

PV247

ECMAScript

ECMAScript: A language standardized by ECMA International.

JavaScript: The commonly used name for implementations of the ECMAScript standard.

ECMAScript 5 (ES5): The 5th edition of ECMAScript, standardized in 2009. This standard has been implemented fairly completely in all modern browsers

ECMAScript 6 (ES6)/ ECMAScript 2015 (ES2015): The 6th edition of ECMAScript, standardized in 2015. This standard has been partially implemented in most modern browsers. To see the state of implementation by different browsers and tools, check out [these compatibility tables](#).

ECMAScript 7 / 2016

ECMAScript 8 / 2017

Polyfills & transpiling

"A polyfill, or polyfiller, is a piece of code (or plugin) that provides the technology that you, the developer, expect the browser to provide natively. Flattening the API landscape if you will."

<https://remysharp.com/2010/10/08/what-is-a-polyfill>

*"A transpiler takes the **syntax** that older browsers won't understand (e.g. classes, 'const', arrow functions), and turns them into syntax they will understand (functions, 'var', functions)."*

<https://hackernoon.com/polyfills-everything-you-ever-wanted-to-know-or-maybe-a-bit-less-7c8de164e423>

ES6 new features

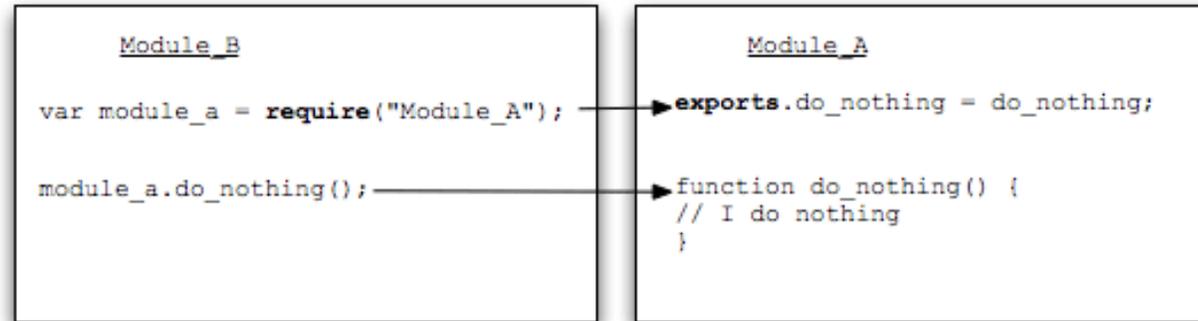
- Constants, let
- Default arguments
- String interpolation
- Property shorthands
- Spread operators
- Object & array destructuring
- Arrow functions (lambda expressions)
- Promises
- Classes & class inheritance

All features - <http://es6-features.org>

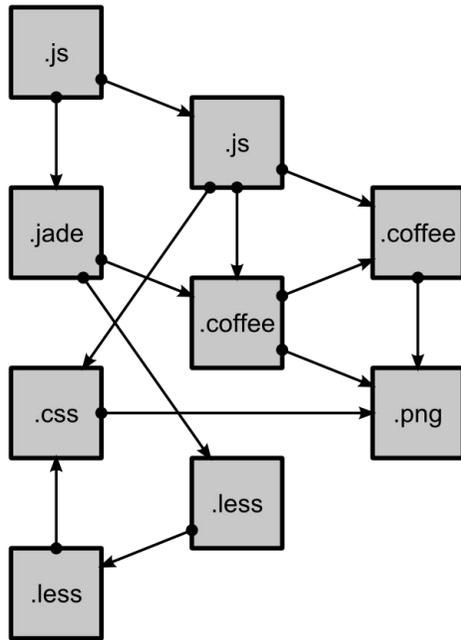
<https://egghead.io/courses/learn-es6-ecmascript-2015>

Modules

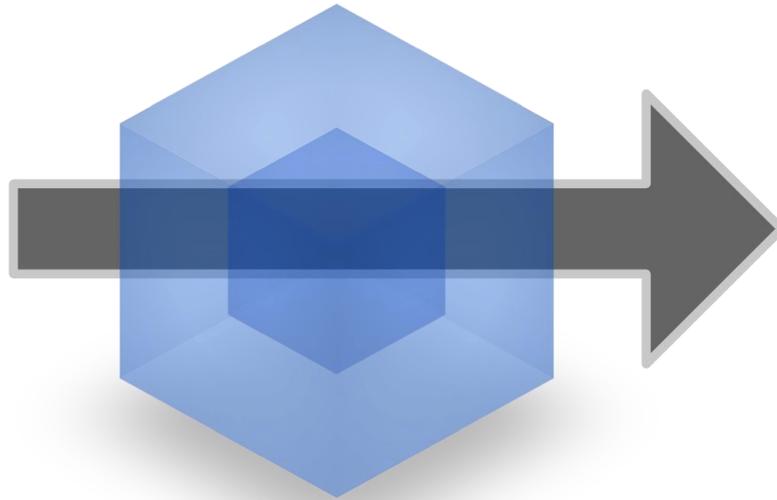
- JavaScript Modules refer to a small units of independent, reusable code
- They seems to mimic how classes are used in Java or Python.



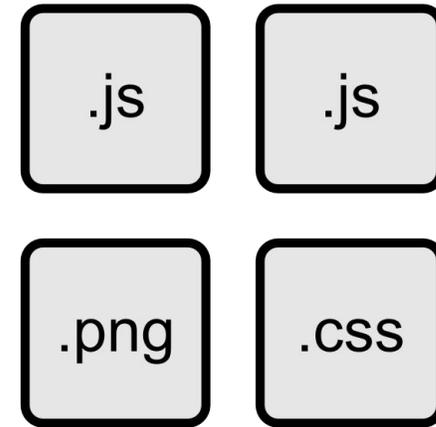
<https://medium.com/sungthecoder/javascript-module-module-loader-module-bundler-es6-module-confused-yet-6343510e7bde>



modules
with dependencies

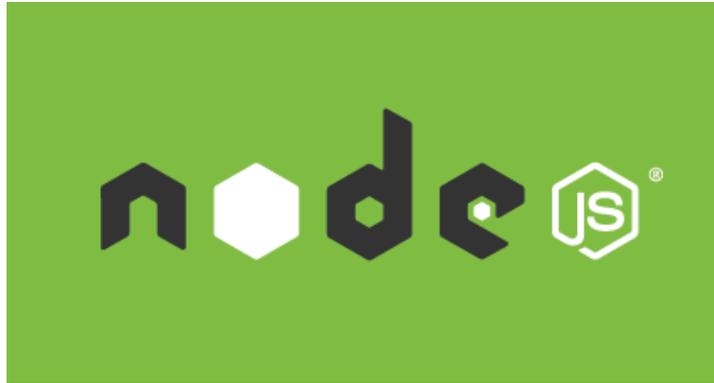


webpack
MODULE BUNDLER

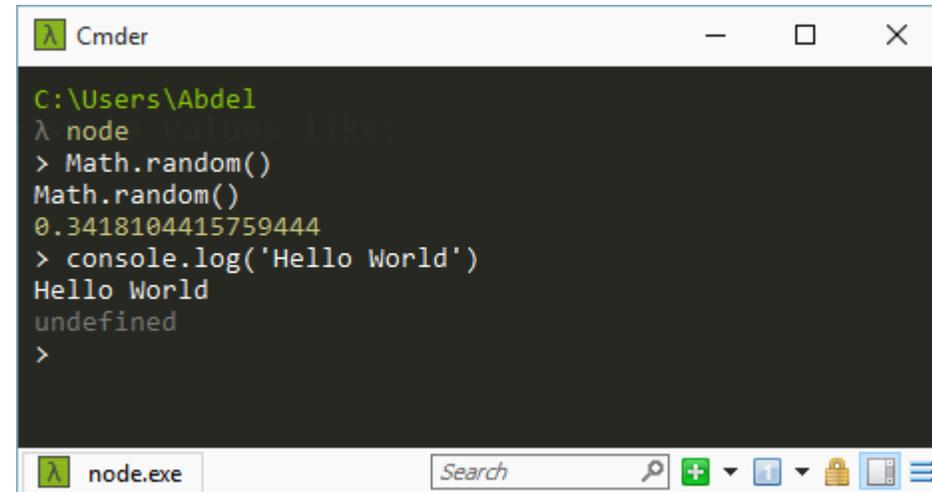


static
assets

<https://webpack.js.org/concepts/>



- npm init
- npm install
- npm run ...

A screenshot of a Windows Command Prompt window titled "Cmder". The window shows the following text:

```
C:\Users\Abdel  
λ node  
> Math.random()  
Math.random()  
0.3418104415759444  
> console.log('Hello World')  
Hello World  
undefined  
>
```

The taskbar at the bottom shows the taskbar icon for "node.exe", a search bar, and several system tray icons.

<https://docs.npmjs.com/getting-started/what-is-npm>

Maintainable code

Code analysis

A linter or lint refers to tools that analyze source code to flag programming errors, bugs, stylistic errors, and suspicious constructs.

- [Eslint](#), [JSLint](#), [JSHint](#)

Lack of static typing

Static typed languages are those in which type checking is done at compile-time, whereas dynamic typed languages are those in which type checking is done at run-time.

- [Typescript](#), [Flow](#)

Maintainable styles

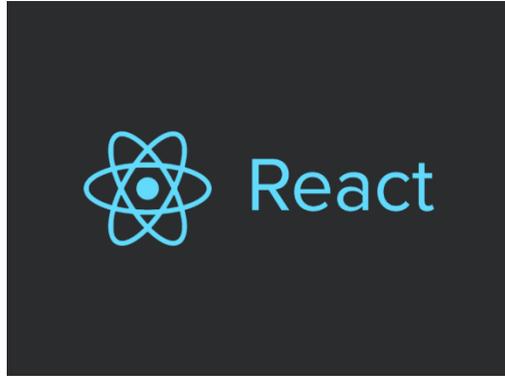
BEM

Methodology that helps you to create reusable components. Core concept is to create the styles for components based on **Block** (standalone meaningful entity), **Element** (part semantically tied to its block), **Modifier** (appearance or behavior flag).

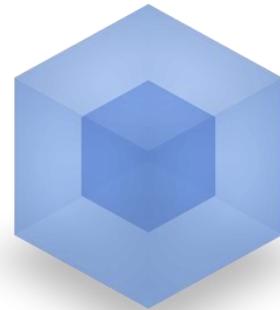
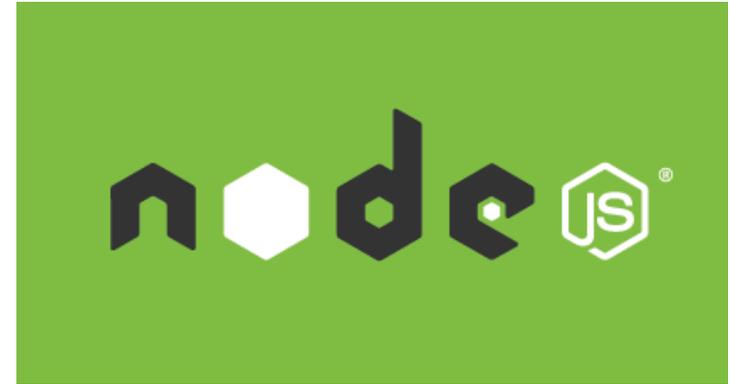
LESS

Backwards-compatible language extension for CSS. LESS looks just like CSS, it only makes a few convenient additions. Among them are variables, nesting, operations, functions and much more.

- [{less}](#)



TypeScript



webpack
MODULE BUNDLER

BABEL

