

- a sip of -

CoffeeScript

Variables and Functions

• *level 1* •

A Beautiful Programming Language

- ◆ Least amount of code to solve problems
- ◆ Readable and Understandable
- ◆ Easy to Maintain

JavaScript ?



compiles into *JavaScript*

- ◆ Least amount of code to solve problems
- ◆ Readable and Understandable
- ◆ Easy to Maintain

<http://jashkenas.github.com/coffee-script/>



CoffeeScript is a little language that compiles into JavaScript. Underneath all of those embarrassing braces and semicolons, JavaScript has always had a gorgeous object model at its heart. CoffeeScript is an attempt to expose the good parts of JavaScript in a simple way.

The golden rule of CoffeeScript is: "*It's just JavaScript*". The code compiles one-to-one into the equivalent JS, and there is no interpretation at runtime. You can use any existing JavaScript library seamlessly (and vice-versa). The compiled output is readable and pretty-printed, passes through [JavaScript Lint](#) without warnings, will work in every JavaScript implementation, and tends to run as fast or faster than the equivalent handwritten JavaScript.

Latest Version: [1.1.2](#)

Overview

CoffeeScript on the left, compiled JavaScript output on the right.

```
# Assignment:  
number = 42  
opposite = true  
  
# Conditions:
```

```
var cubes, list, math, num, number, opposite, race  
var __slice = Array.prototype.slice;  
number = 42;  
opposite = true;  
if (opposite) number = -42;
```

<http://jashkenas.github.com/coffee-script/>

functions and other block expressions, multi-line conditionals are delimited by indentation. There's



TABLE OF CONTENTS

TRY COFFEESCRIPT

ANNOTATED SOURCE

possible, and closure wrapping otherwise. There is no explicit ternary statement in CoffeeScript.

```
mood = greatlyImproved if singing
mood = greatlyImproved if singing
if happy and knowsIt
  clapsHands()
  chaChaCha()
else
  clapsHands()
  chaChaCha()
else
  showIt()
date = if friday then sue else jill
date = if friday then sue else jill
options or= defaults
options or= defaults
```

```
var date, mood;
if (singing) {
  mood = greatlyImproved;
}
if (happy && knowsIt) {
  clapsHands();
  chaChaCha();
} else {
  showIt();
}
date = friday ? sue : jill;
options || (options = defaults);
```

Run

CoffeeScript 

Splats...

JavaScript 

The JavaScript `arguments` object is a useful way to work with functions that accept variable

CoffeeScript



JavaScript



Variables

```
message = "Ready for some Coffee?"  
alert(message)
```



The page at jashkenas.github.com says:

Ready for some Coffee?

OK

```
var message;  
message = "Ready for some Coffee?";  
alert(message);
```



JS

No variable declarations

No semicolons

Variables and Functions

a sip of
CoffeeScript

2 ways to create Functions in JS

◆ Named Functions

```
function coffee() {  
    return confirm("Ready for some Coffee?");  
}
```

JS

◆ Function Expressions

```
var coffee = function() {  
    return confirm("Ready for some Coffee?");  
}
```

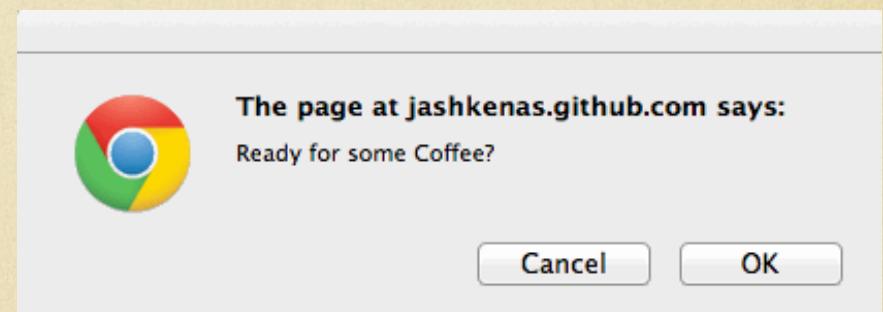
JS

Both called with



coffee();

Variables and Functions



CoffeeScript

We only use Function Expressions

```
coffee = ->  
  confirm "Ready for some Coffee?"
```



1 tab or 2 spaces indented

-> converts to function() {

Always has a return value

```
var coffee = function() {  
  return confirm("Ready for some Coffee?");  
}
```

JS

Variables and Functions

a sip of
CoffeeScript

Returning a String

```
coffee = ->  
  answer = confirm "Ready for some Coffee?"  
  "Your answer is " + answer
```



Same as

```
"Your answer is #{answer}"
```

```
var coffee;  
coffee = function() {  
  var answer;  
  answer = confirm("Ready for some Coffee?");  
  return "Your answer is " + answer;  
}
```



JS

Variables and Functions

a sip of
CoffeeScript

Function Parameters

```
coffee = (message) ->  
  answer = confirm message  
  "Your answer is #{answer}"
```



```
var coffee;  
coffee = function(message) {  
  var answer;  
  answer = confirm(message);  
  return "Your answer is " + answer;  
}
```



JS

Variables and Functions

a sip of
CoffeeScript

Calling Functions



```
coffee = ->
```

```
coffee()
```

```
coffee = (message) ->
```

```
coffee("Yo")
```

parenthesis optional

```
coffee = (message, other) ->
```

```
coffee "Yo"
```

```
coffee("Yo", 2)
```

```
coffee "Yo", 2
```

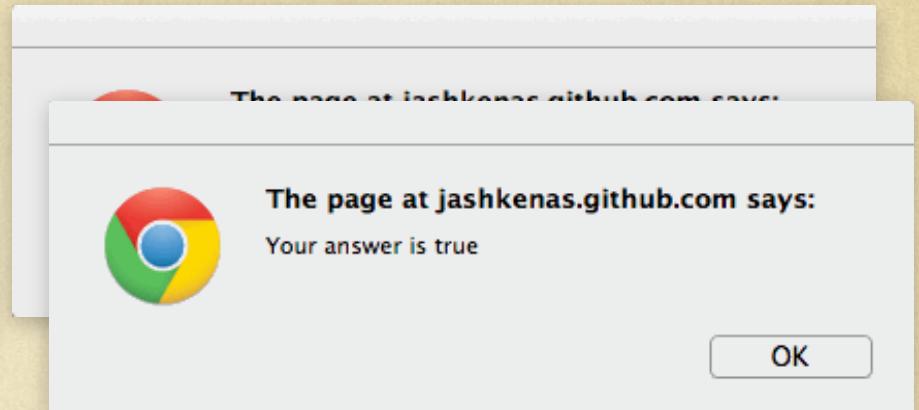
Variables and Functions

a sip of
CoffeeScript

Function Parameters



```
coffee = (message) ->  
  answer = confirm message  
  "Your answer is #{answer}"
```



```
alert coffee("Ready for some Coffee?")
```

parenthesis on everything

but the outermost call

Variables and Functions

a sip of
CoffeeScript

Optional Parameters

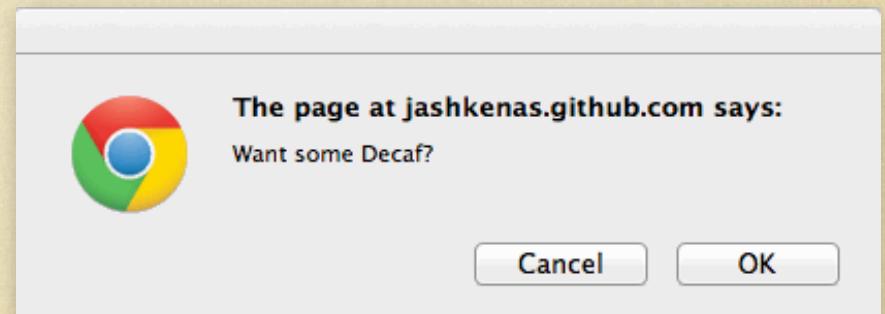
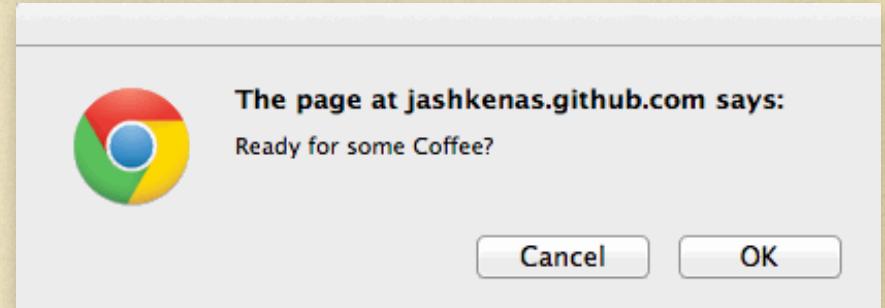


If we want a default message

```
coffee = (message = "Ready for some Coffee?") ->  
  answer = confirm message  
  "Your answer is #{answer}"
```

```
alert coffee()
```

```
alert coffee("Want some Decaf?")
```



Variables and Functions

a sip of
CoffeeScript

Optional Parameters

```
coffee = (message = "Ready for some Coffee?") ->  
  answer = confirm message  
  "Your answer is #{answer}"
```



```
var coffee;  
coffee = function(message) {  
  var answer;  
  if (message == null) {  
    message = "Ready for some Coffee?";  
  }  
  answer = confirm(message);  
  return "Your answer is " + answer;  
}
```

JS

Variables and Functions

a sip of
CoffeeScript

The CoffeeScript Compiler (optional)

1. Install Node.js

<http://nodejs.org/>

2. Install npm

<http://npmjs.org/>

3. `$ npm install -g coffee-script`

```
$ coffee -h
```

Usage: coffee [options] path/to/script.coffee

| | |
|--------------------------------|---|
| <code>-c, --compile</code> | compile to JavaScript and save as .js files |
| <code>-i, --interactive</code> | run an interactive CoffeeScript REPL |
| <code>-o, --output</code> | set the directory for compiled JavaScript |
| <code>-w, --watch</code> | watch scripts for changes, and recompile |
| <code>-p, --print</code> | print the compiled JavaScript to stdout |
| <code>-e, --eval</code> | compile a string from the command line |

Variables and Functions



Command Line Examples

```
$ coffee -c test.coffee
```

Creates test.js

```
$ coffee -cw test.coffee
```

Every time test.coffee is updated re-compile.

```
$ coffee -c src -o js
```

Compile all .coffee files in the src dir into the js dir.

Every time a file is updated re-compile.

Variables and Functions



CoffeeScript TextMate Bundle

<https://github.com/jashkenas/coffee-script-tmbundle>



Sublime Text 2

A screenshot of the TextMate text editor window. The title bar says "test.coffee — CoffeeScriptCourse". The file tab below it also says "test.coffee". The code area contains the following CoffeeScript code:

```
coffee = (message="Ready for some Coffee?") ->
  answer = confirm message
  "Your answer is #{answer}"
```

Variables and Functions

CoffeeScript

Creative Commons

| name | author | URL |
|----------------------------------|--|---|
| Information density | Arenamontanus | http://www.flickr.com/photos/arenamontanus/535807315 |
| Paper Writings: Quotes | Lucia.. | http://www.flickr.com/photos/angelic0devil6/2104607220 |
| Sütterlin | <u>ninastoessinger</u> | http://www.flickr.com/photos/ninastoessinger/4713004390 |
| FF DIN Round: ‘Round PieFontFont | | http://www.flickr.com/photos/fontfont/4840584146 |
| Sonnet 18 | Jinx! | http://www.flickr.com/photos/span112/3041263205 |

- a sip of -

CoffeeScript

download the slides

use the hints

Applied jQuery

• *level 2* •

jQuery to CoffeeScript

```
jQuery(function($) {  
    jQuery ($) -> or $ -> *  
  
    function changeTab(e) {  
        e.preventDefault();  
        $("#tabs li a.active").removeClass("active");  
        $(this).addClass("active");  
    }  
  
    $("#tabs ul li a").click(changeTab);  
});
```

JS

SELECT A FLIGHT

Sep 27

Sep 28

Sep 29

Sep 30

Oct 01

* If no other libraries are using \$

Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

\$ ->

```
function changeTab(e) {  
    e.preventDefault();  
    $("#tabs li a.active").removeClass("active");  
    $(this).addClass("active");  
}  
  
$("#tabs ul li a").click(changeTab);  
});
```

changeTab = (e) ->



JS

Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

```
$ ->
  changeTab = (e) ->

    e.preventDefault();
    $("#tabs li a.active").removeClass("active");
    $(this).addClass("active");
  }

  $("#tabs ul li a").click(changeTab);
});
```



JS

Remove all semicolons and curly brackets

Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

```
$ ->
  changeTab = (e) ->
    e.preventDefault()
    $("#tabs li a.active").removeClass("active")
    $(this).addClass("active")

  $("#tabs ul li a").click(changeTab)
```



Optionally remove parenthesis

Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

```
$ ->  
changeTab = (e) ->  
  e.preventDefault()  
  $("#tabs li a.active").removeClass "active"  
  $(this).addClass "active"  
  
$("#tabs ul li a").click changeTab
```



same as

```
$(@).addClass "active"
```

@ = this

jQuery to CoffeeScript

```
jQuery(function($) {  
  function changeTab(e) {  
    e.preventDefault();  
    $("#tabs li a.active").removeClass("active");  
    $(this).addClass("active");  
  }  
  $("#tabs ul li a").click(changeTab);  
});
```

JS

```
$ ->  
  changeTab = (e) ->  
    e.preventDefault()  
    $("#tabs li a.active").removeClass "active"  
    $(@).addClass "active"  
  
  $("#tabs ul li a").click changeTab
```



Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

```
$("#tabs #error a").click(function (e){  
  e.preventDefault();  
});
```

JS

```
$("#tabs #error a").click (e) ->  
  e.preventDefault()
```



```
$('#confirm').queue(function() {  
  $(this).dequeue();  
});
```

JS

```
$("#confirm").queue ->  
  $($@).dequeue()
```



Applied jQuery

a sip of
CoffeeScript

jQuery to CoffeeScript

```
function showNumberOfFlights(e) {  
  var num_flights = $(this).data('flights');  
  $(this).append("<span>" + num_flights + "</span>");  
  $("#tabs span.tooltip").show();  
}  
JS
```

```
showNumberOfFlights = (e) ->  
  num_flights = $(@).data 'flights'  
  $(@).append "<span>#{flights}</span>"  
  $("#tabs span.tooltip").show()
```



- a sip of -

CoffeeScript

Conditionals & Operators

• *level 3* •

If Statement

```
if (age < 18) {  
  alert('Under age');  
}
```

JS

```
if age < 18  
  alert 'Under age'
```



```
alert 'Under age' if age < 18
```



```
if age < 18 then alert 'Under age'
```



Parenthesis
Optional

Conditionals & Operators

a sip of
CoffeeScript

If Else Statement

```
if (age < 18) {  
    alert('Under age');  
} else {  
    alert('of age');  
}
```

JS

```
if age < 18  
    alert 'Under age'  
else  
    alert 'of age'
```



```
if age < 18 then alert 'Under age' else alert 'of age'
```



No Ternary Operator

Conditionals & Operators

a sip of
CoffeeScript

Operators

| CoffeeScript | JavaScript |
|---|-------------------------|
| <code>==</code> | <code>is</code> |
| <code>!=</code> | <code>isnt</code> |
| <code>not</code> | <code>!</code> |
| <code>and</code> | <code>&&</code> |
| <code>or</code> | <code> </code> |
| <code>true</code> <code>yes</code> <code>on</code> | <code>true</code> |
| <code>false</code> <code>no</code> <code>off</code> | <code>false</code> |

Conditionals & Operators

a sip of
CoffeeScript

Operator Examples & Unless

```
if paid() and coffee() is on then pour()
```



```
if (paid() && coffee() === true) {  
  pour();  
}
```

JS

```
addCaffeine() if not Decaf()
```



```
addCaffeine() unless Decaf()
```



Conditionals & Operators

a sip of
CoffeeScript

Chained Comparisons

```
if (2 < newLevel && newLevel < 5) {  
  alert("In Range!");  
}
```

JS

```
if 2 < newLevel < 5  
alert "In Range!"
```



Conditionals & Operators

a sip of
CoffeeScript

Switch Statements

JS

```
var message = (function() {  
  switch (cupsOfCoffee) {  
    case 0:  
      return 'Asleep';  
    case 1:  
      return 'Eyes Open';  
    case 2:  
      return 'Buzzed';  
    default:  
      return 'Dangerous';  
  }  
})();
```



```
message = switch cupsOfCoffee  
  when 0 then 'Asleep'  
  when 1 then 'Eyes Open'  
  when 2 then 'Buzzed'  
  else 'Dangerous'
```

Conditionals & Operators

- a sip of -
CoffeeScript

Existential Operators

How do we check to see that

cupsOfCoffee

JS

isn't defined and isn't null?

```
if (typeof cupsOfCoffee !== "undefined" && cupsOfCoffee !== null) {  
  alert('it exists!');  
}
```



```
if cupsOfCoffee?  
  alert 'it exists!'
```



```
alert 'it exists!' if cupsOfCoffee?
```

Conditionals & Operators

a sip of
CoffeeScript

Existential Operators

Set `cupsOfCoffee` to Zero unless previously set

```
if not cupsOfCoffee?  
  cupsOfCoffee = 0
```

```
cupsOfCoffee = 0 unless cupsOfCoffee?
```

```
cupsOfCoffee ?= 0
```

Conditionals & Operators

a sip of
CoffeeScript

Existential Operators

Call `brew()` on `coffeePot` only if it exists

```
if coffeePot?  
  coffeePot.brew()
```



```
coffeePot?.brew()
```



Only call function if it exists

```
vehicle.start_engine?().shift_gear?()
```



in Ruby “try()”

Conditionals & Operators

a sip of
CoffeeScript

- a sip of -

CoffeeScript

Arrays, Objects, Iteration

• *level 4* •

Ranges

```
range = [1..4]
```



```
var range = [1, 2, 3, 4];
```

JS

```
range = [1...4]
```



```
var range = [1, 2, 3];
```

JS

With three dots excludes the end

Arrays, Objects, Iteration

Variables & Subsets

```
start = 5  
end = 10
```

```
range = [start..end]
```

[5, 6, 7, 8, 9, 10]

```
range[1..4]
```

[6, 7, 8, 9]

```
range[1...range.length]
```

[6, 7, 8, 9, 10]

```
range[1..-1]
```



- a sip of -

CoffeeScript

Arrays

```
storeLocations = ['Orlando', 'Winter Park', 'Sanford']
```



↓ Can use new lines instead of commas

```
storeLocations = [  
  'Orlando'  
  'Winter Park'  
  'Sanford'  
]
```



Arrays, Objects, Iteration

a sip of
CoffeeScript

Loops

```
storeLocations = ['Orlando', 'Winter Park', 'Sanford']
```



```
storeLocations.forEach (location, index) ->  
  alert "Location: #{location}"
```



```
storeLocations.forEach(function(location, index) {  
  return alert("Location: " + location);  
});
```



Arrays, Objects, Iteration

- a sip of -
CoffeeScript

Loops



```
storeLocations = ['Orlando', 'Winter Park', 'Sanford']
```

```
storeLocations.forEach (location, index) ->  
  alert "Location: #{location}"
```

```
for location in storeLocations  
  alert "Location: #{location}"
```

```
alert "Location: #{location}" for location in storeLocations
```

This is a list comprehension

Arrays, Objects, Iteration

a sip of
CoffeeScript

List Comprehensions



it's an expression

```
storeLocations = ['Orlando', 'Winter Park', 'Sanford']
```

Add “, FL” to each storeLocation

```
"#{loc}, FL" for loc in storeLocations
```

```
['Orlando, FL', 'Winter Park, FL', 'Sanford, FL']
```

```
storeLocations = ("#{loc}, FL" for loc in storeLocations)
```

the parenthesis are important

```
geoLocate(loc) for loc in storeLocations when loc isn't 'Sanford'
```

filter → (expression)

List Comprehensions



it's an expression

```
storeLocations = ['Orlando', 'Winter Park', 'Sanford']
```

Create new array without Sanford

```
['Orlando', 'Winter Park']
```

```
newLocs = []
for loc in storeLocations
    newLocs.push loc if loc isnt 'Sanford'
```



same as

```
newLocs = (loc for loc in storeLocations when loc isnt 'Sanford')
```

Splats



For a variable number of arguments

```
searchLocations = (brand, cities...) ->  
  "looking for #{brand} in #{cities.join(',')}"
```

```
searchLocations 'Starducks', 'Orlando'
```

'Looking for Starducks in Orlando'

```
searchLocations 'Starducks', 'Orlando', 'Winter Park'
```

same as

'Looking for Starducks in Orlando, Winter Park'

```
params = ['Starducks', 'Orlando', 'Winter Park']  
searchLocations(params...)
```

Objects



Objects are lists of keys & values (**hash**)

```
coffee = { name: 'French', strength: 1 }
```

curly braces optional

```
coffee = name: 'French', strength: 1
```

commas optional

```
coffee =  
  name: 'French'  
  strength: 1
```

Arrays, Objects, Iteration

a sip of
CoffeeScript

Objects

```
coffee =  
  name: 'French'  
  strength: 1  
  brew: -> alert("brewing #{@name}")
```



called with
coffee.brew()

```
var coffee = {  
  name: 'French',  
  strength: 1,  
  brew: function() {  
    return alert("brewing " + this.name);  
  }  
};
```



JS

Arrays, Objects, Iteration

- a sip of -
CoffeeScript

Objects

```
coffee =  
  name: 'French'  
  strength: 1  
  brew: -> alert("brewing #{@name}")  
  pour: (amount=1) ->  
    if amount is 1  
      "Poured a single cup"  
    else  
      "Poured #{amount} cups"
```



```
pour: function(amount) {  
  if (amount == null) amount = 1;  
  if (amount === 1) {  
    return "Poured a single cup";  
  } else {  
    return "Poured " + amount + " cups";  
  }
```

An orange circular icon containing the letters "JS". A downward-pointing arrow originates from the "pour" method in the CoffeeScript code and points to this icon.

Arrays, Objects, Iteration

- a sip of -
CoffeeScript

Careful with your Indenting!

```
coffee =  
  name: 'French'  
strength: 1
```



↓ indent issues! ✗

```
coffee = {  
  name: 'French'  
};  
{  
  strength: 1  
}
```

JS

Arrays, Objects, Iteration

a sip of
CoffeeScript

Complex Objects

```
coffees =  
  french:  
    strength: 1  
    in_stock: 20  
  italian:  
    strength: 2  
    in_stock: 12  
  decaf:  
    strength: 0  
    in_stock: 8
```



```
coffees.italian.in_stock
```

12

```
var coffees = {  
  french: {  
    strength: 1,  
    in_stock: 20  
  },  
  italian: {  
    strength: 2,  
    in_stock: 12  
  },  
  decaf: {  
    strength: 0,  
    in_stock: 0  
  }  
};
```

JS

Arrays, Objects, Iteration

- a sip of -
CoffeeScript



Object Iteration with of

KEY VALUE

"#{coffee} has #{attrs.in_stock}" for coffee, attrs of coffees

iterating over object



["french has 20", "italian has 12", "decaf has 0"]

```
coffees =  
  french:  
    strength: 1  
    in_stock: 20  
  italian:  
    strength: 2  
    in_stock: 12  
  decaf:  
    strength: 0  
    in_stock: 0
```

- a sip of -
CoffeeScript



Object Iteration with of

```
"#{coffee} has #{attrs.in_stock}" for coffee, attrs of coffees
```

same as `["french has 20", "italian has 12", "decaf has 0"]`

```
for coffee, attrs of coffees
```

```
  "##{coffee} has #{attrs.in_stock}"
```

```
to_print = for coffee, attrs of coffees when attrs.in_stock > 0
```

```
  "##{coffee} has #{attrs.in_stock}"
```

```
to_print.join ", "
```

```
"french has 20, italian has 12"
```

Object Iteration with of

```
to_print = for coffee, attrs of coffees when attrs.in_stock > 0
  "#{coffee} has #{attrs.in_stock}"
to_print.join ", "
```



```
var attrs, coffee, to_print;
```

```
to_print = (function() {
  var _results;
  _results = [];
  for (coffee in coffees) {
    attrs = coffees[coffee];
    if (attrs.in_stock > 0) _results.push("'" + coffee + " has "
+ attrs.in_stock);
  }
  return _results;
})();

to_print.join(", ")
```

An orange rounded rectangle containing the letters "JS".

JS

- a sip of -

CoffeeScript

Applied jQuery, Part 2

• *level 5* •

Object Simplicity

```
$("#tabs ul li a").bind({  
  click: changeTab,  
  mouseenter: showNumberOfFlights,  
  mouseleave: hideNumberOfFlights  
});
```

JS

```
$("#tabs ul li a").bind  
  click: changeTab  
 mouseenter: showNumberOfFlights  
 mouseleave: hideNumberOfFlights
```



Applied jQuery, Part 2

- a sip of -
CoffeeScript

A Complex Example

```
{ function showFlights(activeDiv) {  
  $("#tabs div").hide(); →  
  if (fetchingFlights) {  
    fetchingFlights.abort();  
  }  
  
  fetchingFlights = $.ajax('/flights', {  
    data: { date: activeDiv },  
    cache: false,  
    error: function(result) {  
      if (result.statusText != "abort") {  
        $('#tabs #error').show();  
      }  
    }  
  });  
}
```

```
showFlights = (activeDiv) ->  
  $("#tabs div").hide()
```



JS

Applied jQuery, Part 2

- a sip of -
CoffeeScript

A Complex Example

```
showFlights = (activeDiv) ->  
  $("#tabs div").hide()
```



```
{  
  if (fetchingFlights) {  
    fetchingFlights.abort();  
  }  
}
```

```
if fetchingFlights  
  fetchingFlights.abort()
```

```
fetchingFlights = $.ajax('/flights', {  
  data: { date: activeDiv },  
  cache: false,  
  error: function(result) {  
    if (result.statusText != "abort") {  
      $('#tabs #error').show();  
    }  
  }  
});  
}
```



A Complex Example

```
showFlights = (activeDiv) ->  
  $("#tabs div").hide()
```

```
  if fetchingFlights  
    fetchingFlights.abort()
```

```
{  
  fetchingFlights = $.ajax('/flights', {  
    data: { date: activeDiv },  
    cache: false,  
    error: function(result) {  
      if (result.statusText !=  
        $('#tabs #error').show();  
    }  
  }  
});  
}
```



```
fetchingFlights = $.ajax '/flights'  
data:  
  date: activeDiv  
  cache: false
```



A Complex Example

```
showFlights = (activeDiv) ->
  $("#tabs div").hide()

  if fetchingFlights
    fetchingFlights.abort()

  fetchingFlights = $.ajax '/flights'
    data:
      date: activeDiv
    cache: false

  error: function(result) {
    if (result.statusText != "abort") {
      $('#tabs #error').show();
    }
  }
});
```



JS

```
error: (result) ->
  if result.statusText isnt "abort"
    $('#tabs #error').show()
```

A Complex Example

```
showFlights = (activeDiv) ->
  $("#tabs div").hide()

  if fetchingFlights
    fetchingFlights.abort()

  fetchingFlights = $.ajax '/flights'
    data:
      date: activeDiv
    cache: false
  error: (result) ->
    if result.statusText isnt "abort"
      $('#tabs #error').show()
```



46 Less Characters!

Applied jQuery, Part 2

a sip of
CoffeeScript

Mind Bending Comprehensions

```
var filteredFlights = [];  
  
$.each(currentFlights, function(index, flight) {  
  if (stops == '2+' || flight.routing == 0) {  
    filteredFlights.push(flight);  
  }  
});
```

JS



```
filteredFlights = []  
  
$.each currentFlights, (index, flight) ->  
  if stops is '2+' or flight.routing is 0  
    filteredFlights.push flight
```



Mind Bending Comprehensions



```
filteredFlights = []
$.each currentFlights, (index, flight) ->
  if stops is '2+' or flight.routing is 0
    filteredFlights.push flight
```

```
filteredFlights =
  (flight for flight in currentFlights when stops is '2+' or
   flight.routing is 0)
```

- a sip of -

CoffeeScript

Object Orientation

• *level 6* •

Remember the Coffee Object?



```
coffee =
  name: 'French'
  strength: 1
  brew: -> alert "brewing #{@name}"
  pour: (amount=1) ->
    if amount is 1
      "Poured a single cup"
    else
      "Poured #{amount} cups"
```

Object Orientation

- a sip of -
CoffeeScript

Constructors & Properties



```
class Coffee
```

```
constructor: (name, strength=1) ->  
  @name = name  
  @strength = strength
```

called when instantiated

same as

```
class Coffee
```

```
constructor: (@name, @strength=1) ->
```

Object Orientation

- a sip of -
CoffeeScript

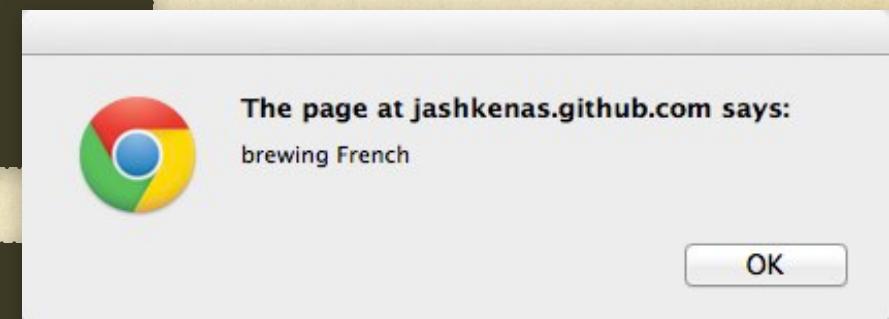
Constructors & Properties



```
class Coffee
```

```
constructor: (@name, @strength=1) ->  
  
brew: -> alert "brewing #{@name}"  
pour: (amount=1) ->  
  if amount is 1  
    "Poured a single cup"  
  else  
    "Poured #{amount} cups"
```

```
french = new Coffee("French", 2)  
  
french.brew()
```



Object Orientation

a sip of
CoffeeScript

Inheritance



```
class Coffee
```

```
constructor: (@name, @strength=1) ->
```

```
brew: -> alert "brewing #{@name}"
```

```
class MaxgoodHouse extends Coffee
```

```
constructor: (@name, @strength=0) ->
```

```
  @brand = "Maxgood House"
```

```
boring = new MaxgoodHouse("Boring")
```

```
boring.brew()
```



The page at jashkenas.github.com says:

brewing Boring

OK

Object Orientation

a sip of
CoffeeScript

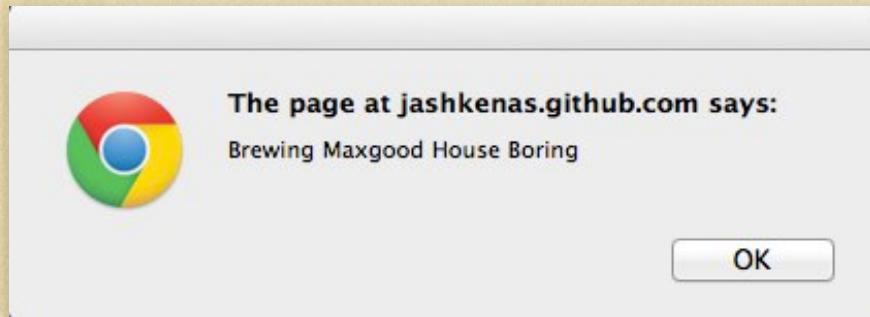
Inheritance



```
class MaxgoodHouse extends Coffee
constructor: (@name, @strength=0) ->
  @brand = "Maxgood House"
brew: -> alert "Brewing #{@brand} #{@name}"
```

```
boring = new MaxgoodHouse("Boring")
```

```
boring.brew()
```



Object Orientation

a sip of
CoffeeScript

Inheritance

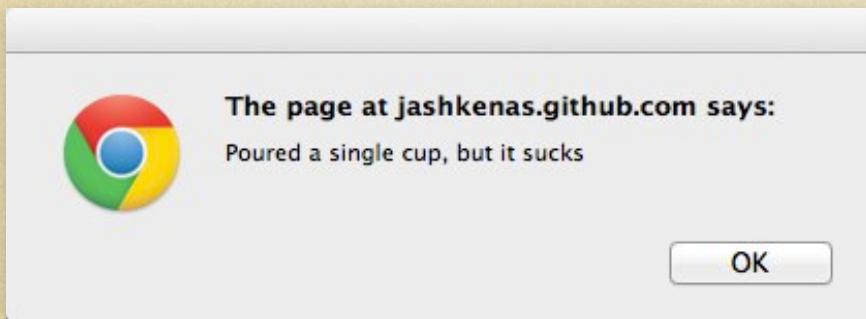


```
class MaxgoodHouse extends Coffee
  constructor: (@name, @strength=0) ->
    @brand = "Maxgood House"

  brew: -> alert "Brewing #{@brand} #{@name}"
  pour: (amount=1) ->
    "#{super(amount)}, but it sucks"
```

```
boring = new MaxgoodHouse("Boring")
```

```
boring.pour()
```



Object Orientation

- a sip of -
CoffeeScript

The Fat Arrow



```
class Coffee
  constructor: (@name, @strength=1, @inventory=0) ->
    pourClick: ->
      $("#pour-#{@name}").click (event) ->
        if @inventory isnt 0
          @inventory -= 1
          alert "Poured a cup of #{@name}"
```



Error!

Looking for property of the dom element

called `@inventory` and `@name`

Object Orientation

a sip of
CoffeeScript

The Fat Arrow



```
class Coffee
  constructor: (@name, @strength=1, @inventory=0) ->
    pourClick: ->
      $("#pour-#{@name}").click (event) =>
        if @inventory isnt 0
          @inventory -= 1
          alert "Poured a cup of #{@name}"
```



Binds to current value of 'this'

Object Orientation

a sip of
CoffeeScript

Using a Class for Encapsulation

```
{ var selectFlights = { fetchingFlights : null,  
  
  init : function() {  
    $("#tabs ul li a").bind({  
      click: this.changeTab  
    });  
  
    $("#tabs #error a").click(function (event){  
      e.preventDefault();  
      this.showFlights($("#tabs li a.active").attr("href"));  
    });  
  },  
  
  showFlights : function(activeDiv) { },  
  changeTab : function(event) { }  
};
```

Object Orientation

class SelectFlights



JS

CoffeeScript

Using a Class for Encapsulation

```
class SelectFlights  
{  
    fetchingFlights : null,  
    constructor: (@fetchingFlights=null) ->  
    init : function() {  
        $("#tabs ul li a").bind({  
            click: this.changeTab  
        });  
  
        $("#tabs #error a").click(function (event){  
            e.preventDefault();  
            this.showFlights($("#tabs li a.active").attr("href"));  
        });  
    },  
  
    showFlights : function(activeDiv) { },  
    changeTab : function(event) { }  
};
```



JS

Object Orientation

CoffeeScript

Using a Class for Encapsulation

```
class SelectFlights  
  constructor: (@fetchingFlights=null) ->
```

```
{  
  $("#tabs ul li a").bind({  
    click: this.changeTab  
  });
```

```
  $("#tabs #error a").click(function (event){  
    e.preventDefault();  
    this.showFlights($("#tabs li a.active").attr("href"));  
  });  
},  
  
showFlights : function(activeDiv) { },  
changeTab : function(event) { }  
});
```



```
$("#tabs ul li a").bind  
  click: @changeTab
```



JS

Object Orientation

CoffeeScript

Using a Class for Encapsulation

```
class SelectFlights
  constructor: (@fetchingFlights=null) ->
    $("#tabs ul li a").bind
      click: @changeTab

    $("#tabs #error a").click(function (event){
      e.preventDefault();
      this.showFlights($("#tabs li a.active").attr("href"));
    });
  },
    $("#tabs #error a").click (event) =>
      event.preventDefault()
      @showFlights $("#tabs li a.active").attr("href")

  showFlights : function(activeDiv) { },
  changeTab : function(event) { }
);
```

Object Orientation

CoffeeScript



JS



Using a Class for Encapsulation

```
class SelectFlights
  constructor: (@fetchingFlights=null) ->
    $("#tabs ul li a").bind
      click: @changeTab

    $("#tabs #error a").click (event) =>
      event.preventDefault()
      @showFlights $("#tabs li a.active").attr("href")

  {
    showFlights : function(activeDiv) { },
    changeTab : function(event) { }
  };

```

```
showFlights : (activeDiv) ->
  changeTab : (event) =>
```

Object Orientation



JS



- a sip of -
CoffeeScript

Using a Class for Encapsulation

```
class SelectFlights
  constructor: (@fetchingFlights=null) ->
    $("#tabs ul li a").bind
      click: @changeTab

    $("#tabs #error a").click (event) =>
      event.preventDefault()
      @showFlights $("#tabs li a.active").attr("href")

    showFlights : (activeDiv) ->
    changeTab : (event) =>
```

```
selectFlights = new SelectFlights()
```

Object Orientation

- a sip of -
CoffeeScript

- a sip of -

CoffeeScript