh yeh dono diff hain. yeh
dono same hain.

abc = "A" 3 both diff.
Abc = 'A'

Key words use nahi krsakhte :- & like console.log
document etc

Things we can use :- \$, -, num, letters. iske lawa use nahi hosakte.

~~Re~~ variable ko number sey start nahi krsakhte.

Now Data types :-

let age = 45; console.log("Age");
agar string par likha Toh wo Age likhega or
console.log(age) without string toh wo 45 print
karےga.

Camel Case :- means ~~one~~ full Name 2 word
hो 2 word ka 1st letter capital

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Class 3 | Data types | Primitive &

Non-primitive

Variable Scope.

- 1) Block scope :- Agar koi {} is main create karte hai toh yeh uss work in this block like {
 a = 1
 b = 2
 c = 3 } } it is a block scope

- 2) Global scope :- yeh use hota hai pure mai kahan bhi globally in whole program

Comments in JS:-

single line :- // let name = "hina";
multi line :- /* */

~~Print Display in JS:-~~

Print Display in Js:-

object hai yeh bhi
 ↑ ↑
 object

On browser = window.document.write("Meh")

In Console = console.log("hina");

popup :- Alert("hina"); /Window.Alert("hina");

Taking Input from User in Js :-

Prompt :-

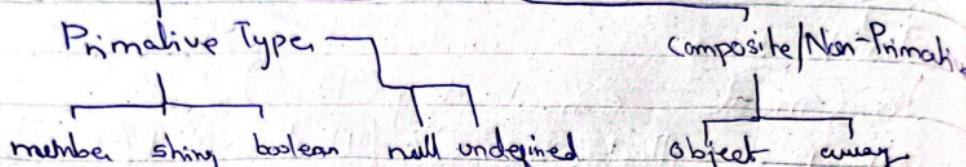
In js, we use prompt() function to ask the user for input. As a parameter we input the text we want to display to user. Once the user press "OK", the input value returned.

like

Prompt("choose any number 1-10");

let num = prompt("choose any number 1-10")
document.write(num);

Data Type in JS



number = jo bhi variable basayegaye, like ^{number main hone lagati hai}
let age = 55;
document.write(age);
console.log(^{type of} age);

String = is main name hone lagati hai.

let name = "Mahwish"; ^{single quotation main bhi likh sakte hai}
document.write(name);
console.log(type of name);

Undefined : jisko hum value nahi dete us undefined hata hai. e.g let percentage;

object (null) :-

```
let abc = null;
```

```
document.write(abc);
```

```
console.log(type of abc);
```

boolean :- is main true ya false hoga

```
let isPass = true;
```

```
document.write(isPass);
```

```
console.log(type of isPass);
```

Non Primitive (Arrays)

Array :- store multiple value in single variable
value written in [] brackets .

Syntax :- 0 1 2

let info = [5, "hina", computer] :- it starts with 0
Console.log () 2 wala 0 hote hai

document.write(info); Document.write(info[1])
it print (5,hina,computer) it will print "hina"

Object :-

- + it also store multiple value in single variable.
- value written in curly brackets {} in pairs with key words.

Yeh curly brackets main hoga or pairs bana kar hoga

Is main sab bartane hoga like.

Let student = {

 name = "hina"; };

Rollno = 23;

 class = computer; }

Document.write (student) (print all)

Document.write (student, rollno) it only print

6/1/24 Class 4: Operators In JS

Function :- In function we need 2 steps.

yeh execute nahi hota jab tak ~~take~~ call nahi
like Kisi player tak niko

function welcome()

{

document.write("Welcome"); }

function sum(a, b);

{

~~document.write~~ let c = a + b

return c; }

welcome();

z iska

~~el we sum(4, 5); let answer = sum(4, 5);~~ mtlb hai aise

likhega teb hi print hogा

Operator in JS

~~task~~ task perform kerna operator hota hai

- * Arithmetic Operators
- * Assignment Operator
- * Comparison Operator
- * Logical Operator
- * Conditional Operator

Arithmetic :- $a+b$, $4+5$.

$5/4$ jo hai wo (operand) hai

+ operator hai jo kaam operator karta hu

- , * , / , %, modulus means remainder .

Exponentiation [In sab main 2 value hona zaruri h]

Increment / decrement (Is main single change hoga)

like :- let a=9;

let b=5

// Addition

document.write(a+b); // (a,"+",b,"=",a+b);
just 14 print hoga | a + b = 14, 9+5=14
iski wajah sey ye ha.

// Subtraction

document.write(a-b); // (a,"-",b,"=",a-b);
4 | a - b = 4 | ~~a~~ 9-5=4

// multiply

document.write(a*b); // (a,"*",b,"=",a*b);
45 | (9*5 = 45)

// division

document.write(a/b); // (a,"/",b,"=",a/b);
1.8 | (9/5 = 1.8)

// Modula

document.write(a%b); // (a,"%",b,"=",a%b);
4 | (9%5 = 4)

Exponentiations means power like 2^3 .
it mean $2 \times 2 \times 2$.

// Exponent

document.write($(a^{**}b)$)
 $a^{**}b = a^b$
 $b^3 = b \times b \times b = (b^3)$

Increment / Decrement
means $++$ or $--$ means 1 plus karo

$a++$ means \oplus plus 1 in a

// Unary operand.

$a = 5$
 $b = 3$

// $a++$, $a = a + 1;$

$a++;$

$a = a - 1;$

$a++;$

Document.write(a); Increment

6 will be answer like $5 + 1. a++$

Document.write(b); Decrement

2 will be answer $3 - 1$.

we can print it directly like Toh answer 5 ayege,
document.write (a++); humhe a++ likhega
5, print hoga to answer ayege

Post Increment

Document.write (a++); 5

Document.write (a++); 6

Document.write (~~a++~~); 5

Document.write (a++); 4

Assignment Operators (Assign value) :

= a = 2 leftside = rightside

+ = a = 2 ~~leftside = right~~ a += 4, a = a + 4

- = a -= 4, a = a - 4

* = a *= 4, a = a * 4

% = a % = 4, a = a % 4

** = a ** = 4, a = a ** 4.

jab a++ toh 1 k lije hata hai agar koi
bhi value hoto assign value holi hai

// Assign operation

let a = 8 , a+=4;

document.write(a); // 12 Am

~~a~~ a -= 3 ;

document.write(a); // 5 i

a *= 3 ;

document.write(a); // 15 .

~~a~~ a / = 3 ;

document.write(a); // 2.665

a % = 3 ;

document.write(a); // 2

$$\begin{array}{r} 3 \sqrt{8} \\ \underline{-6} \\ 2 \end{array}$$

a *** = 3 ;

document.write(a); // $8 \times 8 \times 8 = 512$

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Comparison operator :-

It is used for 2 value comparison.

ya toh 2 value equal ho ya not equal ho
is ka answer true/false main ata hai

$= =$ equal to $= = =$ (equal to + same data type)
 $! =$ not equal to $!=$ (not equal to & data type)

like

~~let a = 2;~~ if $a == 2$ then ~~do something~~

let a = 2; a is ke data type num

let b = "2"; b is ke string

$a == b$: true ; dono equal hai.

$a == b$: false ; is ki data type same nahi hai

$a != b$: True ; qk data type aley hai

> greater than

< less than

$>=$

$<=$

Logical Operators.

- logical AND & & & 2 condition check
- logical OR || 2 condition check
- logical NOT ! false hoga toh

Condition Operator

if (agar sahi hai toh yeh karo krde)

if-else (agar ~~sahi~~ sahi hai yeh krde waha yeh krde)

if - else if (baar baar check kro condition)

like :-

let a = b;

let b = b;

if (a == b) {

document.write("Hello") } agar yeh equal
hai to print kare
equal that is true hogaya

~~if~~ let agez 14; (if else)
if (~~age~~ $a \geq 18$)
{ document.write ("you can vote"); }
else {
document.write ("you cannot vote"); }

If else if
let age = 23;
if (age < 18)
{ document.write ("You are child"); }
else if (age > 40)
{ document.write ("You are old") }
else { document.write ("You are young") }

Logical Operator

- logical AND & & :-
Condition 1 & Condition 2
- ~~dono~~ true / false main jawab ayeega.
- + Dono condition true ho ya dono false
ho to print hogi waha kis nahi

Logical OR || :-

Condition 1 true ho ya Condition 2
dono main sey 1 bhi true hogi to print
hoga yega

like

let a = 5;

let b = 6;

{ }

true

↑

if (a > 2 & b > 5)

{ }

~~document.write~~ alert ("both conditions true")

else { }
alert ("one condition false") ;

if a = 5 ;

false

b = 6 ;

if (a > 7 & b > 5)

{ }

~~document~~ alert ("both condition true");

else { }
alert ("both condition is false");

OR ||

let a = 5;

let b = 6;

if ($a > 7 \text{ || } b > 5$)

{ alert ("Hello"); }

else {

= Ek condition sahi thi. Toh print h.

{ alert ("Welcome") }

let a = 5;

let b = 6;

(b ~~ba~~ a sey)

if (!($a < b$)) || if

{

 alert ("Hello"); }

{

 alert ("welcome") }

Ternary Operator. // logically check whether

age > 18? "Adult"; "no adult";

like

let age = 20

let result

result = age > 18? "Adult"; "no adult";
~~alert~~ alert(result);

print adult age