

JavaScript for Pros

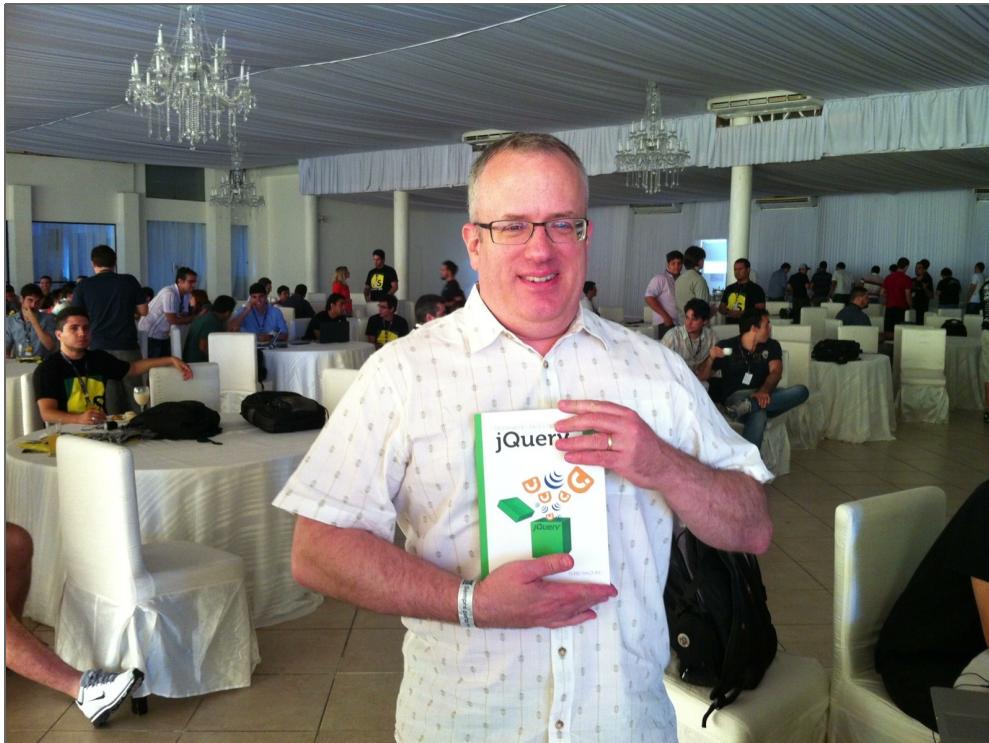
TDC 2013

Plínio Balduino / @p_balduino

A past century software developer



Brendan Eich



Developed JavaScript in 1995

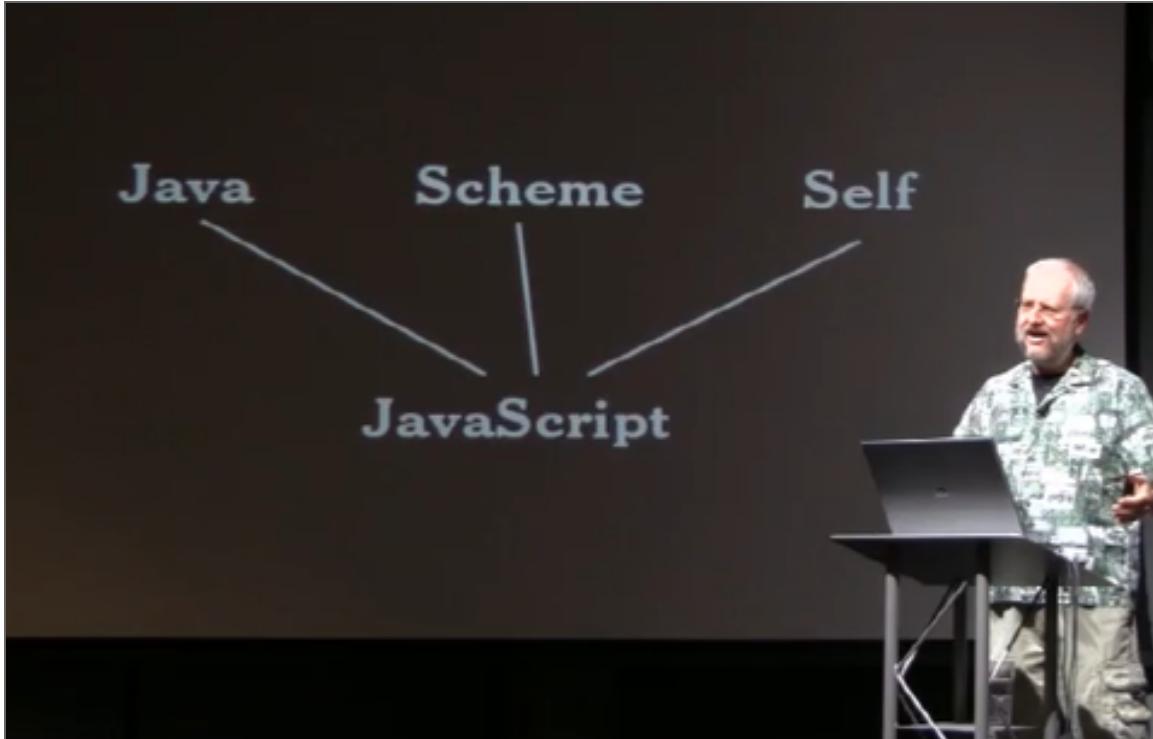
Misconceptions

Not Java

Not a toy language

Not web only

Origins



Definition

Dynamic

Object-oriented

Prototype-based

Functional

Very flexible

Dynamic...

... like Ruby

```
var x = 1;  
  
var y = "oh yeah!";  
  
eval("alert('meh');");
```

Object-oriented

```
// JavaScript
function Dog() {

    this.bark = function() {
        return "WHOOF!"
    };
}

var rex = new Dog();

rex.bark();
```

Object-oriented

```
// Java
public class Dog() {

    public String bark() {
        return "WOOOF!";
    }
}

Dog rex = new Dog();

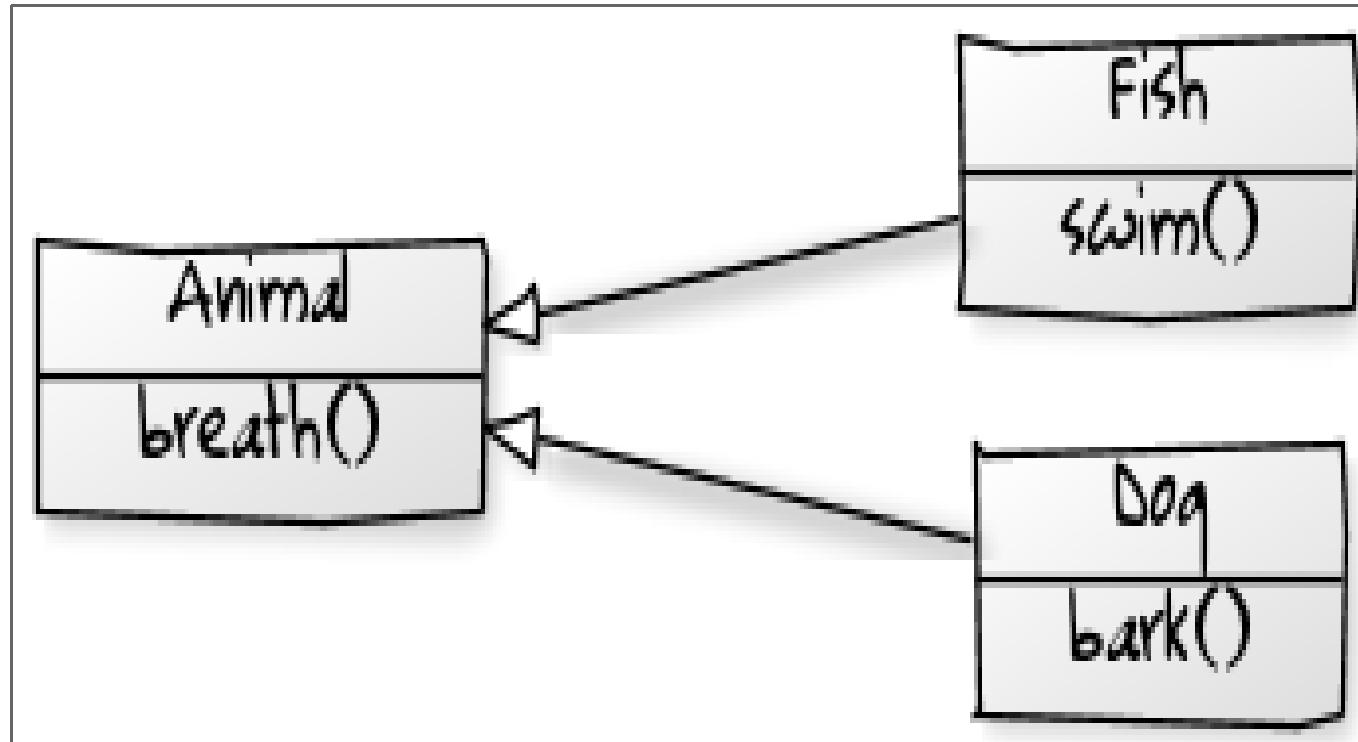
rex.bark();
```

Prototype-based

Because JavaScript is object-oriented

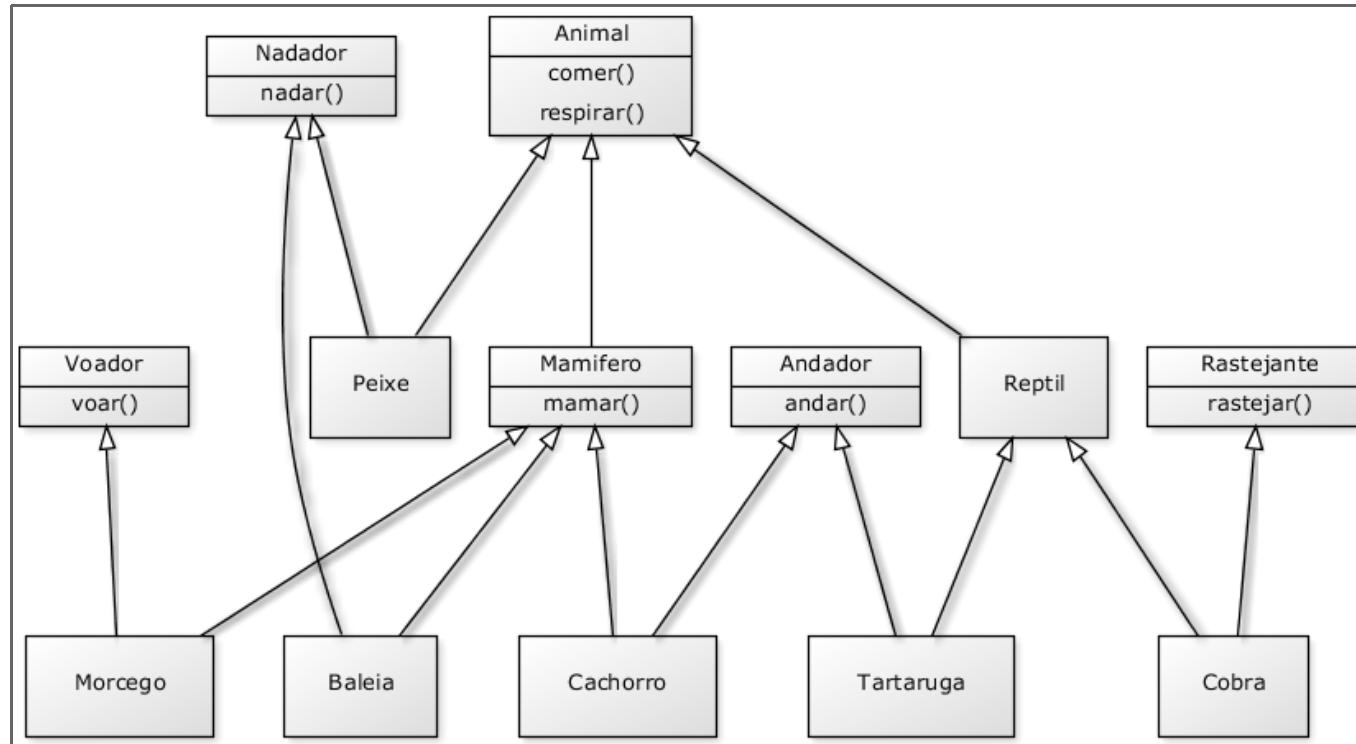
Not class-oriented

Classical inheritance



```
function Animal() {
  this.breath() {
    console.log("I'm breathing");
  }
}
function Dog() {
  this.bark() {
    console.log("WHOOOF!");
  }
}
function Fish() {
  this.swim() {
    console.log("GLOOB GLOOB!");
  }
}
Dog.prototype = new Animal();
Fish.prototype = new Animal();
```

Multiple inheritance



Mixin

```
function Bubbles() {
  this.bubble() {
    console.log("Making bubbles");
  }
}
```

Mixin

```
Object.prototype.includes = function (constructor) {
  var obj = new constructor();
  for (var prop in obj) {
    if (obj.hasOwnProperty(prop)) {
      this.prototype[prop] = obj[prop];
    }
  }
};

Fish.includes(Bubbles);
var fish = new Fish();

fish.bubble();
```

Functional

JS is Lisp in C's Clothing (Douglas Crockford)



High Order Functions

```
; SCHEME
(define calculate (lambda (op v1 v2)
                         (op v1 v2)))
(define sum (lambda (a b) (+ a b)))
(define mult (lambda (x y) (* x y)))
(calculate sum 2 3) ; retorna 5
(calculate mult 2 3) ; retorna 6
```

High Order Functions

```
// JavaScript
function calculate(op, v1, v2) {
    return op(v1, v2);
}

function sum(a, b){
    return a + b;
}
function mult(x, y){
    return x * y;
}

calculate(sum, 2, 3); // retorna 5

calculate(mult, 2, 3); // retorna 6
```

jQuery uses all the time

```
$($.function(){
  console.log("DOM loaded")
});

$(".clickable").click($.function(){
  console.log(this + " was clicked")
});
```

Currying

```
function hey(text, name) {  
  console.log(text + ", " + name);  
}  
  
hey("Bom dia", "João");  
  
hey("Bom dia", "José");  
  
hey("Bom dia", "Nicolau");
```

Currying

```
function hey(text) {  
    return function(name) {  
        console.log(text + ", " + name);  
    }  
}  
  
var bomDia = hey("Bom dia");  
  
bomDia("João");  
  
bomDia("José");  
  
bomDia("Nicolau");
```

Export to PDF

Presentations can be **exported to PDF**, below is an example that's been uploaded to SlideShare.



Take a Moment

Press b or period on your keyboard to enter the 'paused' mode. This mode is helpful when you want to take distracting slides off the screen during a presentation.

Stellar Links

- Try the online editor
- Source code on GitHub
- Follow me on Twitter

THE END

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