

# Day 4: Count Objects

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## JavaScript: Iterating Over Arrays

In this article, we demonstrate some of the ways of iterating over an array's elements in JavaScript.

### Basic *for* Loop

We can use a standard *for* loop to iterate over an array's elements.

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EXAMPLE

```
1 const arr = ['a', 'b', 'c', 'd'];
2
3 // 'i' is the index
4 for (let i = 0; i < arr.length; i++) {
5     console.log('arr[' + i + ']: ' + arr[i]);
6 }
```

Output

Run

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### The *for...in* Statement

The *for...in* statement iterates over the enumerable properties of an object in an arbitrary order, which allows us to execute statements for each distinct property. In the case of an array, the property would be its elements. In the case of an object, that would be its properties.

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EXAMPLE

Iterating Over an Object's Properties

When we use this loop to iterate over an object, we can perform operations on the array's property names and their corresponding values.

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```
1 const o = {
2   a: 1,
3   b: 2,
4   c: 3,
5   d: 4
6 };
7
8 console.log('property: value');
9 // 'p' is the property
10 for (p in o) {
11   console.log(p + ': ' + o[p]);
12 }
```

Output

```
property: value
a: 1
b: 2
c: 3
d: 4
```

Run

- EXAMPLE

### Iterating Over an Array's Elements

When we use this loop to iterate over an array, the array's indices behave like properties.

```
1 const o = ['first', 'second', false];
2
3 // 'p' is the index
4 for (let p in o) {
5   console.log(p + ' ' + o[p]);
6 }
```

Output

```
0 first
1 second
2 false
```

Run

## The *forEach* Method

The *forEach* method iterates through an array and, for each element, it executes a function once.

- EXAMPLE

```
const arr = ['a', 'b', 'c', 'd'];

arr.forEach((value, index, array) => {
  console.log('index', index, 'has a value of', value,
    'which correlates to array[' + index + ']:', array[index]);
});

arr.forEach((value, index) => {
  console.log('index', index, 'has a value of', value);
});
```

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12|arr.forEach((value) => {  
13| console.log('value:', value);  
14|});

Output

Run

Resources

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LOOPS

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