

CopyWithin

`copyWithin(target, start, end)`

```
[ 'JavaScript', 'PHP', 'Python', 'Ruby', 'C++', 'RUST' ]  
  0         1         2         3         4         5         6
```

Fig: Array position 0, 1, 2, 3

`copyWithin(target, start, end)`

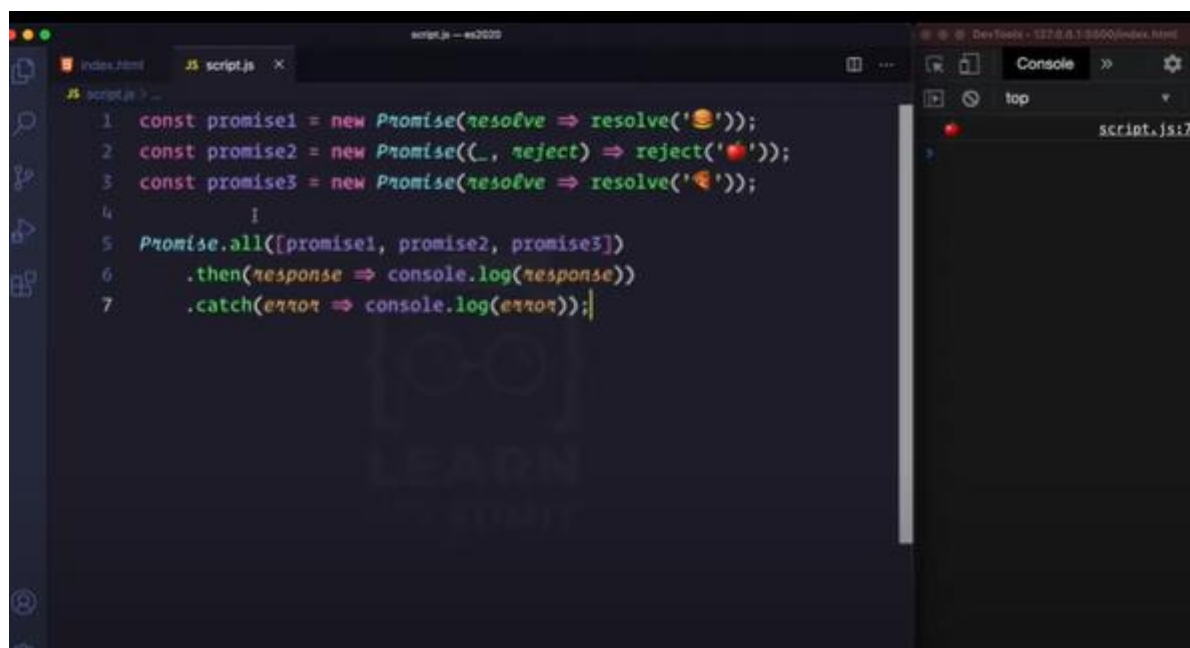
```
[ 'JavaScript', 'PHP', 'Python', 'Ruby', 'C++', 'RUST' ]  
 -6         -5         -4         -3         -2         -1
```

`copyWithin(target, start, end)`

- ✓ `target` is required
- ✓ `start` defaults to 0
- ✓ `end` defaults to `array.length`
- ✓ never changes `array.length`
- ✓ overwrites original `array`
- ✓ returns modified `array`

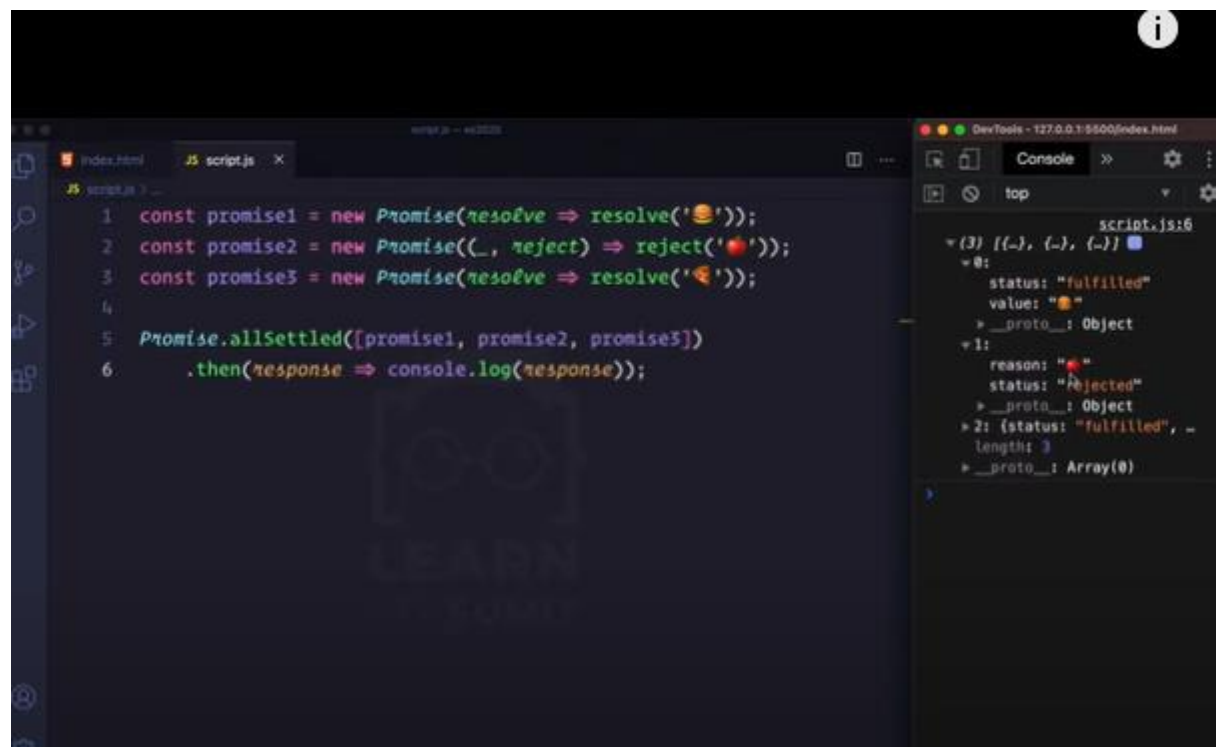
//copyWithin note those are.

Promise.allSettled()

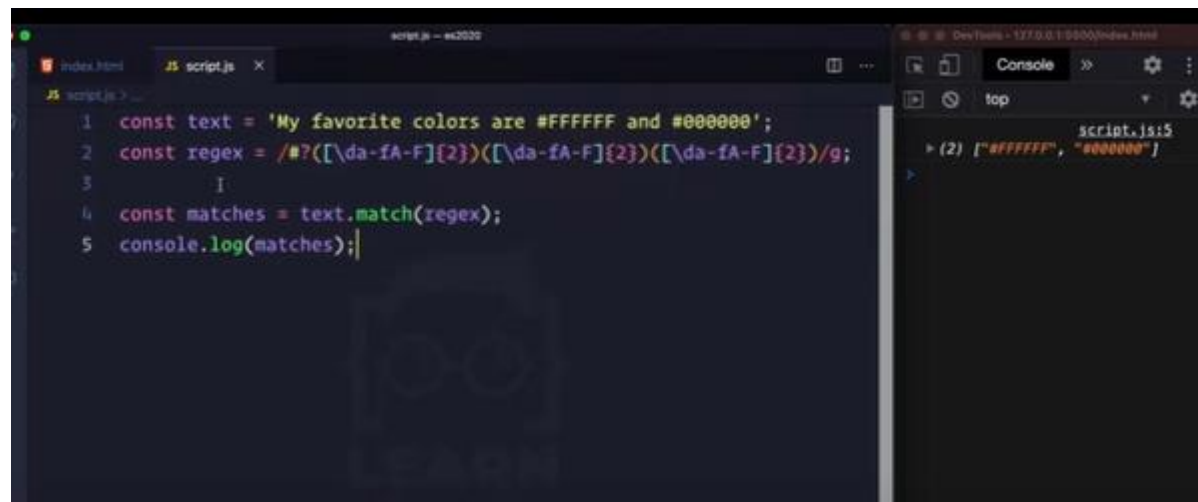


So amra 3 ta promise ek shate pate chile amra promise.all use kori . But ai khake pizza amra kokhono e khate parbo na karon 2nd promise reject hoiya apple amder error akare diy.

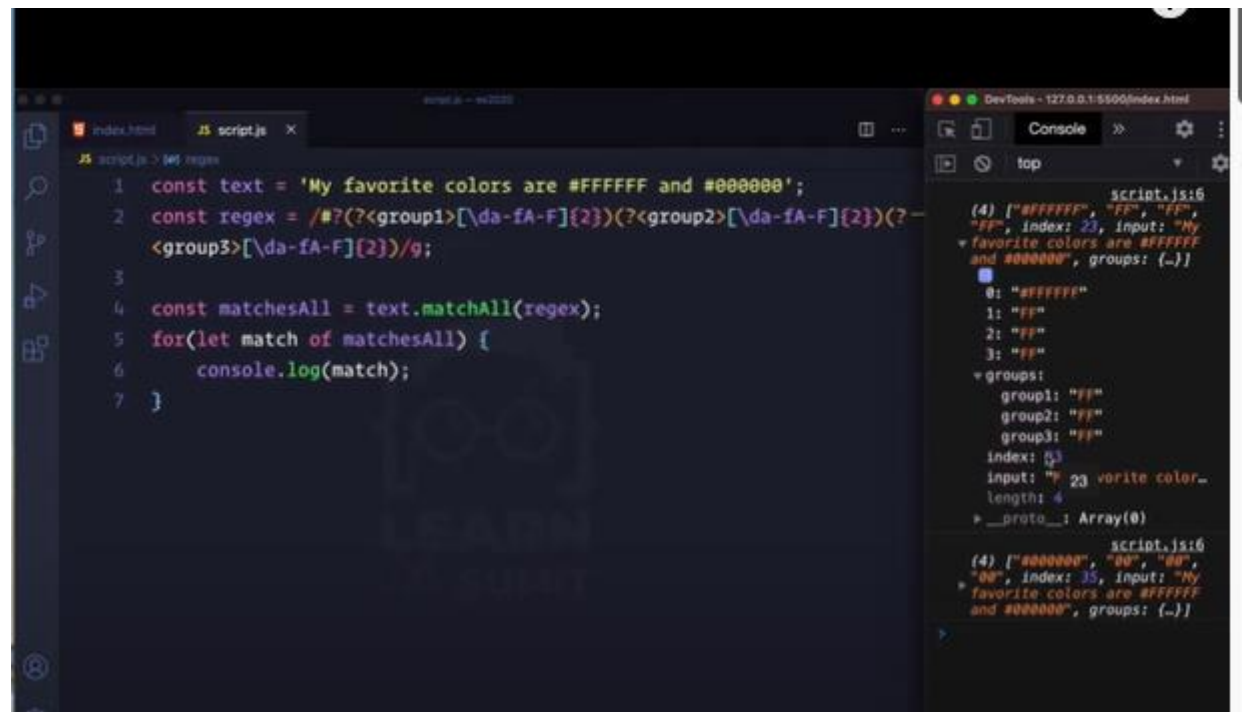
//amon joti hoi promise kanta resolve, reject holo mater kore na shob gulo promise pate chai tahole ES11 theke promise.allSettled use korte pari



String.match



matchAll()



Match.All amder ekta iterator return kore So amra ata ke for of diya iterate korte parsi & pottek iteration a ekta object passi je khane match shomporke details info ase & kon position a match hoiyase tar index o diya diyase

So aita use kore RegExp diya boro string match kori amk details info diya disse details info dorkar hole aita use korte pari

```
// Terminal a code run korer jonno node & file name likte hoi

//Flat Arrow function

//normal function
function number() {
    return 10;
}
console.log(number());

//convert normal function to array function

let number = () => {
    return 10; //ai rokom ekta statement thakle amro arrow function k chuto kore felte pari
}
console.log(number());

//choto korsii..
let number = () => 10; //return thakle kaj korbe na
console.log(number());

//or
let number = () => console.log(10);
number();

//js normal function this
var javascript = {
    name: "JavaScript",
    libraries: ["react", "Angular", "Vue"],
    printLibraries: function () {
        // console.log(this);
        this.libraries.forEach(function (a) { //libraries k iterate korte forEach use korsii, forEach prottek ta element k
            iterate korbe, forEach er bitor a ekta function likhe dibo ai function take forEach pottek iteration/element er shomoi
            call korbey. Pottek ta element k pabe a er modda. element gulo hosse React, angular....
            console.log(`${this.name} loves ${a}`); //name javascript k passe na ai function karon normal function aita
            }); //So forEach er ekta function she this k pabe na forEach er upor er amader controll nai aita js er buildin fu
            nction.
        },
    };
};
javascript.printLibraries(); //printLibraries() javascript call korse so she javascript object k passe so this hosse jav
ascript object ta
//Output: undefined loves react    undefined loves Angular    undefined loves Vue
```

```
//ai this k thik kora jai ekta opaie, ekta variable er modda this k rakle
```

```
var javascript = {  
  name: "JavaScript",  
  libraries: ["react", "Angular", "Vue"],  
  printLibraries: function () {  
    var self = this;//bairer this k ekta variable a niya nilam  
    this.libraries.forEach(function (a) {  
      console.log(`${self.name} loves ${a}`);  
    });  
  },  
};
```

```
javascript.printLibraries();
```

```
//akhon er undefine pabo na actual output pabo
```

```
//so Aita ashole shubida jonok na amder jonno ai jonno e arrow function
```

```
//arrow function asher main karon ki? this keyword er confusion dur korer jonno.//programmer er life esay korte arrow function
```

```
//akhon arrow function diya example
```

```
var javascript = {  
  name: "JavaScript",  
  libraries: ["react", "Angular", "Vue"],  
  printLibraries: function () {  
    this.libraries.forEach((a) => console.log(`${this.name} loves ${a}`));  
  },  
};
```

```
javascript.printLibraries();
```

```
//Output: JavaScript loves react      JavaScript loves Angular      JavaScript loves Vue
```

```
//Arrow function a bairer this & bitor er this same thake
```

```
// js truthy falsy value
```

```
//truthy hobe jodi false, 0, " " or blank, Null, Undefined, NaN ai gula na hoi boolean cotext a she truthy ai khane 6 ta condition.
```

```
var myVar = "";
```

```
if(myVar) {  
  console.log("I am truthy");  
}else {  
  console.log("I am falsy");  
}
```

```
//Output:I am falsy
```

```
//ternary operator
```

```
//Normal example
```

```
var age = 18;  
var type;  
if(age >= 18) {  
  type = "adult";  
}else {  
  type = "Child";  
}//Its so long
```

```
//use ternary operator
```

```
// var variable = (condition) ? if/value1 : else/value2 ;
```

```
var age = 18;
```

```
var type = (age >= 18) ? "adult" : "Child";

//nested condition hole
var age = 18;

var type = (age >= 18) ? "adult"
                  : (age < 10)
                  ? "Child" : "Young";
console.log(type);
//output:adult

var a = 5;
var access = a > 5 ? true : false;

//or
var a = 5;
var access = a > 5;
console.log(access);
//Output: false
//maximum 2 level porjonto hole ternary operator use korbo noito complex hoiya jai chok shojjo korte parbe na. Er bashi
hole if/else, switch ai gula use kora e better.


//array find
//array.find aita main array k change kore na aita element take bar kore dai
// Array.prototype.find //ai find prototype er modda ase
var number = [1, 2, 3, 4, 5];
var result = number.find(function(currentValue){//find er vitor 1st parameter hishbe ekta function pathalam, er 2nd para
meter this //mane find chasse amak ekta kaj daw mane function daw jeta ami tmr prottek ta element er moddo diya jawer sh
omoi korbo ek bar kore & korer shomoi jodi tmi true return koro ami bariya ashbo
//find er bitor function ta prothon je parameter ta pai sheta currentVaule, then currentIndex, array
return currentValue > 4;
}, /*this*/);
//this er confusion hosse arrow function use korbo
console.log(result);
//outPut: 5


//findIndex()
//findIndex() aita ekta index ke ber kore dai, aita value na peley minus return kore dai
//Array.prototype.findIndex()
var number = [1, 2, 3, 4, 5];
var result = number.findIndex((currentValue, index, arr) => {
    return currentValue > 4;
});
console.log(result);
//output: 4 amk 5 er index return korse then bariya ashe


//filter()
//filter() aita ekta filter array return kore main array k change kore na
//Array.prototype.filter
var number = [1, 2, 3, 4, 5, 6, 7, 8];
var result = number.filter((currentValue, index, arr) => {
    return currentValue > 4;
});
console.log(result);
//output: [5, 6, 7, 8]
```

```
//Array slice() //slice bujai suppose cake er 2 dik a cut diya cake ta khabo
var number = [1, 2, 3, 4, 5, 6, 7, 8];
var result = number.slice(1, 3);
console.log(result);
//output:[2, 3]

//Array splice()    main array k change kore ager ekta o main array k change kore na
var number = [1, 2, 3, 4, 5, 6, 7, 8];
var result = number.splice(1, 2, 10, 12)//kothi kop dibe, koita element fale dibe, ki ki add korte chaw
console.log(number);//retult a output pabo na, result a remove value gula pabo
//output:[1, 10, 12, 4, 5, 6, 7, 8]
console.log(result);//Output:[2, 3]

//array concat name jura lagano, main array k change kore na
var number1 = [1, 2, 3, 4, 5];
var number2 = [ 6, 7, 8];
var result = number1.concat(number2);

//or
//onek gula jura lagate hole..
var number1 = [1, 2, 3, 4, 5];
var number2 = [ 6, 7, 8];
var number3 = [ 9, 10];
var result = number1.concat(number2, number3);
console.log(result);//Output:[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

//push    main array k change kore
var number = [1, 2, 3, 4, 5];

var result = number.push(6, 7,8);
console.log(number);//output: [1, 2, 3, 4, 5, 6, 7, 8]
console.log(result);//output: 8    //muptiple parameter dile last er ta output dibe

//map...    amra for use kori na map use kori
//main array k change kore na
var number = [1, 2, 3, 4, 5];

var result = number.map((num) => { //(num) aninomos function she element gula pabey //num er modda number gula pabey & po
ttek takey 2 diya gun kore dibe
    return 2 * num;
});
console.log(number);//output: [1, 2, 3, 4, 5]
console.log(result);//output: [2, 4, 6, 8, 10]

//push, splice main array k change kore

//Array reduce
//Array.prototype.reduce()
//main array k change kore na
var number = [1, 2, 3, 4, 5];
var result = number.reduce((preValue, currentValue, currentIndex, array) => { //reduce k ekta callback function dilam
return preValue + currentValue;
});
```

```

//1 er jonno kono previous value nai so sum ta hobe na

//akhon hobe
var number = [1, 2, 3, 4, 5];
var result = number.reduce((preValue, currentValue) => { //reduce k ekta callback function dilam
return preValue + currentValue;
}, 0); /*2nd parameter pass korsi/initial value pass korsi*/
console.log(result); //putput: 15


//for loop, for in, for of
//for loop block scope
const myObj = {
  name: "Javascript",
  estd: '1995',
  founder: 'Eich'
};
for(property in myObj){
  console.log(property);
}
//object er property k iterate korte amra for in use korbo
//array er modda in korle index pabo

console.log(property);

//for of
//aita je kono iterable object er modda e aita kaj korte pare //aita array object, string, ai gula k iterate korte pare

//array
const myArray = [1, 2, 3, 4];

for(element of myArray);
console.log(element); //element gulo pabo outup ye, in use korle index pabo

//string
const myString = "javaScript";

for(element of myString){
  console.log(element);
}
//output: j a v s c r i p t


//important object method
const myObj = {
  name: "Javascript", // name: key, value = "javascript"
  estd: '1995',
  founder: 'Eich'
};

var keys = Object.keys(myObj);
var values = Object.values(myObj);
var entries = Object.entries(myObj);
console.log(keys); //output: ["name", "estd", "founder"]
console.log(values); //output: ["Javascript", "1995", "Eich"]
console.log(entries); //output: [ [ 'name', 'Javascript' ], [ 'estd', '1995' ], [ 'founder', 'Eich' ] ]
// entries= name: "Javascript"
// entries= estd: '1995',

//variable short form
var x = 12;
var y = 15;
const myObj = {
  name: "Javascript",

```

```

    estd: '1995',
    founder: 'Eich',
    x, //X = x,
    y,
  };

//function default parameter value
function myFunc(x = 10) { //call korer shomoi value pathini so tai default 10 dhore nilam
  return x;
}
console.log(myFunc());

//spread operator
//spread operator mane soriya dewa
var number = [1, 2, 3];
var newNumbers = [number[0], number[1], number[2], 4, 5, 6]; //1, 2, 3 k soriya dilam //ai process ta khubi jotil
var newNumbers = [...number, 4, 5, 6]; //that is easy
console.log(newNumbers); //output: [1, 2, 3, 4, 5, 6]

var number = [1, 2, 3];
var a = [...number]; //exact copy of number
number.push(4);
console.log(number); //output: [1, 2, 3, 4]
console.log(a); //output: [1, 2, 3]

var number = [1, 2, 3];
var a = number; //number change hole a o change hobe
number.push(4);
console.log(number); //output: [1, 2, 3, 4]
console.log(a); //output: [1, 2, 3, 4]

//2 ta array k ek shate korbo
//array spreading
var number1 = [1, 2, 3];
var number2 = [4, 5, 6];

var number = [...number1, ...number2];
console.log(number); //output: [1, 2, 3, 4, 5, 6]

//object spreading
var myObjec1 = {
  x: 1,
  y: 2
}

var myObjec2 = {
  a: 1,
  b: 2
}
// console.log([...myObjec1, ...myObjec2]); //3rd bracket diya error karon aita o array na
console.log({
  ...myObjec1, ...myObjec2
});
//output: {x: 1, y: 2, a: 1, b: 2}

```



```

//rest operator
//rest operator & spread operator 2 ta dekte same but kothi baboher hosse she onujai difference

function myFunc(a, b){
  console.log(a, b);
}
myFunc(5, 6, 7, 8); //jodi amon hoi user jokhon call korbey unlimited parameter dite parey ami to jani na koita dibe So
shei value gula k amra rest operator diya nite pari
//rest operator asher age aita kora hoto arguments object diya

function myFunc(){
  console.log(arguments); //aita function er ekta buldin property
}
myFunc(5, 6, 7, 8);
//output: [Arguments] { '0': 5, '1': 6, '2': 7, '3': 8 } ekta object output dilo


//akhon final rest operator
//function er parameter a jokhon use korbo kothon sheta rest operator
function myFunc(...params){
  console.log(...params);
}
myFunc(5, 6, 7, 8, 9, 10);
//output: 5 6 7 8 9 10 ja ja pathiyasi tai pelam


//rest operator
function myFunc(a, ...params){ //a = 5 k alada pathlam //rest operator last parameter a thakte hobe
  console.log(a);
  console.log(...params);
}
myFunc(5, 6, 7, 8, 9, 10);
//output: 5
//output: 6 7 8 9 10


// **destructring

//object destructring
const user = {
  id: 234,
  name: "Sakib",
  age: 34
};

//abject theke name take ber kore ene are ekta variable e assign korte chai jeno onno jaygay use korte pari

//old way
var name = user["name"];
console.log(name); //output: Sakib
//new way
const user = {
  id: 234,
  name: "Sakib",
  age: 34
};
const {name} = user; //user theke name k ber kore niya ashlam new way te
console.log(name);


//nested object er khatre
const user = {
  id: 234,
  name: "Sakib",
  age: 34,
  education: {
    degree: "Mashters"
  }
}

```

```

    }
  };

// const {} = user;
const {education : {degree},} = user;//degree: x korle degree theke x name hoiya jabe
console.log(degree);//output: Mashters    // console.log(x);

//suppose internet theke data ashtase So education dai abr dai na thale ki korbo? na dile error hobe code a
const user = {
  id: 234,
  name: "Sakib",
  age: 34,
  // education: {
  //   degree: "Mashters"
  // }
};
//value na dile amra default value diya dibo
const {education : {degree} = {}} = user;//akhon eucation er ekta defaut value ase So akhon education na pele o ekta obj
ect pabe So shei object.degree pabe akhon
console.log(degree);//output: undefined So akhon undefine passi error pabo na atlist


//array destructring
var numbers = [1, 2, 3, 4, 5];
var [a, b] = numbers;
console.log(a, b);//output: 1 2

//suppose ami 2 & 5 k destructring kore niya ashte chai
var [, a, , , b] = numbers;
console.log(a, b);////output: 2 5


//nasted array destructring
var numbers = [1, 2, [3, 100, 500], 4, 5];
var [, , [, a, b]] = numbers;
console.log(a, b);//output: 100 500


//swap korbo value destructring way te easily
var a = 1;
var b = 2;
//old way
var temp = a;
a = b;
b = temp;
console.log(a, b);//output: 2 1

// new way
// [] = [];//anonymous array
// [] = [a, b];
[b, a] = [a, b];
console.log(a, b);//output: 2 1


// //import or export
// // package.json file write...
// {
//   "type" : "module";//module k on kore nilam normal Js file er jonno
// }

```

```

//template literals
var a = 2;
var b = 4;
console.log(`${ a + b}`);//jug bagh o korte parsi or single expression korte parsi
console.log(` I am
                Mila`);//kaj korbe


//tagged template literals
//aita simply ekta function

function modifier(string, ...values){//aita 2 ta parameter pai string, values
//ki pai era dakhi?
console.log(string);//Output:[" We have ", " and ", " in our team", raw: Array(3)]
console.log(values); //Output: ["sakib", " Tamim"]

const m = string.reduce((prev, current) => {//amr finaly 1 ta value lagbe tai reduce use korsi
return prev + current + (values.length? "Mr." + values.shift() : ""); //shift prothom sakib k niya ashbey then tamim
}, "");//initiall value null dore nilam prothome
return m;
}
var player1 = "sakib";
var player2 = " Tamim";
console.log(modifier` We have ${player1} and ${player2} in our team`);//modifier pottek ta inter polation er modda call
hobe
//output: We have Mr.sakib and Mr. Tamim in our team

//So ai ta kano korte parlam template literals er karone


//set & WeakSet
//set & WeakSet data strucure
//js a data structure ache arra, object set, map, weakset, weakMap
//Data type 2 dhoroner premetive & reference
//set reference data type
//***set
function log(anything){//log jano bar bar define na korte hoi ai jonno ekta log function tuiroi koresi
return console.log(anything);
}
//sets
// let myArray = []; //literal syntax
// let myArray = new Array();//contex syntex
//array k ai 2 vabe kora jai

//set k literal syntax a use korte parbo na take contex syntex a use korte hoi
let mySet = new Set();
log(mySet);


// Set method


//array te data dukai
let myArray = new Array();
myArray[0] = 5;
myArray[1] = 8;


//but Set y data dukate hoi set er method use kore
//Set er prototype e onek gula method ase

```

```
mySet.add(5);
mySet.add('Bangla');
mySet.delete('Bangla');//delete bangla
log(mySet.has('Bangla'));//has boolean eta return kore true, false //age delete korsi tai false answer
log(mySet);
//string, number ja koto data dukate pari

//add, delete korsi ai method gulo call korsi era abr set kei return kore dai jar karone amra set chain korte parbo
//We can to method chaining with set method
mySet.add(5).add(6).add('Bangla');
log(mySet);

//set from array
//kono ekta array theke set banano hai
let myArray = [1, 2, 3]//ai array k set a convert korbo
let mySet = new Set(myArray);//array k set banalam
//set er modda je kono iterabole pass kora jai
//string iterable
//set er modda iterator ase so set k iterate kora jabe

let mySet = new Set('Bangladesh');
for(let value of mySet){
  log(value);
}
//output: B a n g l a d e s h

//set , array dakte same hole o tara ek na ek hole js amder k ai 2 ta k alada alada data Structure a deto na
//set a add delete & array te reduce, filter ai gulu thake
// set er order nai but array er order ache
//set k array banabo or array from set

let myArray = [1, 2, 3];
let mySet = new Set(myArray);
console.log(mySet);//output:Set(3) {1, 2, 3}
log([...mySet]);

log(Array.from(mySet));
//output:[1, 2, 3]
//set k 2 vabe array te convert kora jai spread operato & Array.from use kore

//set uses .... set diya
//math korer shomoi amra 2 ta set er uninon, intersection, difference kortam amra ai dhoroner kaj er jonno set ashse
//set onnano programming language a o ase tai js a o ana hoiyse ai operator gula korer jonno
//akhon dekbo kon kon jai gai set use hosse
//set er common baboher hosse unique element niya asha
//set a shob element new thake
let myArray = [1, 2, 3];
let mySet = new Set(myArray);
mySet.add(3);
log(mySet);
//output:Set(3) {1, 2, 3} notun kore r 3 add hoinai

let myArray = 'Bangladesh';
let mySet = new Set(myArray);
mySet.add('1');
log(mySet);
//output: 1 add hobe na & a o bad hoiya gase

//object er khatre prothom a e object nite parbo na coz object iterable na
let myArray = [1, 2, 3];
```

```

let mySet = new Set(myArray);
mySet.add({
  a: 5,
  b: 2
});
mySet.add({
  a: 5,
  b: 2
});
log(mySet);

//output:
// 0: 1
// 1: 2
// 2: 3
// 3: Object
// 4: Object

// 2 ta to ak e object to 2 ta e kano show korse tai na?
//karon object to reference type so ai 2 ta ek na. dekte ek e but ader reference alada ta show korbe

//amra jodi ekta variable er modda nai taile abr ekta e object show korbe
let myArray = [1, 2];
let mySet = new Set(myArray);
let object = mySet.add({
  a: 5,
  b: 2
});
mySet.add(object);
mySet.add(object);
mySet.add(object);
log(mySet);

//output:
// 0: 1
// 1: 2
// 2: Object
// 3: Set(4)

//ekta array ase with duplicate value but amr unique value dorkar aita theke so dekhi ki vabe kora jai
let myArray = [1, 2, 3, 4, 5, 5, 6, 5];
log(new Set(myArray)); //output: Set(6) { 1, 2, 3, 4, 5, 6 } //set a convert korlam array k
//akhon set take abr array te convet korbo
log([...new Set(myArray)]); //set k array te convert korlam

//So ki korbe array k set then set k abr array te convert korle e onek shohoje ami unique value gulu peya jassi
//*** Set is used to get unique elements from array

//set er buildin union intersection ai gula nai but amra manually korte pari akhon next undate js hoito build in ai gulo
niya ashbey
//akhon 2 ta sep er union korbo
let a = new Set([1, 2, 3, 3]);
let b = new Set([4, 5, 6, 6]);
let union = new Set([...a, ...b]); //aita 2 ta array er union
log(union);
//output:Set(6) { 1, 2, 3, 4, 5, 6 }

//intersection
let a = new Set([1, 2, 3, 3]);
let b = new Set([2, 3, 4, 6]);
let intersection = new Set([...a].filter(x => b.has(x))); //1st a set array te convert holo then b set er jegula true has
kore amra nilam finally pura ta abr set holo

```

```
log(intersection);
//output:Set(2) { 2, 3 }

//set er difference
let a = new Set([1, 2, 3, 3]);
let b = new Set([2, 3, 4, 6]);
let difference = new Set([...a].filter(x => !b.has(x)));
log(difference);
//output: Set(1) { 1 }

//set ekta iterable er modda iterable e dite hoi
//set k new diya toiri korte hoi
//set er kisu prototype method ase add, delete, has etc
//set & array ek jinish noi
//set er uppor kono operasion chalanor jonno set k array te convert kore nei tarpor array er uppor operation chaliya array k set a convert kore dei
//set shob shomoi unique value store kore rakhe

//Weak set
//dekhi weak set er bitor ki ase
const ws = new WeakSet();
log(ws);

//Weak set a shudu matro object add korte hobe onno nisu dile e error dibe
const ws = new WeakSet([{a: 1}, {b: 2}]);
log(ws);

const ws = new WeakSet([{a: 1}, {b: 2}]);
for(let value of ws);
//weak set moddo niya amra iterate korte pari na
// output: ws is not iterable

//weak set er baboher
//weak set useses
//.....tamon kono use nai

//jodi kono concept niya na pari tahole implementation or useses deya search diya amra implementation or useses dekha ni te pari

//js Array method
//copyWithin()
//copyWithin() aita prototype er modda ase aita 3 ta para meter recive kore target, start, end ai gula array er index
//negative position o hote pare, array er length boro hobe na kata porbey

//Example
let a = ['javascript', 'PHP', 'Python', 'Ruby', 'C++', 'Rust'];
a.copyWithin(3, 2); //target= 3, start = 2
```

```

//byDefault start =0, end = array length
console.log(a);
//output: (6) ["javascript", "PHP", "Python", "Python", "Ruby", "C++"]
a.copyWithin(-3, -2, -1);
console.log(a);
//output:(6) ["javascript", "PHP", "Python", "Ruby", "Ruby", "C++"]


// ES11 ES 2020
// JS je khane e thakuk ekta global object run kore browser er khatre sheta window object
window.setTimeout(() => console.log('hello'), 100);
//ai function ta window object er shate attached hoiya ase
global.setTimeout(() => console.log('hello'), 100);//node js er khatre global


//amon ekta code likbo jeta server & browser 2 khatre e kaj korbey....tahole ki vabe likbo?
//ES11 er age je vabe korte hoto dakhi..aita standardized na
var setGlobal = function(){
    if(typeof window !== 'undefined'){ return window; }
    if(typeof global !== 'undefined'){ return global; }
    throw new Error('unable to local global object');
}
var myGlobal = setGlobal();
myGlobal.setTimeout(() => console.log('hello'), 100);
//manually check kore global object konta buje sheter maddone property call korte hoto.


// but ES11 theke ai kaj ta shohoj hoiya gase
globalThis.setTimeout(() => console.log('hello'), 100);


window == globalThis //broser er jonno window k point korse
global == globalThis //node js er jonno global k point korse


//js e ekta integer maximum koto boro hote pare she ta amra ai vabe jante pari
let largest_number = Number.MAX_SAFE_INTEGER;//MAX_SAFE_INTEGER ai property ta use kore jante pari
largest_number += 1;
largest_number += 1;
console.log(largest_number);
//output:9007199254740992 er bashi boro interger js store korte pare na. atai maximum limit


//ai ES11 a notun ekta type ashese BigInt
let largest_number = Number.MAX_SAFE_INTEGER;
largest_number += 1;
largest_number += BigInt(largest_number) + 1;//largest_number take BigInt function er maddone gibInt banalam & er shate
1 jug korlam
//ai khane 1 jadutu interger tai ake o BigInt a porinoto kore nite hobe So 1 er shate n diya dile e js BigInt dhore nibe
largest_number += BigInt(largest_number) + 1n;
console.log(largest_number);


//10n === 10 //false 2 ta binno data type
//10n ==10; // true
//10n ===BigInt(10); // true


const language = {
    name: 'JavaScript',
    creator: 'Eich',
    library: {
        react: {
            company: 'Facebook'
        }
    }
}

```

```

    }
  };
  //ai object er company property ta excess korte chai. Kori thahole..
  let compay = language.library.react.company;
  console.log(compay);

  //But aita rigth way na karon ai property ta jodi kono API theke ashe shob property ashbe ki na amra sure na thaki. thah
  ole to error chole ashbe
  //So property ta ase ki na check korte hobe pottek level e.
  //Amra ki vabe korte pari dakhi..
  let company = language && language.library && language.library.react && language.library.react.company? language.library
  .react.company : undefined;
  console.log(compay);

  //ai vabe kora ta khub e jotil aro nested object hole to kharap oboshta hobe So ai jonno Optional chaining

  //ES11 Optional chaining
  let company = language?.library?.react?.company;//kono property na thakle undefine dibe error dibe na
  console.log(compay);

  //Aita array er khatre o kaj kore
  let colors = ['read', 'green'];
  //kono property na thakle amra error pai but akhon er pabo na
  console.log(colors?.[1]);//index dhore array element excess

  //Nullish Coalescing operator  =null, undefine ai nullish 2 ta jinish k ak korse  //nullish mane null er moto jinish k a
  k korse
  //Coalescing mane akotrito kora or miloto kora
  let language;
  // language = null;
  console.log(language ?? 'JavaScript');//language er value nai undefine //left side undefine or null hole right side retu
  rn kore
  //output: JavaScript
  console.log(language || 'JavaScript');//left side undefine or null hole right side return kore
  //output: JavaScript

  // ?? = Nullish, or= ||

  let language;
  language = NaN;
  console.log(language ?? 'JavaScript');
  //output: NaN
  console.log(language || 'JavaScript');
  //output: JavaScript

  let language;
  language = false;
  console.log(language ?? 'JavaScript');
  //output: false
  console.log(language || 'JavaScript');
  //output: JavaScript

  //ai take jodi chaning kori
  //suppose name ekta object ase and ter property ase akhon..
  console.log(name.firstName || name.lastName ?? 'Anonymous');//error karon or & nullish Coalecing mix koraci

  //Er solution holo brakel use korte hobe
  console.log((name.firstName || name.lastName) ?? 'Anonymous');
  //output: Anonymous

```



```
/**Dynamic Import
//Dynamic Import er maddome dynamically js file module akare import korte pari, Normally ai ta korte web pack or babel e
r help nite hoi

// utils.js file code
export function add(){
  console.log('adding');
};

export function remove(){
  console.log('removing');
};

//script.js file
//utils.js file import korbo ai file a async way te
const {add} = await import('./utils.js');
const {remove} = await import('./utils.js');
add();
remove();

//import function ta ekta promise return kore so amra await diya resolve korlam resolve hoiya gele {add},{remove} er mod
da paya jabo & awaint use korly asynce dorkar hoi so amra ekta Anonymous invoke function or iife use korte pari

(async function(){
const {add} = await import('./utils.js');
const {remove} = await import('./utils.js');
add();
remove();

})();

Promise.allSettled()
// .....example upore

String.prototype.matchAll()
// match name string a ekta method ase jeta regExp er shate string k match kore
// matchAll() ar ektu detail output dai
```