KEVIN CHISHOLM - BLOG

Web Development Articles and Tutorials

JavaScript Array.prototype.shift()

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The JavaScript shift method removes the first element from the array and returns that element.

While it may be tempting to use the **Array.prototype.splice()** method to remove an element from the beginning of a JavaScript array, believe me, **Array.prototype.shift()** is the best way to do it. And just as a side note, I've always felt that the method name "shift" is a little odd, but that's what the ECMAScript specification calls for, so we'll just move along with the good stuff.

So, with the **Array.prototype.shift()** method, it's the syntax that's really important, and the beauty of it is, it's quite simple. You just chain .**shift()** onto your array variable name, without passing any arguments. For example: **myArray.shift()** would remove the first element from the beginning of the "**myArray**" array. Just keep in mind that the .**shift()** method returns the element that was removed from the beginning of the array. So, for example, if an array has five elements and the first one is the string "ABC", calling the .**shift()** method will return "ABC", because it has removed that element from the beginning of the array.

Try it yourself!



Edit in JSFiddle

- JavaScript
- Result

```
var foo = ['a', 'b', 'c', 'd', 'e', 'f'];

//the shift method removes the first element,
//and returns the removed element

console.warn('foo.shift() -> ' + foo.shift()); // a
console.info('foo.length -> ' + foo.length); // 5
console.dir(foo); // ['b', 'c', 'd', 'e', 'f']

console.warn('foo.shift() -> ' + foo.shift()); // b
console.info('foo.length -> ' + foo.length); // 4
console.dir(foo); // ['c', 'd', 'e', 'f']

console.warn('foo.shift() -> ' + foo.shift()); // c
console.info('foo.length -> ' + foo.length); // 3
console.dir(foo); // ['d', 'e', 'f']
```

In the above example, we have the **foo** array, which has six elements. Each time we call the shift method, the first element of that array is removed. Notice that we show the return value of the **shift** method in the console. So, we can see that **shift** returns the element that was returned.

Click the **Result** tab. Notice how we call the shift method a total of three times. Each time, we show the return of that call to **shift**: "a", "b", and "c". We also show the length of the foo array each time as well. That length decreases each time we call shift, so the values are **5**, **4**, and **3**. And finally, each time we call shift, we use the **console.dir** method to inspect foo, so that we can see the changes that are happening to the array with each call to **shift**.

Video Example Code

If you want to download the example code, visit this page: kcv-array-shift-fiddle

Summary

So, to recap, the ECMAScript specification provides a number of methods on the Array.prototype object that are designed for handling mutations to the beginning and end of an array. But the Array.prototype.shift() method specifically functions to efficiently remove the first element from the beginning of an array. This method takes no arguments and returns the element that was removed from the beginning of the array. Simplicity and efficiency at its best!

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