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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](#)).

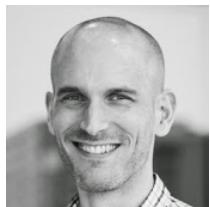
- **Why is the method called includes and not has?**

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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- November (4)
- October (4)
- September (5)
- August (1)
- June (1)
- May (2)
- April (2)
- March (2)
- ▼ February (8)

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JavaScript's
standard ...

JavaScript fatigue
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ECMAScript 2017:
the final feature
set

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async functions

ES2016 feature:
exponentiation
operator (**)

ES2016 feature:
Array.prototype.
includes

- January (8)

► 2015 (65)

► 2014 (55)

► 2013 (98)

► 2012 (177)

► 2011 (380)

► 2010 (174)

► 2009 (68)

► 2008 (46)

► 2007 (12)

► 2006 (1)

► 2005 (2)

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[dev](#) (592)

[javascript](#) (400)

[computers](#) (316)

[life](#) (194)

[jslang](#) (179)

[esnext](#) (156)

[apple](#) (107)

[webdev](#) (95)

[mobile](#) (83)

[scitech](#) (50)

- **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)

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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.
```

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Raul Mihăilă • a year ago

Also, it treats holes as undefined values.

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Andrew Balmus • a year ago

Very nice, much cleaner than indexOf!

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

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mac (47)
google (39)
java (37)
ios (33)
business (32)
video (32)
clientjs (31)
hci (27)
entertainment (26)
nodejs (26)
society (26)
browser (25)
firefox (25)
html5 (24)
ipad (24)
movie (23)
psychology (22)
2ality (18)
tv (18)
android (17)
social (17)
chrome (16)
fun (16)
jsmodules (16)
tablet (16)
humor (15)
politics (15)
web (15)
cloud (14)
hardware (14)
microsoft (14)
software engineering (13)
blogging (12)
gaming (12)
eclipse (11)
gwt (11)
numbers (11)
programming languages (11)
app store (10)
media (10)
nature (10)
security (10)
semantic web (10)
software (10)
twitter (10)
webos (10)
12quirks (9)
education (9)
jstools (9)
photo (9)
webcomponents (9)
windows 8 (9)

async (8)

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iphone (8)

itunes (8)
scifi-fantasy (8)

app (7)
babel (7)

bookmarklet (7)
chromeos (7)

english (7)
es proposal (7)

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jsshell (7)

thunderbolt (7)
webapp (7)

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promises (6)
ted (6)

book (5)
environment (5)

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web design (4)

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back to the future (3)

bitwise_ops (3)

css (3)

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icloud (3)

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jsfuture (3)

jsstyle (3)

linux (3)

mozilla (3)

python (3)

regexp (3)

samsung (3)

tizen (3)

traffic (3)

typedjs (3)

unix (3)

adobe (2)

angry birds (2)

angularjs (2)

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design (2)

dom (2)

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eval (2)

exploring es6 (2)

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