

HELLO JAVASCRIPT

"Unfortunately, because of its dominance in the web, [JavaScript] is now moving into virtually everywhere else. It has become a tragically important language, and we're going to be stuck with it for a time." – Douglas Crockford 8/2012



"Regardless of your personal feelings about JavaScript it is undoubtedly the single most important computer language in the world today." – Joel Cochran 12/2012

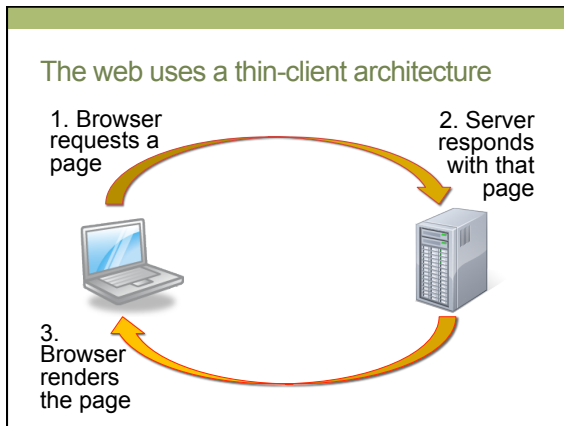


JavaScript is eating the world.

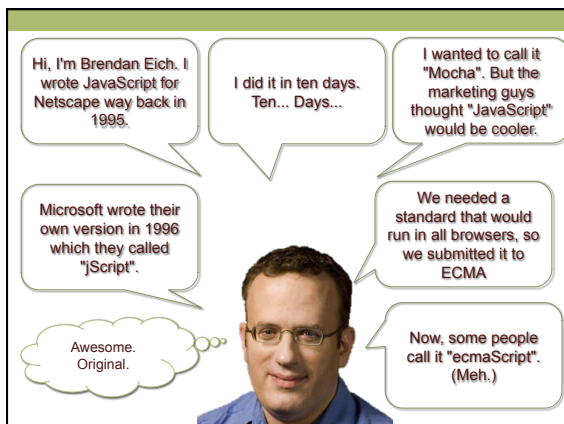
If you want a job, Node.js is the thing to hop into right now. Something different is happening with Node.js. It is flipping the typical script.

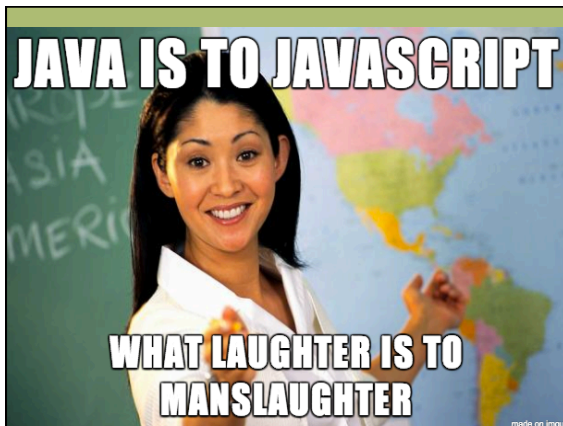
Kevin Lacker, CTO/
cofounder of Parse













JavaScript can be ... weird

- Dynamically typed
- Only three basic data types
- Functions can contain functions
- Objects created on the fly
- Local scoping only works occasionally
- All function parameters are optional

A simple line drawing of a face with wide, staring eyes and an open mouth showing sharp teeth, resembling a screaming or shocked expression.

ES2015 is the current standard

- But not all browsers support all the features

The logo for ES2015, featuring the letters 'ES' in a bold, black font above a yellow shield-like shape containing the year '2015' in white.

You add JavaScript to web pages

- Put it inside `<script>` tags ...

```
<script>
function sayHi() {
  alert("Hello, world.");
}
sayHi();
</script>
```

- ... or add as a separate file

```
<script src="navigation.js"></script>
```

```
var x; // Everything to the right of slashes
/*
Anything between slash-splat and
splat-slash are comments.
*/
```

I comment my code - but I
still don't know what I
did or why.

You can comment your code

JAVASCRIPT
FRAMEWORKS



Transpilers

- Babel - ES2015-to-ES5
- TypeScript - Proprietary dialect to ES5
- Traceur - ES2015-to-ES5
- CoffeeScript - Proprietary dialect to ES5
- Scala.js
- JS++
- ST-JS

Package managers

- Download and install components in a controlled, easy way
- Like system package managers but for JavaScript
 - bower - Good for static assets. Has been called "abandonware"
 - npm - Most popular

Testing tools

- Mocha - A nodeJS testing framework/test runner
 - Can test node code and server-side JavaScript using PhantomJS as a headless browser
- Karma - Just like Mocha
- Jasmine
- Chai - Just like Jasmine
- Usually Mocha/Chai or Karma/Jasmine

Linters

- Tell you when your code is not following best practices.
- Helps to maintain high code quality.
- ESLint - Newer and better
- JSLint - Older

Minifying
makes your
JavaScript
load quickly

YUI Compressor
<http://developer.yahoo.com/yui/compressor>
<http://refresh-sf.com/yui>



Minifiers

- Uglify - Very popular
- Browserify - conceptually easier
- Webpack - more capable and does more for you.

Task runners/build systems

- Transpiles your code, lints it, minifies js and css, compiles documentation from comments, produce source maps, checks in to git, runs tests, deploys your code, etc.
- Task runners/build systems
 - WebPack
 - gulp - Streams - code over configuration
 - grunt - Files - configuration over code
 - npm run

tl;dr

- JavaScript (aka. ECMAScript) is taking over the world because it runs on nearly every machine known to man.
- It can be different
 - Dynamic
 - Not OO
 - Strange practices and patterns
- JavaScript fatigue and JavaScript friction are very real! Try not to get discouraged
- Many libraries and tools built for JavaScript make your job easier ... and in some ways harder.
