

## JS

↳ interactive Content → Interpreted language.  
↳ Scripting language.  
↳ lightweight programming lang

① < Body >  
  < script >                          < script >  
  < /Body >

② External JS.

③ Console → In developer tools.  
  |  
  | In Inspect.

Object → It is an Entity which have some properties. That have some methods or functions.

functions inside Object is called as methods.

Object writing Syntax

{

Property : value,  
property1 : value.1,  
method : function() {}

.

Object name . property/method ()

`Console.log("Hello World");`

Control + / → press → for comments.

`/* Hello this is multiple */`

`Console.error("this is an error");`

`Console.warn("this is a warning");`

New Repositories

Java in dev

git git bash

Check for configuration

`git config --list`

`git config --global user.name "Emar"`

`git config --global user.email "Emar"`

`git init`

`git add .`

`git branch -m main`

`git commit -m "First Commit"`

`git remote add origin git -`

`git push -v`

01/05/26

JS → Benday

Each.

line by line

Java Script is a (Synchronous) Single threaded language.

Variable :- Contains that stores values.

Java is a dynamic language.

→ 3 ways of Variable to declare (ask &).

① Var

② let

③ const.

ES6 features → 2015

↓  
let & const.

Q How to declare variable in JS.

- Var name = "John";
  - ① Should not start with number
  - ② Should Contain ~~domain~~, only underscore, dollar, Underscore.
  - ③ 2 words - A  
firstname - lowercase  
firstName - camel case.  
First Name - pascal case.

declaration - var, let

Redeclare - var

Reassignment - Var and let,  
reinitialization.

Ex let c = "John";  
c = "Harry"  
console.log(c);

Obj

Data type — ② types

① Primitive      ↗ In stack memory → In block wise  
backticks.

String = (" ") or ``

Number = Integer as well as float

Boolean → true or false

Null — Intentional absence of any object value

Undefined - A variable that has not yet been defined / assigned.

Symbol -

BigInt - Big Number

Why the datatype of Null is object in JS  
↳ it is a mistake in JS

② Reference Types (Object) → Non-primitive

Value and when assigned to a Variable

Object literals

arrays

functions.

Stored as Heap-type.

→ Primitive data types → Value stored at store  
that is

→ Reference types if value to refer points to  
ki तो क्या है।

Object → To store multiple data.  
Object literals.

Syntax:

```
const person = {  
    name: "John",  
    age: 32  
};
```

arrays → Elements stores ~~multiple~~ values  
In arrays you can store multiple values  
Indexing starts from 0 → start from 0

Multiple values  
Save memory  
Index numbers 0 through value & count

Syntax

```
const numbers = [1, 2, 3, 4, 5, 6];
```

```
console.log(numbers[0]);  
console.log(numbers[1]);
```

(console.log(numbers, type of number)).

// functions → Block of code in curly braces & dr function header { }.

Syntax

```
function display() {  
    //  
    keyword anyone  
}
```

function declaration

```
function display() {  
    console.log("Hello everyone");  
    alert("Hello");  
}
```

function calling :-

```
display();
```

datatype = object.

```
Console.log(display, type of display);
```

## Operators

```
x = x + y  
x += y;
```

```
let x = 10;  
let y = 5;  
let z = x + y;  
z = x - y;  
z = x / y;  
z = x % y;  
z = x * y;
```

```
Console.log(z);
```

```
x++;  
x = x + 1
```

```
x--;
```

```
x = x - 1
```

```
x = x + y
```

(x += y)

Equality operator ( $==$ )  $\rightarrow$  only use in JS

let  $x = 10;$

$y = "10";$

if ( $x == y$ ) {

    Console.log(true);

}

else {

    Console.log(false);

}

\* Addition of two strings :- (Concatenation)

let first = "Hello";

let last = "World";

let fullString = first + " " + last;

Console.log(fullString);

String :- always write in " " or ''

↳ also write as

Template literal or template string or  
backticks.

↳ this feature is ESG model

let data = 'Hello world \${first} and \${last};  
→                      |                      |  
                        Variable      Variable.  
template literal!

Console log (data);

String n<sup>t</sup> Indexing ⚡ start ⚡ end ⚡ .

Methods In String let str = "javascript";

1. charAt — gives the character at that index  
↳ let x = str.length; → gives length of string.  
x = str.charAt(s);

2. indexOf() → Returns the index number of  
Character.

↳ let x = str.indexOf("p");

↳ or      ↳ first To character find  $\rightarrow$  use  
                    of Number  $\rightarrow$  |

"Javascript".indexOf("p");

// .toUpperCase(); → ~~for~~ for Convert the letter of string into uppercase.

// .toLowerCase(); → for Convert the letter of string into lower case.

// .includes(); → Checks If the text is present in String or not gives output as True or false.

// .replace("from", "to"); Get Element only.

.replace All("", ""); All elements change to one.

↳ To replace A text with Some Other text in String.

// .trim(); → Removes the Space from start & end

// .split(); → Change string to array

Ex x = str.split(" ")

It is get array that Spans. It is like

// Slice - Removes a part of a string.  
(starting index, ending  
index)

x = str.slice(0, 15);  
↳ string ke part  
Remove koi character  
(character ki value. Et kisi).

Original string ko change nahi kar li.

If single value give it  
Value extracts the remaining  
string.  
also give negative value

// Substring → Same as slice.

Can't give negative value.  
↳ can give only one value. ex(s,)

// Concat. → To add two strings.

let a = "hello";  
let b = "world";

let c = `\${a} \${b}`;  
① c = a + b;  
② c = a.concat(b); } methods.  
Console.log(c);

## String methods

Math. PI ;

Math. abs(-78); → absolute for positive  
the number.

Math. sign() → returns -1 if num is  
negative (-1).  
returns 1 if num is positive.

Math. sqrt(49); → square root.

Math. round(4.123); = output 4.

Math. floor() → floor methods rounds to  
lower value.

Math. ceil() → ceil method rounds to  
upper value.

x = Math. ceil(4.1);

Math. trunc() → trunc returns the integer  
part only.

Ex- x = Math. trunc(2354.7612).

output = 2354

Math. min() → returns the minimum  
value

Ex x = Math. min(45, 34, 0, -24, -2324, -432)  
Output - 2324

Math.max → returns the max value.

Math.pow(2,3) → returns  $x$  to the power of  $y$   
( $x,y$ )

Ex =  $x = \text{Math.pow}(2,3)$

$$\text{Output} = 2^3 = 2 \times 2 \times 2 = 8.$$

Math.random() → random num from 0 to 1

Math.random() \* 10 → random num from 0 to 9

Math.floor(Math.random() \* 11);

$x = \text{Math.floor}(\text{Math.random()} * 100) + 1;$

## # Date Object

1) `let d = new Date();`

By default, JavaScript will use the browser's time zone and display a date as a full text string.

2) `New Date (milliseconds)`

3) `New Date (datestring)`

4) New Date (year, month, day, hours,  
minutes, seconds, milliseconds)

month → (0 to 11) दूसरे से

If New Date (only one data तो यह इति)

→ By default minutes and  
seconds are zero.

1 Jan 1970 के बिना सभी  
दृष्टि |

10

log d = new Date();  
console.log(d);

const year = d.getFullYear();  
console.log(year)

Date → 07/05/2025

Q1 → HELLO · WORLD

Q2 → a

Q3 → True

Q4 →

Type Conversion :-

① var a = 10;  
let y = a . toString();  
console.log(y, type of y);

② Number();

y = Number(b);  
console.log(y, type of y)

\* To get User Input \*

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

let age = prompt("what is your age?");

console.log(name);

console.log(age);

or

console.log(name + age);

let age = parseInt(prompt("What is your age  
?"));