

# ES2015+ cheatsheet



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ads via Carbon

A quick overview of new JavaScript features in ES2015, ES2016, ES2017, ES2018 and beyond.

## Block scoping

## Backtick

Let

```
function fn () {  
  if (true) {  
  }  
}
```

Const

```
const a = 1
```

let is the new var. Constants work just like let, but can't be reassigned. See: [Let and const](#)

Interpolat

```
const m
```

Multiline

```
const s  
hello  
world  
,
```

Templat

## Binary a

## New methods

```
let bin  
let oct
```

New string methods

```
"hello".repeat(3)  
"hello".includes("ll")  
"hello".startsWith("he")  
"hello".padStart(8) // "    hello"  
"hello".padEnd(8) // "hello  "  
"hello".padEnd(8, '!') // hello!!!  
"\u1E9B\u0323".normalize("NFC")
```

See: [New methods](#)

## Classes

```
class C
```

Construct

```
// Same as: Math.pow(2, 8)
```

:hi

Methods

ret

}

Calling su

expa

}

Static me

ret

}

}

Syntacti

## # Promises

### Making promises

```
if (ok) { resolve(result) }  
else { reject(error) }  
})
```

For asynchronous programming. See: [Promises](#)

### Using promises

promise

### Promise functions

```
Promise.all(...)  
Promise.race(...)  
Promise.reject(...)
```

### Async-await

```
async function run () {  
  
  return [user, tweets]  
}
```

async functions are another way of using functions.

See: [async function](#)

## # Destructuring

### Destructuring assignment

Arrays

```
const scores = [22, 33]
const [math = 50, sci = 50, arts =
```

Objects

```
  title: 'The Silkworm',
  author: 'R. Galbraith'
}
```

```
// Result:
// math === 22, sci === 33, arts =
```

Default values can be assigned while dest

Supports for matching arrays and objects. See: [Destructuring](#)

### Default values

### Default values

### Loops

```
console.log(`Hi ${name}!`);
}
```

```
...
}
```

The assignment expressions work in loops, too.

### Object destructuring

Extract some keys individually and remain

## # Spread

| with Object spread   | with Array                                 |
|--|--|
| <pre>const options = {<br/>  visible: true<br/>}</pre>   | <pre>const u<br/><br/>'rsta<br/>]</pre>    |
| without Object spread  | without A                                  |
| <pre>const options = Object.assign(<br/>  {}, defaults,<br/>  { visible: true })</pre>                                     | <pre>const u<br/>  .conc<br/>  .conc</pre> |
| <p>The Object spread operator lets you build new objects from other objects.</p> <p>See: <a href="#">Object spread</a></p> |  |
| <p>The spre</p> <p>See: <a href="#">Spr</a></p>  |  |

# # Functions

## Function arguments

## Fat arrow

| Default arguments   | Fat arrow             |
|---|-----------------------|
| <pre>return `Hello \${name}`<br/>}</pre>                              | <pre>...<br/>})</pre> |
| Rest arguments  | With argu             |
| <pre>// y is an Array<br/>return x * y.length<br/>}</pre>             | <pre>...<br/>})</pre> |
| Spread  | Implicit re           |
| <pre>// same as fn(1, 2, 3)</pre>                                     |                       |
| <p>Default, rest, spread. See: <a href="#">Function arguments</a></p> |                       |

## # Objects

### Shorthand syntax

```
module.exports = { hello, bye }  
// Same as: module.exports = { hello: hello, bye: bye }
```

See: [Object literal enhancements](#)

### Getters and setters

```
const App = {  
  return this.status === 'closed'  
},  
  
  this.status = value ? 'closed' : 'open'  
}  
}
```

See: [Object literal enhancements](#)

### Extract values

```
const fatherJS = { age: 57, name: "Brendan Eich" }  
  
// [57, "Brendan Eich"]  
  
// [{"age", 57}, {"name", "Brendan Eich"}]
```

## # Modules

```
// No c  
// Same
```

```
// Impl
```

Method

```
const A
```

```
con  
}  
}  
// Same
```

See: [Obj](#)

Comput

```
let eve  
let har  
  
}  
// Same
```

See: [Obj](#)

|  |                               |
|--|-------------------------------|
| <pre>import 'helpers'<br/>// aka: require('...')</pre>   | <pre>export<br/>// aka:</pre> |
| <pre>import Express from 'express'<br/>// aka: const Express = require('...').default    require('...')</pre>      | <pre>export<br/>// aka:</pre> |
| <pre>import { indent } from 'helpers'<br/>// aka: const indent = require('...').indent</pre>                       | <pre>export<br/>// aka:</pre> |
| <pre>import * as Helpers from 'helpers'<br/>// aka: const Helpers = require('...')</pre>                           | <pre>export i</pre>           |
| <pre>import { indentSpaces as indent } from 'helpers'<br/>// aka: const indent = require('...').indentSpaces</pre> |                               |
| <p>import is the new require(). See: <a href="#">Module imports</a></p>  |                               |

## # Generators

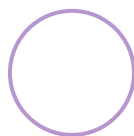
### Generators

### For..of it

|  |                                     |
|--|-------------------------------------|
| <pre>function* idMaker () {<br/>  let id = 0<br/>  while (true) { yield id++ }<br/>}</pre>                         | <pre>for (let<br/>  ...<br/>)</pre> |
| <pre>let gen = idMaker()<br/>gen.next().value // → 0<br/>gen.next().value // → 1<br/>gen.next().value // → 2</pre> | <pre>For itera</pre>                |
| <p>It's complicated. See: <a href="#">Generators</a></p>   |                                     |

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