

# Array

If you have a list of items

Learn array flat and array in array and 2d

```
const cars = ["Saab", "Volvo", "BMW"];
```

```
const cars = [];
```

```
cars[0] = "Saab";
```

```
cars[1] = "Volvo";
```

```
var points = new Array(40, 100, 1);
```

```
document.getElementById("demo").innerHTML = points; => 40,100,1
```

```
const cars = ["Saab", "Volvo", "BMW"];
```

```
cars[0] = "Opel";    =>    true
```

```
fruits[fruits.length-1];
```

```
fruits[fruits.length] = "ali"
```

```
let text = "<ul>";
```

```
for (let i = 0; i < fruits.length; i++) {
```

```
    text += "<li>" + fruits[i] + "</li>";
```

```
}
```

```
text += "</ul>";
```

```
fruits.forEach(myFunction);
```

```
document.getElementById("demo").innerHTML = text;
```

```
function myFunction(value) {
```

```
    text += "<li>" + value + "</li>";
```

```
}
```

```
Array.isArray(fruits)    or    fruits instanceof Array;
```

```
const arr1 = ["Cecilie", "Lone"];
```

```
const arr2 = ["Emil", "Tobias", "Linus"];
```

```
const arr3 = ["Robin"];
```

```
const children = arr1.concat(arr2, arr3);
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
const f = fruits.entries();
for (let x of f) {
  document.getElementById("demo").innerHTML += x + "<br>";
}
```

```
const ages = [32, 33, 16, 40];
document.getElementById("demo").innerHTML = ages.every(checkAge);
function checkAge(age) {
  return age > 18;
}
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
fruits.fill("Kiwi");
```

```
const ages = [32, 33, 16, 40];
document.getElementById("demo").innerHTML = ages.filter(checkAdult);
function checkAdult(age) {
  return age >= 18;
}
32,33,40
```

```
const ages = [3, 10, 50, 18, 20];
document.getElementById("demo").innerHTML = ages.find(checkAge);
function checkAge(age) {
  return age > 18;
}
50
```

```
const ages = [3, 10, 18, 9, 20];
document.getElementById("demo").innerHTML = ages.findIndex(checkAge);
function checkAge(age) {
  return age > 18;
}
4
```

```
let text = "";
const fruits = ["apple", "orange", "cherry"];
fruits.forEach(myFunction);
document.getElementById("demo").innerHTML = text;
function myFunction(item, index) {
  text += index + ": " + item + "<br>";
}
125
```

```
let text = "ABCDEFGH"
```

```
const myArr = Array.from(text); => A,B,C,D,E,F,G
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
document.getElementById("demo").innerHTML = fruits.includes("Mango"); => true
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
document.getElementById("demo").innerHTML = fruits.includes("Banana", 3); => false
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
let index = fruits.indexOf("Apple"); => 2
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
let text = fruits.join(); => Banana,Orange,Apple,Mango
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
```

```
const keys = fruits.keys();
```

```
let text = "";
```

```
for (let x of keys) {
```

```
  text += x + "<br>";
```

```
}0123
```

```
const fruits = ["Apple", "Orange", "Apple", "Mango"];
```

```
let index = fruits.lastIndexOf("Apple");
```

```
document.getElementById("demo").innerHTML = index; 2
```

```
const numbers = [4, 9, 16, 25];
```

```
document.getElementById("demo").innerHTML = numbers.map(Math.sqrt);2,3,4,5
```

```
const numbers = [65, 44, 12, 4];
const newArr = numbers.map(myFunction);
document.getElementById("demo").innerHTML = newArr;
function myFunction(num) {
  return num * 10;
}650,440,120,40
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
fruits.pop();
document.getElementById("demo").innerHTML = fruits;Banana,Orange,Apple
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
fruits.push("Kiwi");
document.getElementById("demo").innerHTML = fruits;Banana,Orange,Apple,Mango,Kiwi
```

```
const numbers = [175, 50, 25];
document.getElementById("demo").innerHTML = numbers.reduce(myFunc);
function myFunc(total, num) {
  return total - num;
}100
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
document.getElementById("demo").innerHTML = fruits.reverse();
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
fruits.shift();
```

```
const fruits = ["Banana", "Orange", "Lemon", "Apple", "Mango"];
const citrus = fruits.slice(1, 3);Orange,Lemon
```

```
const ages = [3, 10, 18, 20];
document.getElementById("demo").innerHTML = ages.some(checkAdult);
function checkAdult(age) {
  return age > 18;
}true
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];  
document.getElementById("demo").innerHTML = fruits.sort();Apple,Banana,Mango,Orange
```

```
const points = [40, 100, 1, 5, 25, 10];  
points.sort(function(a, b){return a-b});1,5,10,25,40,100
```

```
const points = [40, 100, 1, 5, 25, 10];  
points.sort(function(a, b){return b-a});100,40,25,10,5,1
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];  
fruits.sort();  
fruits.reverse();
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];  
fruits.splice(2, 0, "Lemon", "Kiwi");Banana,Orange,Lemon,Kiwi,Apple,Mango
```

```
var fruits = ["Banana", "Orange", "Apple", "Mango"];  
fruits.splice(2, 1, "Lemon", "Kiwi");Banana,Orange,Lemon,Kiwi,Mango
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];  
let text = fruits.toString();Banana,Orange,Apple,Mango
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
fruits.unshift("Lemon", "Pineapple");Lemon,Pineapple,Banana,Orange,Apple,Mango
```

```
const fruits = ["Banana", "Orange", "Apple", "Mango"];
const myArray = fruits.valueOf();Banana,Orange,Apple,Mango
```

```
const fruits = ['apple', 'orange', 'banana'];
const fruitsCopied = [...fruits]; // ['apple', 'orange', 'banana']
```

```
const fruits = ['apple', 'orange', 'banana'];
const vegetables = ['carrot'];
const fruitsAndVegetables = [...fruits, ...vegetables]; // ['apple', 'orange', 'banana', 'carrot']
const fruitsAndVegetables = ['carrot', ...fruits]; // ['carrot', 'apple', 'orange', 'banana']
```

```
const mixer = (x, y, z) => console.log(x, y, z);
const fruits = ['apple', 'orange', 'banana'];
mixer(...fruits); // 'apple', 'orange', 'banana'
```

```
const cars = ["BMW", "Volvo", "Mini"];
for (let x of cars) {
  text += x + "<br>";
}
```

```
let language = "JavaScript";
for (let x of language) {
  text += x + "<br>";
}
```

```
var x = ['parsa', 'arsam', 'sina', 'mina']
var temp = x.entries()
for(i of temp){
  document.getElementsByClassName('para1')[0].innerHTML += i + '<br>'
}
```

```
var x = ['parsa', 'arsam', 'mina', 'sina', 'arash']  
x.forEach(para)  
function para(value, index){  
  document.getElementById('demo').innerHTML += index + " = " + value + '<br>'  
}
```

```
const myArr = [[1,2],[3,4],[5,6]];  
const newArr = myArr.flat(); => 1,2,3,4,5,6
```

## تغییر ناپذیر => Records and Tuples

The Record and Tuple proposal aims to bring immutable data structures to JavaScript.

```
const person =  
{  
  name : 'arsam'  
}  
Object.freeze(person)  
person.name = 'parsa'  
console.log(person.name);
```