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2016-02-01

## ES2016 feature: `Array.prototype.includes`

Labels: [dev](#), [es2016](#), [esnext](#), [javascript](#)

`Array.prototype.includes` is an ECMAScript proposal by Domenic Denicola and Rick Waldron. It is at stage 4 (finished) and part of [ECMAScript 2016](#).

### 1. The `Array` method `includes`

The `Array` method `includes` has the following signature:

```
Array.prototype.includes(value : any) : boolean
```

It returns `true` if `value` is an element of its receiver (`this`) and `false`, otherwise:

```
> ['a', 'b', 'c'].includes('a')
true
> ['a', 'b', 'c'].includes('d')
false
```

`includes` is similar to `indexOf` – the following two expressions are mostly equivalent:

```
arr.includes(x)
arr.indexOf(x) >= 0
```

The main difference is that `includes()` finds `NaN`, whereas `indexOf()` doesn't:

```
> [NaN].includes(NaN)
true
> [NaN].indexOf(NaN)
-1
```

`includes` does not distinguish between `+0` and `-0` (which is how almost all of JavaScript works):

```
> [-0].includes(+0)
true
```

Typed Arrays will also have a method `includes()`:

```
let tarr = Uint8Array.of(12, 5, 3);
console.log(tarr.includes(5)); // true
```

### 2. Frequently asked questions

- **Why is the method called `includes` and not `contains`?**  
The latter was the initial choice, but that broke code on the web ([MooTools adds this method to `Array.prototype`](#)).
- **Why is the method called `includes` and not `has`?**  
`has` is used for keys (`Map.prototype.has`), `includes` is used for elements (`String.prototype.includes`). The elements of a `Set` can be viewed as being both keys and values, which is why there is a `Set.prototype.has` (and no `includes`).

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- **The ES6 method String.prototype.includes works with strings, not characters. Isn't that inconsistent w.r.t. Array.prototype.includes?**  
If Array includes worked exactly like string includes, it would accept arrays, not single elements. But the two includes follow the example of indexOf; characters are seen as a special case and strings with arbitrary lengths as the general case.

3. Further reading

- **Array.prototype.includes** (Domenic Denicola, Rick Waldron)

3 Comments

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Dmitri Pavlutin • a year ago

Another difference:  
[ , , ].indexOf(undefined) // => -1  
[ , , ].includes(undefined) // => true  
includes() will find an undefined value in a sparse array, but indexOf() will not.  
2 ^ | v • Reply • Share



Raul Mihailă • a year ago

Also, it treats holes as undefined values.  
2 ^ | v • Reply • Share



Andrew Balmus • a year ago

Very nice, much cleaner than indexOf!  
^ | v • Reply • Share

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Tweets by @rauschma



Axel Rauschmayer

@rauschma

Enjoying "Troll Hunters":  
– "Let's call him 'Gnome Chomsky'"  
– "Juliet dies in this? Nooo!"

9h




Jonathan Creamer

@jcreamer898

A nice little shout out to [@rauschma...](#)  
[infoworld.com/article/316483... #es2017 #async](#)

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13h



Axel Rauschmayer

@rauschma

Not a physics book!  
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02 Feb



Jordan Harband

@ljharb

Making our React components forbid extra props has caught SO many bugs. I highly recommend it.

[npmjs.com/airbnb-prop-ty...](#)

npm: air...  
Custom ...  
npmjs.com

02 Feb



Seth Petry-Johnson

@spetryjohnson

Open strong. Be bold. Tell a story. Do something to get me interested. Opening w/ the "obligatory 'about me' slide" puts me to sleep :)

02 Feb

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