

JavaScript Arrays

- description : JavaScript Arrays
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- lastupdate : 2021-04-26

The source of this article

[[https://www.w3schools.com/js/js_events.asphttps://www.w3schools.com/js/js_arrays.asp JavaScript

```
<script>
  let cars = ["Saab", "Volvo", "BMW"];
  document.getElementById("demo").innerHTML = cars;
</script>
```

What is an Array?

(:) ,

```
let car1 = "Saab";
let car2 = "Volvo";
let car3 = "BMW";
```

?

!

? 가 3 가 300

Creating an Array

JavaScript

가

Syntax

```
var array_name = [item1, item2, ...];
```

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

(line breaks)

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

Using the JavaScript Keyword new

```
let cars = new Array("Saab", "Volvo", "BMW");
```

, new Array() 가 , the array literal method)

Access the Elements of an Array

(index number)

cars

```
let name = cars[0];
```

```
let cars = ["Saab", "Volvo", "BMW"];  
document.getElementById("demo").innerHTML = cars[1]; // Volvo
```

Note: 0 . [0] . [1]

Changing an Array Element

`cars`

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

```
let cars = ["Saab", "Volvo", "BMW"];
cars[2] = "Opel";
document.getElementById("demo").innerHTML = cars; // Saab, Volvo, Opel
```

Access the Full Array

JavaScript

```
let cars = ["Saab", "Volvo", "BMW"];
document.getElementById("demo").innerHTML = cars; // Saab, Volvo, BMW
```

Arrays are Objects

. JavaScript `typeof`

“ ”

, JavaScript

가

“ ”

`person[0]` John

:

Array:

```
let person = ["John", "Doe", 46];
document.getElementById("demo").innerHTML = person[0]; // John
```

`person.firstName` John (members)

Object

```
let person = { firstName: "John", lastName: "Doe", age: 46 };
```

JavaScript 가 .
 , 가 .
 가 . 가 . 가 .

JavaScript

```
length      (          )      .
```

length 가 .

```
document.getElementById("demo").innerHTML = first; // Banana
```

Accessing the Last Array Element

```
let fruits = ["Banana", "Orange", "Apple", "Mango"];
let last = fruits[fruits.length - 1];
// fruits[fruits.length-1] = fruits[4-1] = fruits[3]
document.getElementById("demo").innerHTML = last; // Mango
```

Looping Array Elements

가 for loop .

```
let fruits, text, fLen, i; //
fruits = ["Banana", "Orange", "Apple", "Mango"]; // fruits
fLen = fruits.length; // 4

text = "<ul>";
for (i = 0; i < fLen; i++) {
  text += "<li>" + fruits[i] + "</li>";
}
text += "</ul>";

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

Array.forEach() .

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

text = "<ul>";
fruits.forEach(myFunction);
text += "</ul>";
document.getElementById("demo").innerHTML = text;

function myFunction(value) {
  text += "<li>" + value + "</li>";
}
```

Adding Array Elements

가 가 "push()" .

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

function myFunction() {
  fruits.push("Lemon");
  document.getElementById("demo").innerHTML = fruits;
} // Banana, Orange, Apple, Mango, Lemon
```

length 가 .

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

function myFunction() {
  fruits[fruits.length] = "Lemon";
  document.getElementById("demo").innerHTML = fruits;
}
```

WARNING! 가 가 (undefined) " (holes)" .

```
let fruits, text, fLen, i;
fruits = ["Banana", "Orange", "Apple", "Mango"];
\fruits[6] = "Lemon";

fLen = fruits.length;
text = "";
for (i = 0; i < fLen; i++) {
  text += fruits[i] + "<br>";
}
document.getElementById("demo").innerHTML = text;
// Banana Orange Apple Mango undefined undefined Lemon
```

Associative Arrays()

가 .
가 (hashes) .

JavaScript 가 .

JavaScript 가 .

```
let person = [];  
person[0] = "John";  
person[1] = "Doe";  
person[2] = 46;  
let x = person.length;  
let y = person[0];  
console.log(x); // person.length will return 3  
console.log(y); // person[0] will return "John"  
document.getElementById("demo").innerHTML = person[0] + " " + person.length;  
// John 3
```

WARNING!!

JavaScript의 배열은 인덱스(index)를 사용하여 접근합니다. 인덱스는 0부터 시작하며, 배열의 길이(length)를 나타내는 값은 배열의 마지막 인덱스 + 1입니다.

```
let person = {};  
person["firstName"] = "John";  
person["lastName"] = "Doe";  
person["age"] = 46;  
document.getElementById("demo").innerHTML = person[0] + " " + person.length;  
// undefined()
```

The Difference Between Arrays and Objects

JavaScript	(arrays)*	가	(numbered indexes)	.
JavaScript	(objects)		(named indexes)	.
	가	가		.

When to Use Arrays. When to use Objects.

- JavaScript의 배열은 인덱스(index)를 사용하여 접근합니다.
- 객체는 키(key)를 사용하여 접근합니다.
- 배열의 길이를 알 수 있지만, 객체의 길이를 알 수 없습니다.

Avoid new Array()

JavaScript에서 new Array()를 사용하면 배열의 길이를 알 수 없습니다. 대신에 []를 사용하면 배열의 길이를 알 수 있습니다.

```
let points = new Array(); // Bad
let points = []; // Good
```

2

6

가

.

```
//
let points = new Array(40, 100, 1, 5, 25, 10);
let points = [40, 100, 1, 5, 25, 10];
document.getElementById("demo").innerHTML = points[0];
console.log(points); // 40
```

new

가

.

```
let points = new Array(40, 100); // Creates an array with two elements ( 40
and 100)
```

```
let points = new Array(40);
document.getElementById("demo").innerHTML = points[0];
// Creates an array with 40 undefined elements!!!
```

How to Recognize an Array

: 가

?

JavaScript

typeof가 "object "

.

```
let fruits = ["Banana", "Orange", "Apple", "Mango"];
document.getElementById("demo").innerHTML = typeof fruits; // object
```

typeof

JavaScript

.

Solution 1:

, ECMAScript 5

Array.isArray()

.

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

```
document.getElementById("demo").innerHTML = Array.isArray(fruits); //
true
```

ECMAScript 5가

Solution 2:

, isArray() :

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

function isArray(myArray) {
  return myArray.constructor.toString().indexOf("Array") > -1;
} // true
```

가 true .
 , "Array" 가 , true .

Solution 3:

instanceof 가 true .

```
let fruits = ["Banana", "Orange", "Apple", "Mango"];
document.getElementById("demo").innerHTML = fruits instanceof Array; //
true
```

, Javascript, Arrays

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. - 2023.12

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Last update: 2022/03/10 19:52

