

# String.prototype.indexOf()

**Summary:** in this tutorial, you'll learn how to use the JavaScript String `indexOf()` method to find the index of the first occurrence of a substring within a string.

## JavaScript String `indexOf()` method

The `String.prototype.indexOf()` returns the index of the first occurrence of the substring ( `substr` ) in a string ( `str` ):

```
let index = str.indexOf(substr, [, fromIndex]);
```

The `indexOf()` method returns -1 if the `str` does not contain the `substr` .

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```
.indexOf('a') → 1
```

The `fromIndex` is an optional parameter that specifies the index at which the search starts. It defaults to zero (0), meaning that if you omit `fromIndex` , the search will start from the beginning of the string.

It's important to note that the `indexOf()` always perform a case-sensitive search.

Note that you use the `lastIndexOf()` method to find the index of the last occurrence of a substring in a string.

## JavaScript String `indexOf()` examples

Let's take some examples of using the JavaScript string `indexOf()` method.

## Basic JavaScript string `indexOf()` method example

The following example uses the `indexOf()` to get the index of the first occurrence of the substring `'str'` in the string `'finding substring in string'` :

```
let str = 'finding substring in string';
let index = str.indexOf('str');

console.log(index); // 11
```

## 2) Using `indexOf()` to count occurrences of a substring in a string

The following example uses the `indexOf()` method to count the number of occurrences of the substring `'know'` in the string `'You do not know what you do not know until you know.'` :

```
let str = "You do not know what you do not know until you know.";
let substr = "know";

let count = 0;

let index = str.indexOf(substr);
while (index !== -1) {
  count++;
  index = str.indexOf(substr, index + 1);
}

console.log({ count });
```

Output:

```
{ count: 3 }
```

How it works:

- First, use the `indexOf()` method to find the first occurrence of the `substr` in the `str` .

- Then, use the `while` loop to repeatedly find the next position of the `substr` in the `str` starting from the last found position + 1.

### 3) The `indexOf()` method and case-sensitivity

The `indexOf()` is case-sensitive. See the following example:

```
let str = "JS indexOf";
let substr = "js";

let index = str.indexOf(substr);

console.log({ index }); // -1
```

In this example, the `indexOf()` returns -1 because the string `JS IndexOf` does not contain the substring `js` but `JS`.

To perform a case-insensitive search for the index of a substring within a string, you can convert both substring and string to lowercase before using the `indexOf()` method like this:

```
let str = "JS indexOf";
let substr = "js";

let index = str.toLocaleLowerCase().indexOf(substr.toLocaleLowerCase());

console.log(index); // 0
```

## Summary

- The `indexOf()` returns the index of the first occurrence of a substring in a string, or -1 if the string does not contain the substring.
- The `indexOf()` always performs a case-sensitive search.