

# Learn JavaScript Syntax: Arrays

### Property .length

The .length property of a JavaScript array indicates the number of elements the array contains.

```
const numbers = [1, 2, 3, 4];
numbers.length // 4
```

#### Index

Array elements are arranged by *index* values, starting at 0 as the first element index. Elements can be accessed by their index using the array name, and the index surrounded by square brackets.

```
// Accessing an array element
const myArray = [100, 200, 300];

console.log(myArray[0]); // 100
console.log(myArray[1]); // 200
console.log(myArray[2]); // 300
```

## Method .push()

The .push() method of JavaScript arrays can be used to add one or more elements to the end of an array.

.push() mutates the original array and returns the new length of the array.

```
// Adding a single element:
const cart = ['apple', 'orange'];
cart.push('pear');

// Adding multiple elements:
const numbers = [1, 2];
numbers.push(3, 4, 5);
```

#### Method .pop()

The .pop() method removes the last element from an array and returns that element.

```
const ingredients = ['eggs', 'flour',
'chocolate'];

const poppedIngredient =
ingredients.pop(); // 'chocolate'
console.log(ingredients); // ['eggs',
'flour']
```



#### **Mutable**

JavaScript arrays are *mutable*, meaning that the values they contain can be changed.

Even if they are declared using const , the contents can be manipulated by reassigning internal values or using methods like .push() and .pop() .

### **Arrays**

Arrays are lists of ordered, stored data. They can hold items that are of any data type. Arrays are created by using square brackets, with individual elements separated by commas.

```
const names = ['Alice', 'Bob'];

names.push('Carl');

// ['Alice', 'Bob', 'Carl']

// An array containing numbers

const numberArray = [0, 1, 2, 3];

// An array containing different data

types
const mixedArray = [1, 'chicken', false];
```