

Array.prototype.concat()



The **concat()** method of <u>Array</u> instances is used to merge two or more arrays.

This method does not change the existing arrays, but instead returns a new array.

Try it

Syntax

```
JS

concat()
concat(value1)
concat(value1, value2)
concat(value1, value2, /* ..., */ valueN)
```

Parameters

value1, ..., valueN (Optional)

Arrays and/or values to concatenate into a new array. If all valueN parameters are omitted, concat returns a <u>shallow copy</u> of the existing array on which it is called. See the description below for more details.

Return value

A new Array instance.

Description

The concat method creates a new array. The array will first be populated by the elements in the object on which it is called. Then, for each argument, its value will be concatenated into the array — for normal objects or primitives, the argument itself will become an element of the final array; for arrays or array-like objects with the property Symbol.isConcatSpreadable set to a truthy value, each element of the argument will be independently added to the final array. The concat method does not recurse into nested array arguments.

The <code>concat()</code> method is a <u>copying method</u>. It does not alter <code>this</code> or any of the arrays provided as arguments but instead returns a <u>shallow copy</u> that contains the same elements as the ones from the original arrays.

The concat() method preserves empty slots if any of the source arrays is sparse.

The <code>concat()</code> method is <code>generic</code>. The <code>this</code> value is treated in the same way as the other arguments (except it will be converted to an object first), which means plain objects will be directly prepended to the resulting array, while array-like objects with truthy <code>[Symbol.isConcatSpreadable]</code> will be spread into the resulting array.

Examples

Concatenating two arrays

The following code concatenates two arrays:

```
const letters = ["a", "b", "c"];
const numbers = [1, 2, 3];

const alphaNumeric = letters.concat(numbers);
console.log(alphaNumeric);
// results in ['a', 'b', 'c', 1, 2, 3]
```

Concatenating three arrays

The following code concatenates three arrays:

```
const num1 = [1, 2, 3];
const num2 = [4, 5, 6];
const num3 = [7, 8, 9];

const numbers = num1.concat(num2, num3);

console.log(numbers);
// results in [1, 2, 3, 4, 5, 6, 7, 8, 9]
```

Concatenating values to an array

The following code concatenates three values to an array:

```
const letters = ["a", "b", "c"];

const alphaNumeric = letters.concat(1, [2, 3]);

console.log(alphaNumeric);
// results in ['a', 'b', 'c', 1, 2, 3]
```

Concatenating nested arrays

The following code concatenates nested arrays and demonstrates retention of references:

```
const num1 = [[1]];
const num2 = [2, [3]];

const numbers = num1.concat(num2);

console.log(numbers);

// results in [[1], 2, [3]]

// modify the first element of num1
num1[0].push(4);

console.log(numbers);

// results in [[1, 4], 2, [3]]
```

Concatenating array-like objects with Symbol.isConcatSpreadable

concat does not treat all array-like objects as arrays by default — only if Symbol.isConcatSpreadable is set to a truthy value (e.g., true).

```
JS

const obj1 = { 0: 1, 1: 2, 2: 3, length: 3 };
const obj2 = { 0: 1, 1: 2, 2: 3, length: 3, [Symbol.isConcatSpreadable]:
true };
console.log([0].concat(obj1, obj2));
// [ 0, { '0': 1, '1': 2, '2': 3, length: 3 }, 1, 2, 3 ]
```

Using concat() on sparse arrays

If any of the source arrays is sparse, the resulting array will also be sparse:

```
JS

console.log([1, , 3].concat([4, 5])); // [1, empty, 3, 4, 5]

console.log([1, 2].concat([3, , 5])); // [1, 2, 3, empty, 5]
```

Calling concat() on non-array objects

If the this value is not an array, it is converted to an object and then treated in the same way as the arguments for concat(). In this case the return value is

always a plain new array.

```
console.log(Array.prototype.concat.call({}, 1, 2, 3)); // [{}, 1, 2, 3]
console.log(Array.prototype.concat.call(1, 2, 3)); // [[Number: 1], 2, 3]
const arrayLike = {
    [Symbol.isConcatSpreadable]: true,
    length: 2,
    0: 1,
    1: 2,
    2: 99, // ignored by concat() since length is 2
};
console.log(Array.prototype.concat.call(arrayLike, 3, 4)); // [1, 2, 3, 4]
```

Specifications

Specification

ECMAScript® 2026 Language Specification

sec-array.prototype.concat

Browser compatibility

Report problems with this compatibility data • View data on GitHub



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✓ Full support

See also

- Polyfill of Array.prototype.concat in core-js with fixes and implementation of modern behavior like Symbol.isConcatSpreadable support
- <u>es-shims polyfill of Array.prototype.concat</u> ☑
- Indexed collections guide
- <u>Array</u>
- Array.prototype.push()
- Array.prototype.unshift()
- Array.prototype.splice()
- String.prototype.concat()
- <u>Symbol.isConcatSpreadable</u>

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