

## Symbol in JavaScript

```
//Symbol in JS
// Symbol ekta data type like string,boolean ES15 te jeta ashse
//Symbol primitive type
var symbol1 = Symbol();//Symbol() js er ekta buildin function new keyword nai kintu ai khane.
//aita k use kore amra ekta symbol toiri korte pari, function call korle e symbol toiri hoi.

var symbol2 = Symbol();

console.log(symbol1 === symbol2);//Output: false both are not same
console.log(symbol1,symbol2);//Output: Symbol(), Symbol()


//Features in symbol
var symbol1 = Symbol("I am Symbol 1");//symbol with discription
var symbol2 = Symbol("I am Symbol 1");
//symbol k new keyword diya create kora jai na
//symbol gula unique hoi


//singleton
var symbol1 = Symbol.for("name");//for use korlay bitor er jinish ta important tokhon sheta key hishaba kaj kore
var symbol2 = Symbol.for("name");
console.log(symbol1 === symbol2);//Output: true
//symbol.for avoit kora e valo


//symbol k amra kono ekta object er property key hishabe use korty pari
var cricket = Symbol.for("This is cricket Symbol");

var object = {
  name: "sakib",
  [cricket]: "Bangladesh",//cricket proprty er jaigai This is cricket Symbol hoiya jabe
};
console.log(object);


//Symbol kano asho? Why do you need symbol?
var object = {};

object.name = "Javascript";
object.estd = "1995";

//hidden property
//object er value dynamically dite chile [] dite hoi dot dite parbo na
object[Symbol("founder")] = "Brendan Eich";
//ai kane object key symbol & property founder value Brendan Eich
console.log(object);//Output: {name: "Javascript", estd: "1995", Symbol(founder): "Brendan Eich"}

//object ter modda diya jodi jai mane jodi iterate kori
for(let key in object) {
  console.log(key);//output: name estd
  //for loop symbol er moddo diya jaite pare nai
}


console.log(Object.keys(object));//Output: (2) ["name", "estd"] //Object.keys er modda object pathiya dile tar shob prop
erty gula diya dei but ai khane dei nai
```

```

//Symbol er property gula js er bibino loop, bibino function tara aita k dekte pai na
//onek indentifier ase like id ja amra dakhate china ai rokom khatre symbol use korbo


console.log(Array.prototype); //Ai boro Array er prototype er modde bibino Method ase


//in the backend js pochur porimane symbol use kore
// .search, .charAt ai method gulo bitore symbol use kore


//prototype k jeno over Write korte pare er ekta karon holo symblo asha
var myArray = [1,2,3];
console.log(myArray.includes(2)); //output: true //Array te iclude name buildin ekta property ase jeta ekta function
console.log(myArray["includes"](2)); //output: true //both same


var includes = Symbol("my own array includes method");
Array.prototype[includes] = () => { //aita anonymous function
  console.log("This is my includes function");
}
var myArray = [1,2,3];
console.log(myArray.includes(2)); //includes search kore
console.log(myArray["includes"](2)); //buildin includes aita

myArray[includes](2); //aita Symbol includes // output: This is my includes function


//Mozilla JS er Diary/Dictionary/Bible


//builtin Symbol.Search amra ai rokom nijeta toiri korbo
var title = "JavaScript"; //string type


//search kothi pelo ai peimitive type?
//1. title ke new String("JavaScript")
// 2. convert parameter ("Script") into RegExp
// 3. RegExp er moddhe Symble.search() er implementation ache kina
console.log(String); //ai boro string er modda search ache


console.log(title.search("Script")); //Aita k regular experation a dewa jai like /Script/


//Finally nijera toiri kori...

class Product {
  constructor(title) {
    this.title = title;
  }
  //implement search
  [Symbol.search](string) { //aita ekta function
    return string.indexOf(this.title) >= 0 ? "Found" : "Not found";
  }
}

```

```
var laptop = new Product("laptop");
console.log("HP laptop".search(laptop)); //amder symbol.search use kore
```

```
//symbol k delete korte parbo na.....
function myFunc() {
  const PVT = Symbol('My private value');

  return {
    modify(obj) {
      obj[PVT] = true;
    },
    output(obj) {
      return obj[PVT];
    }
  }
}
```

```
const value = myFunc();
const obj = {a: 1, b: 2};
value.modify(obj);
console.log(value.output(obj));
console.log(obj);
delete obj["My private value"]
console.log(obj); //delete hobe na
```

```
var p = {a: 1, b: 2};
delete p["a"];
console.log(p); //output: 2 .... 1 delete
```

- For loop er modde Symbol gulo visible hobe na
  - Symbol.search k nijer moto implemnt kora jabe but delete kora jabe na
  - Symbol er description bole ekta property ase
  - Symbol.search unique identifier
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