#### The Future of the Front End

or: How I Learned To Stop Worrying And Love JavaScript

#### About me

- @iangreenleaf
- Full-stack Rails developer
- Hire me! dev@iangreenleaf.com
- I wrote a book on CoffeeScript: http://goo.gl/5WtQdg

Predicting the future...

Reality

## Internet Explorer is not going away

#### Poll

## Internet Explorer is not going away

#### Mobile is the new IE

# We're never getting rid of JavaScript

Or CSS

Or HTML

### Standards will never be standard

### A way forward

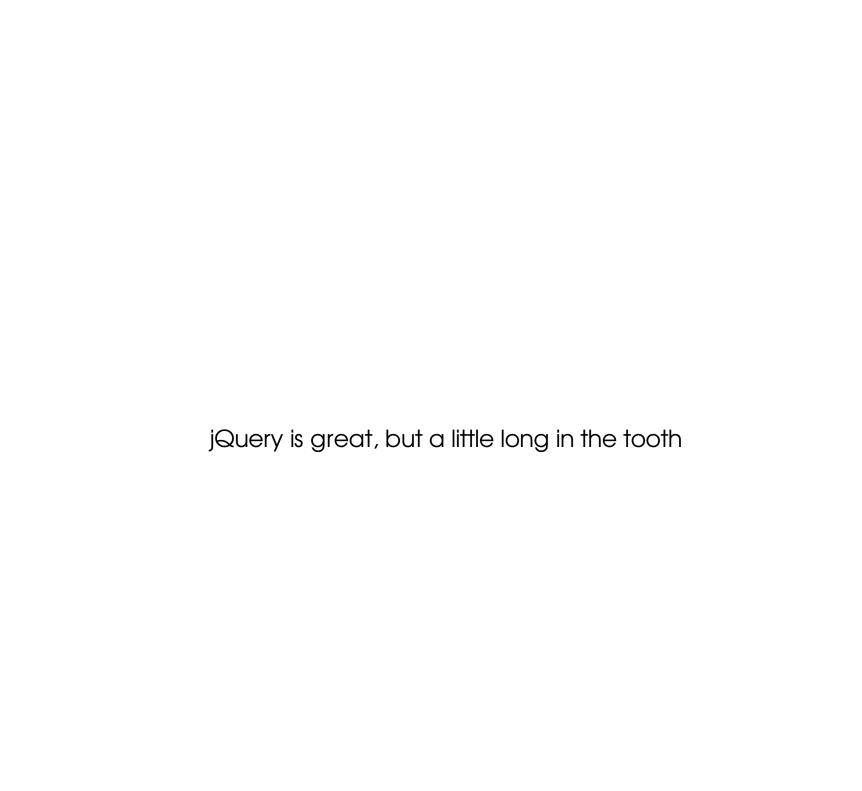
### The dark ages

jQuery

### jQuery was a watershed moment

```
$(".my-class");
```

```
$(".my-class");
```



# Solution: compiled languages!

New Language --> Compiler --> HTML/CSS/JavaScript

### JavaScript/CSS/HTML is the new bytecode

- Backwards compatible
- Reasonably powerful
- Awful to write by hand

SCSS (née Sass)

```
a {
   color: #484C55;
}
```

```
$link-color: #484C55;
a {
  color: $link-color;
}
```

```
$link-color: #484C55;
a {
  color: $link-color;
}
a:hover {
  color: $link-color + #444;
}
```

```
.nav-bar {
   a {
      color: black;
   }
}
```

```
@mixin highlighted {
   background-color: yellow;
   font-style: italic;
}
p.callout {
   @include highlighted();
}
```

SCSS + Compass

```
.avatar {
    // No!!!
    -webkit-border-radius: 5;
    -moz-border-radius: 5;
    border-radius: 5;
}
```

```
.avatar {
   // Yess!!!
   @include border-radius(5);
}
```

#### Haml

#nav-bar.dropdown
%ul.nav-links
%li Home
%li About

### CoffeeScript

```
num = Math.pow 2, 3
if true == true
  console.log "Tautology!"
```

```
animals = ["dog", "cat", "bird"]
for animal in animals
  console.log animal
```

```
double = (num) ->
  num * 2

double(5)
```

```
class Automobile
  honk: ->
    console.log "Beep!"

car = new Automobile()
car.honk()
```

```
class PoliceCar extends Automobile
honk: ->
    super
    console.log "Wee-oo wee-oo!"
```

document.getElementById("nav-bar").cla

#### JavaScript

### JavaScript ...well, ES6 to be precise

```
for (let element of [1, 2, 3]) {
  console.log(element);
}
```

```
class PoliceCar extends Automobile {
  honk() {
    super();
    console.log("Wee-oo wee-oo!");
  }
}
```

```
import {firstName, lastName}
from './another_file';
```

#### ...and more

#### ClojureScript

By way of Clojure

```
(def a 5)
(+ a 2 3)
```

```
(def shout (fn [x]
   (.toUpperCase x)))
(shout "hello")
(map shout ["hello" "world"])
```

```
(def shout (fn [x]
   (.toUpperCase x)))
(shout "hello")
(map shout ["hello" "world"])
```

```
(def foo (js-obj "bar" "baz"))
; var foo = {bar: "baz"};
(set! (.-bar foo) "quux")
(def clojure-foo (js->clj foo))
(clj->js clojure-foo)
```

asm.js

## Can I use asm.js now? ....sorta.

- LLVM is a many-to-many compiler toolset
- Emscripten can go from LLVM to JavaScript
- C --(clang)--> LLVM --(Emscripten)--> asm.js

The best is yet to come

# We're never getting rid of HTML/CSS/JavaScript ...but I don't care.

#### Fin