HTML5 w/ Play Scala, CoffeeScript and Jade

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DEVOXX™
the java™ community conference

Photos by Trish McGinity - **http://mcginityphoto.com**

Introductions

- How many of you like beer?
- Have you used HTML5?
- Have you used Play Framework?
- Have you used Scala?
- Tried CoffeeScript?
- Scalate or Jade?

Matt Raible

LinkedIn®

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Time
Warner
Cable®

overstock.com®
shortcut: O.co™

Taleo
Talent Drives Performance

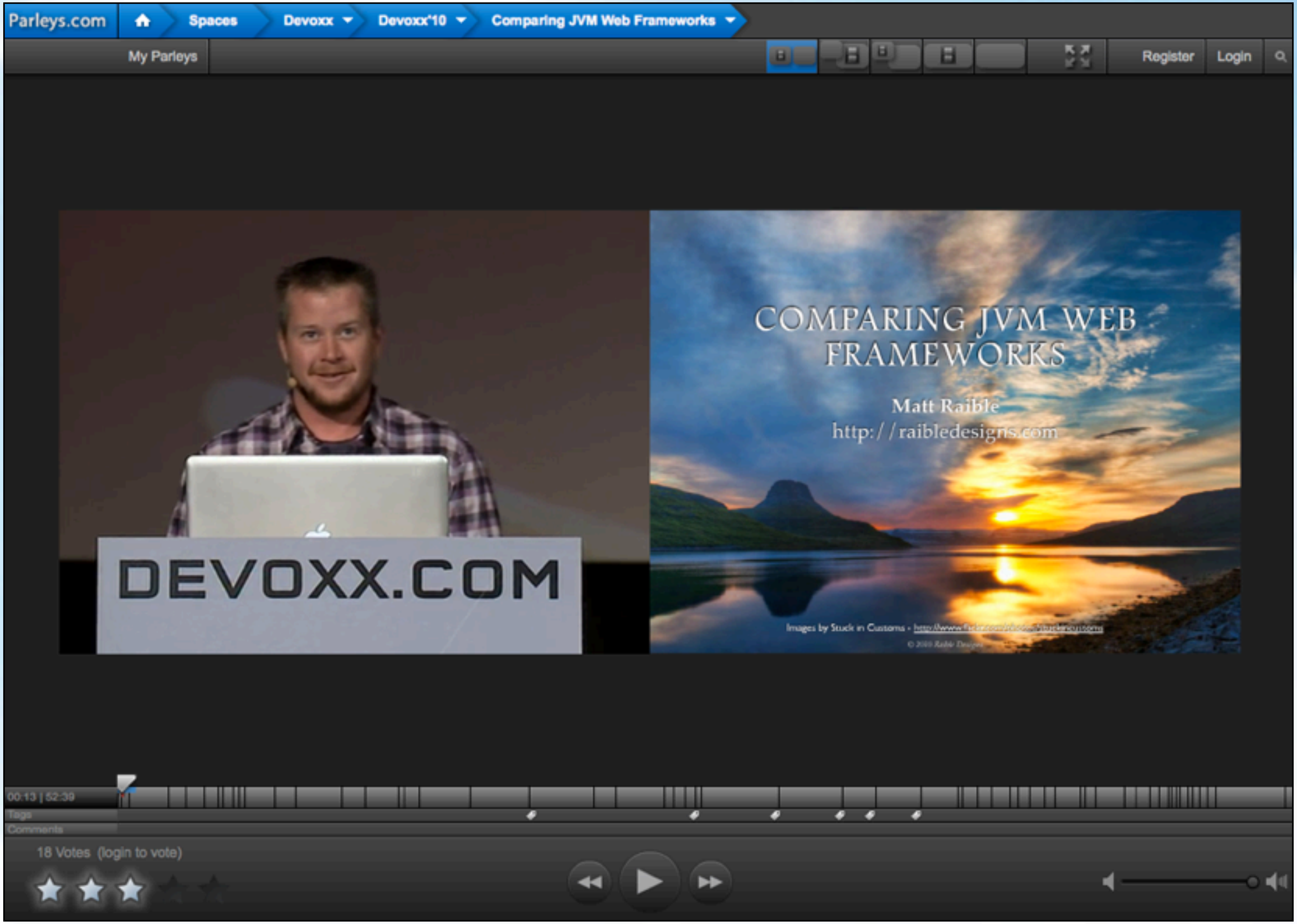
Struts 2

AppFuse

4.0
Roller

displaytag

Switch



COMPARING JVM WEB FRAMEWORKS

Matt Raible
http://raibledesigns.com

Images by Stuck in Customs - http://www.flickr.com/photos/stuckincustoms

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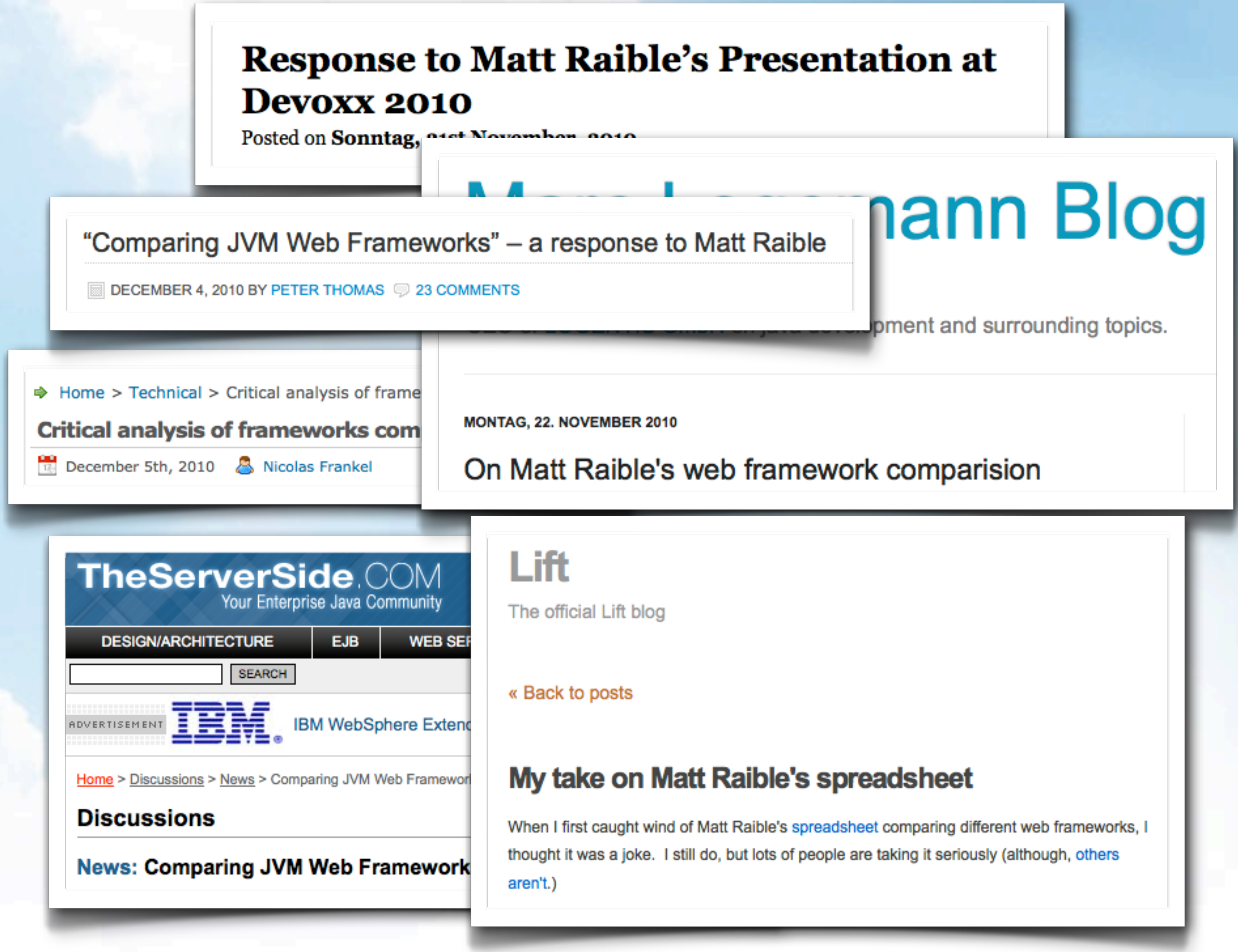


Response to Matt Raible's Presentation at Devoxx 2010

Posted on Sonntag, 21st November, 2010

ann Blog

pment and surrounding topics.

MONTAG, 22. NOVEMBER 2010

On Matt Raible's web framework comparision

"Comparing JVM Web Frameworks" – a response to Matt Raible

DECEMBER 4, 2010 BY PETER THOMAS 23 COMMENTS

Home > Technical > Critical analysis of frame

Critical analysis of frameworks com

December 5th, 2010 Nicolas Frankel

TheServerSide.COM
Your Enterprise Java Community

Home > Discussions > News > Comparing JVM Web Framewor

Discussions

News: Comparing JVM Web Framework

Lift

The official Lift blog

« Back to posts

My take on Matt Raible's spreadsheet

When I first caught wind of Matt Raible's spreadsheet comparing different web frameworks, I thought it was a joke. I still do, but lots of people are taking it seriously (although, others aren't.)

Leffe
Bière d'Abbaye - Abdijbier
BLONDE BLOND
STELLA ARTOIS
Hoegaarden

Pauwel Kwak

Scala

Play!

jade

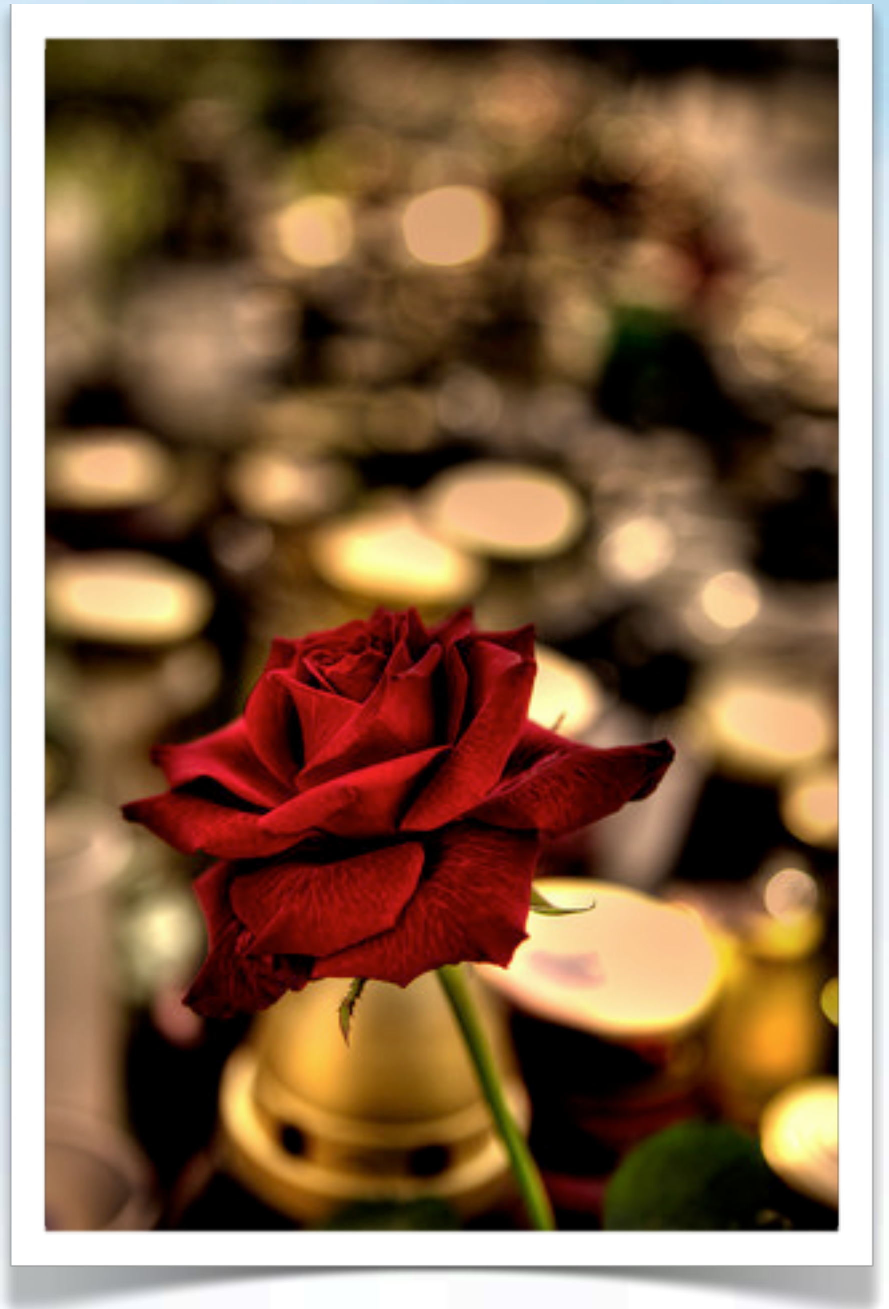
CoffeeScript

HTML 5

jQuery
write less, do more.

Agenda

- Introductions
- Why am I doing this talk?
- What are these technologies?
- My Development Experience
- Demo
- Q and A
- Conclusion



Why am I doing this talk?

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Why am I doing this talk?

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Why am I doing this talk?

CHALLENGE
The most profitable decisions in your life will be the most challenging.

Why am I doing this talk?

- I like a Challenge to...
  - Learn Scala
  - Via Play!
  - And Jade is cool too!
  - So is CoffeeScript!

Why am I doing this talk?

- Honestly, it's because of James Strachan...

Why am I doing this talk?

- Who likes beer too!

Why am I doing this talk?

© McGinity Photo 2011

What are these technologies?

Scala

Play!

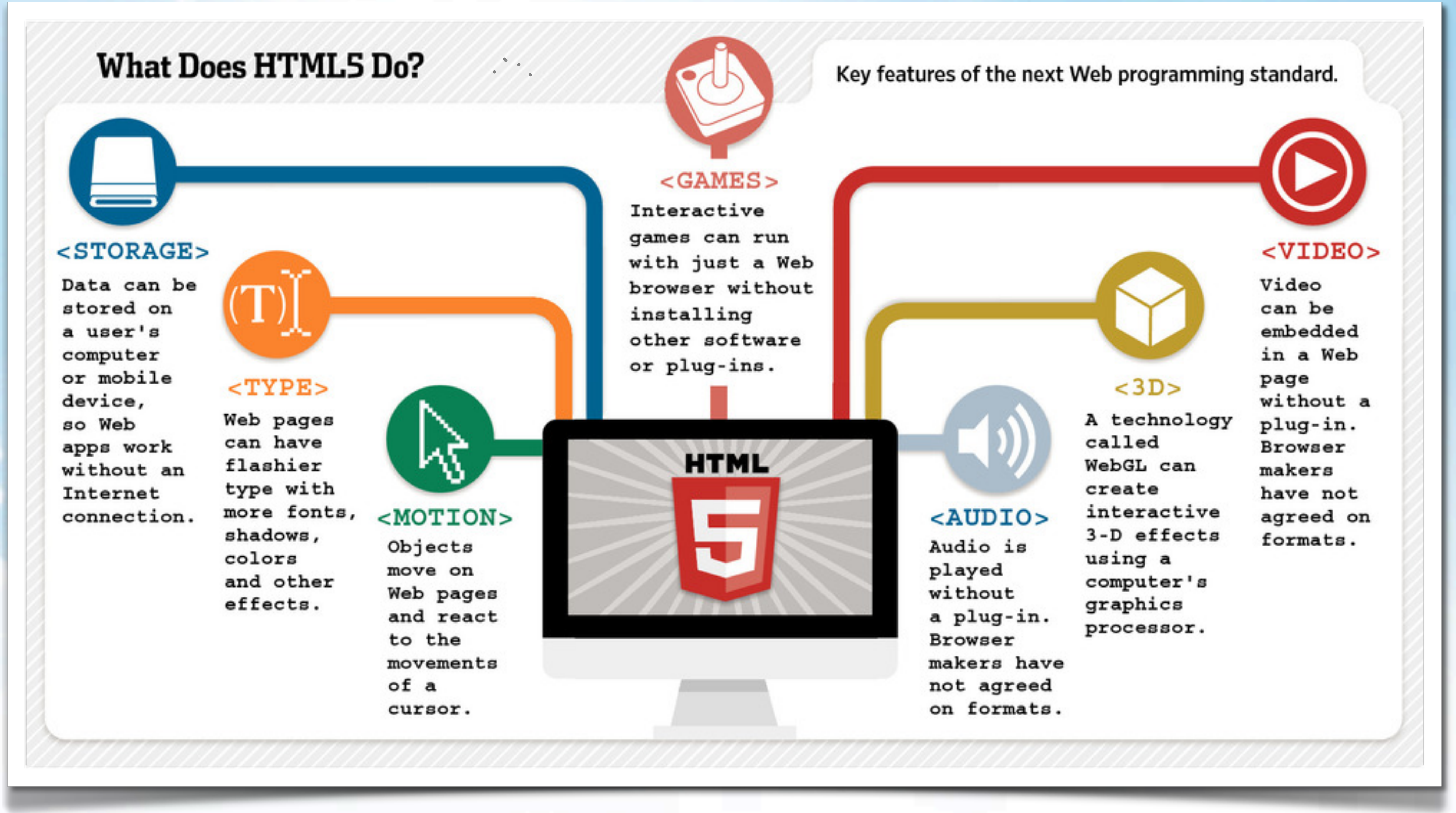
jade

CoffeeScript

HTML 5

{less}

HTML5



What Does HTML5 Do?

Key features of the next Web programming standard.

<STORAGE>

Data can be stored on a user's computer or mobile device, so Web apps work without an Internet connection.

<TYPE>

Web pages can have flashier type with more fonts, shadows, colors and other effects.

<MOTION>

Objects move on Web pages and react to the movements of a cursor.

<GAMES>

Interactive games can run with just a Web browser without installing other software or plug-ins.

<AUDIO>

Audio is played without a plug-in. Browser makers have not agreed on formats.

<3D>

A technology called WebGL can create interactive 3-D effects using a computer's graphics processor.

<VIDEO>

Video can be embedded in a Web page without a plug-in. Browser makers have not agreed on formats.

http://on.wsj.com/tEGIJL

How do you write HTML5?

<!DOCTYPE html>

<article> <aside> <section>
<header> <footer> <nav>
<audio> <canvas> <video>
<datalist> <details>

NEW

<applet> <center> <font>
<frame> <frameset>

🚫

http://www.w3schools.com/html5/html5_reference.asp

CSS3

- Animated Transitions

```
transform: rotateY(180deg);
```

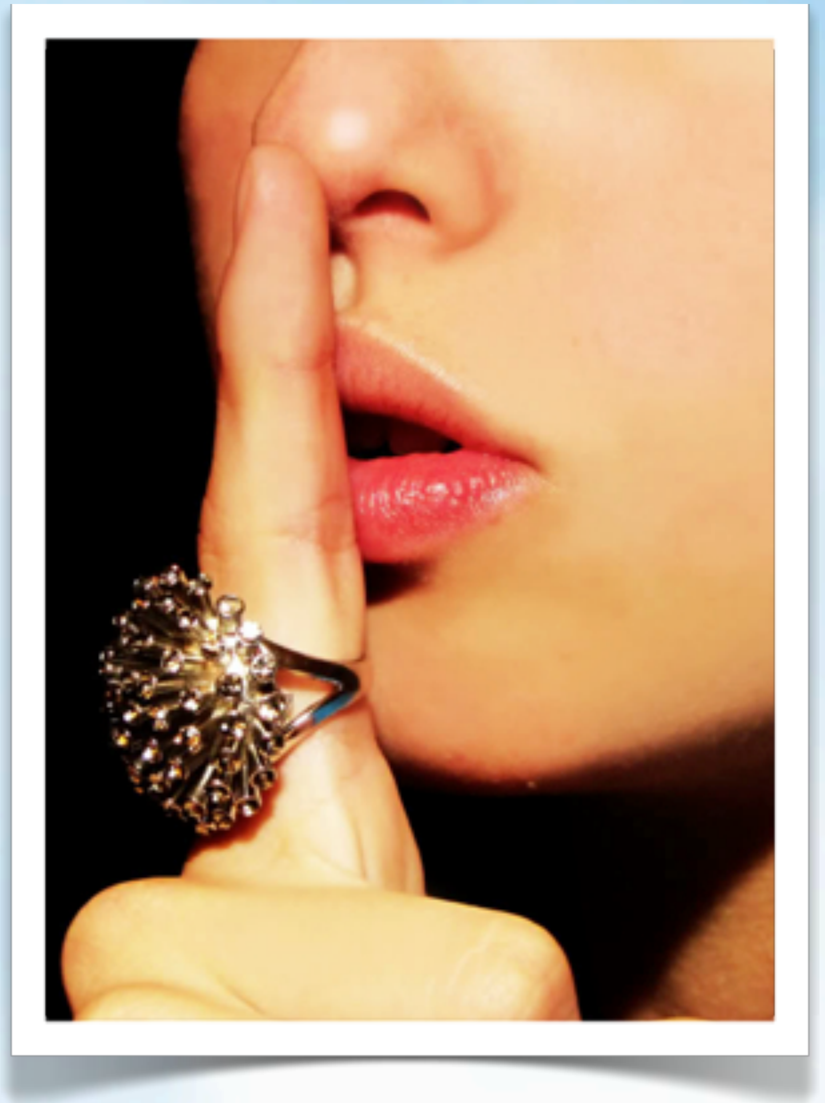
- Rounded Corners

```
border-radius: 8px 8px 0 0;
```

- Drop Shadows

```
box-shadow: 2px 2px 4px 4px;
```

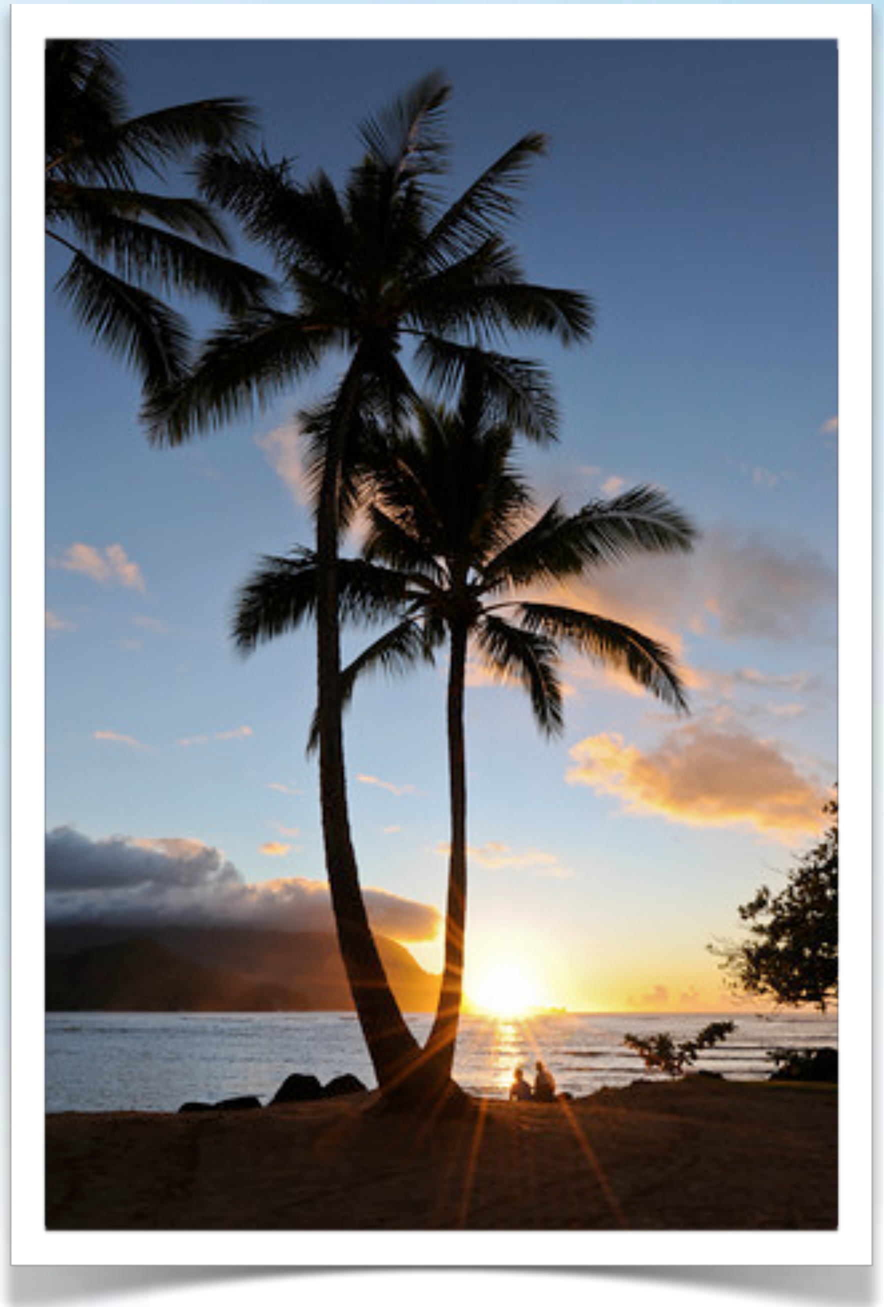
- Gradient Colors
- Styling based on sibling count
- More cursors for better usability
- Custom Checkboxes and Radio Buttons



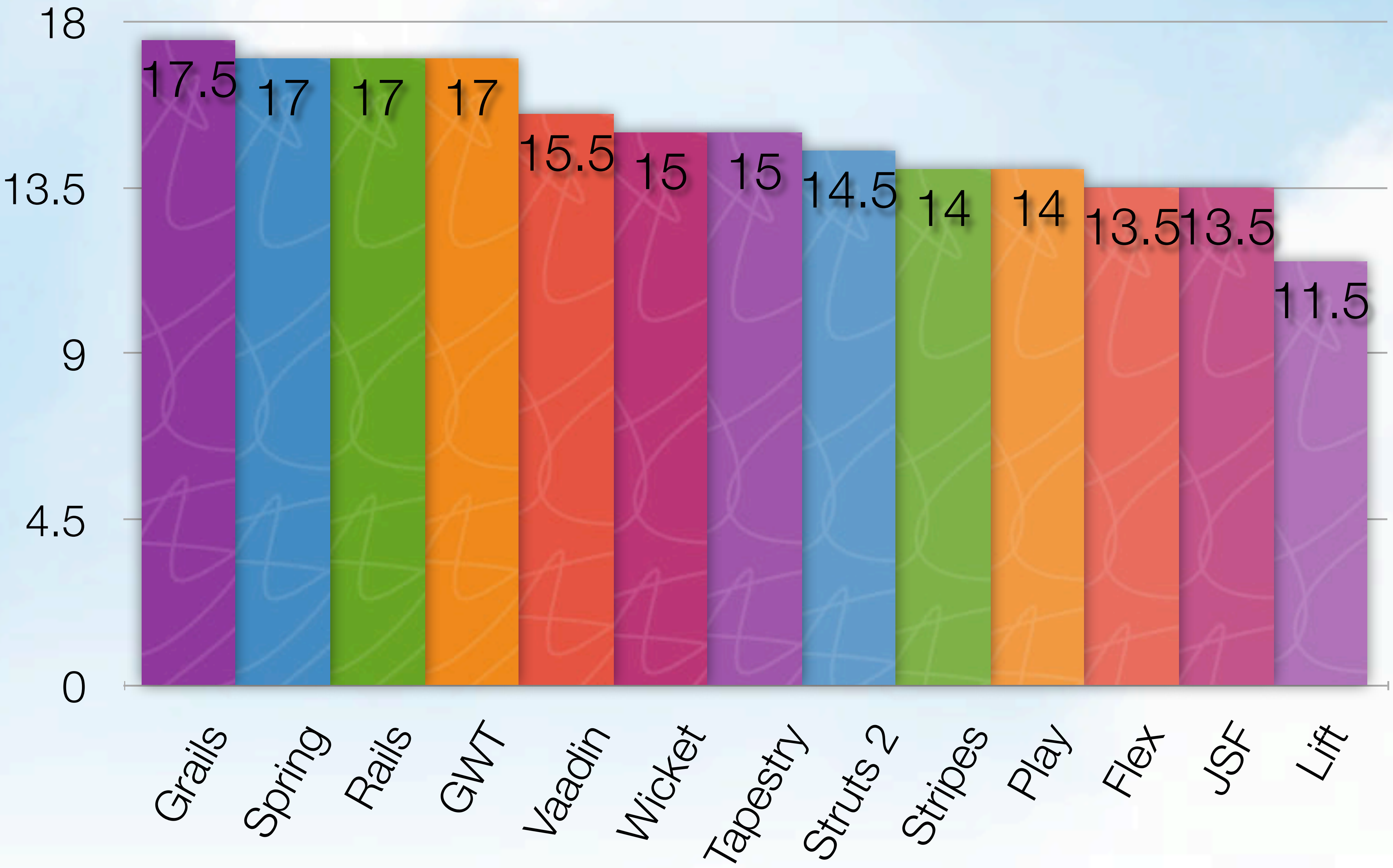
http://lea.verou.me/css3-secrets

Play Framework

- A full-stack Java Web Framework made by Web Developers
- Compile on-the-fly Play!
- Stateless Architecture
- Breaks web framework norms
  - Uses static methods
  - Doesn't use Servlet API



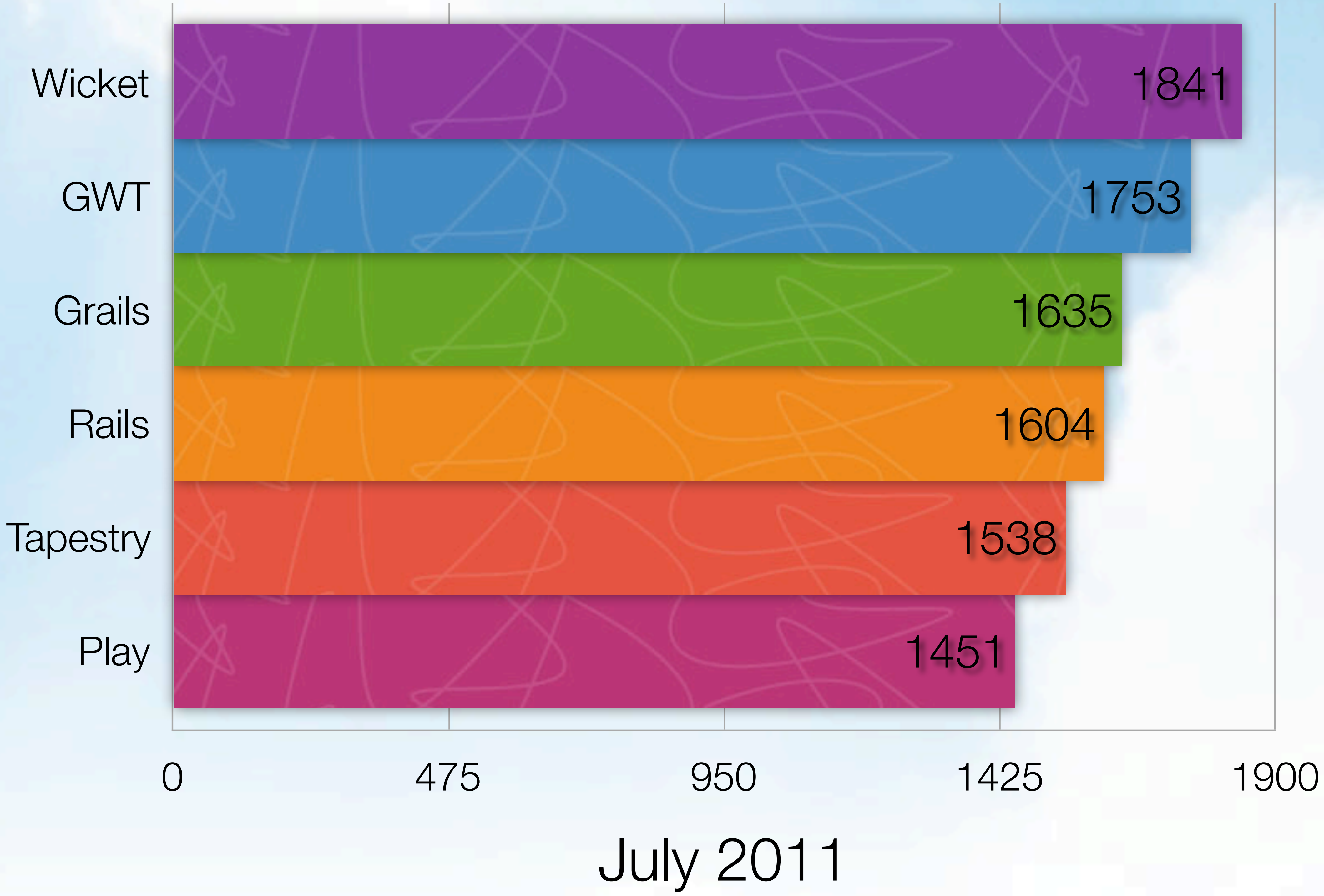
Matrix Results



Weighted Results

- Grails (90)
- Spring MVC (85)
- Ruby on Rails (82.5)
- Vaadin (82.5)
- Play (82.5)
- GWT (80)

Mailing List Traffic

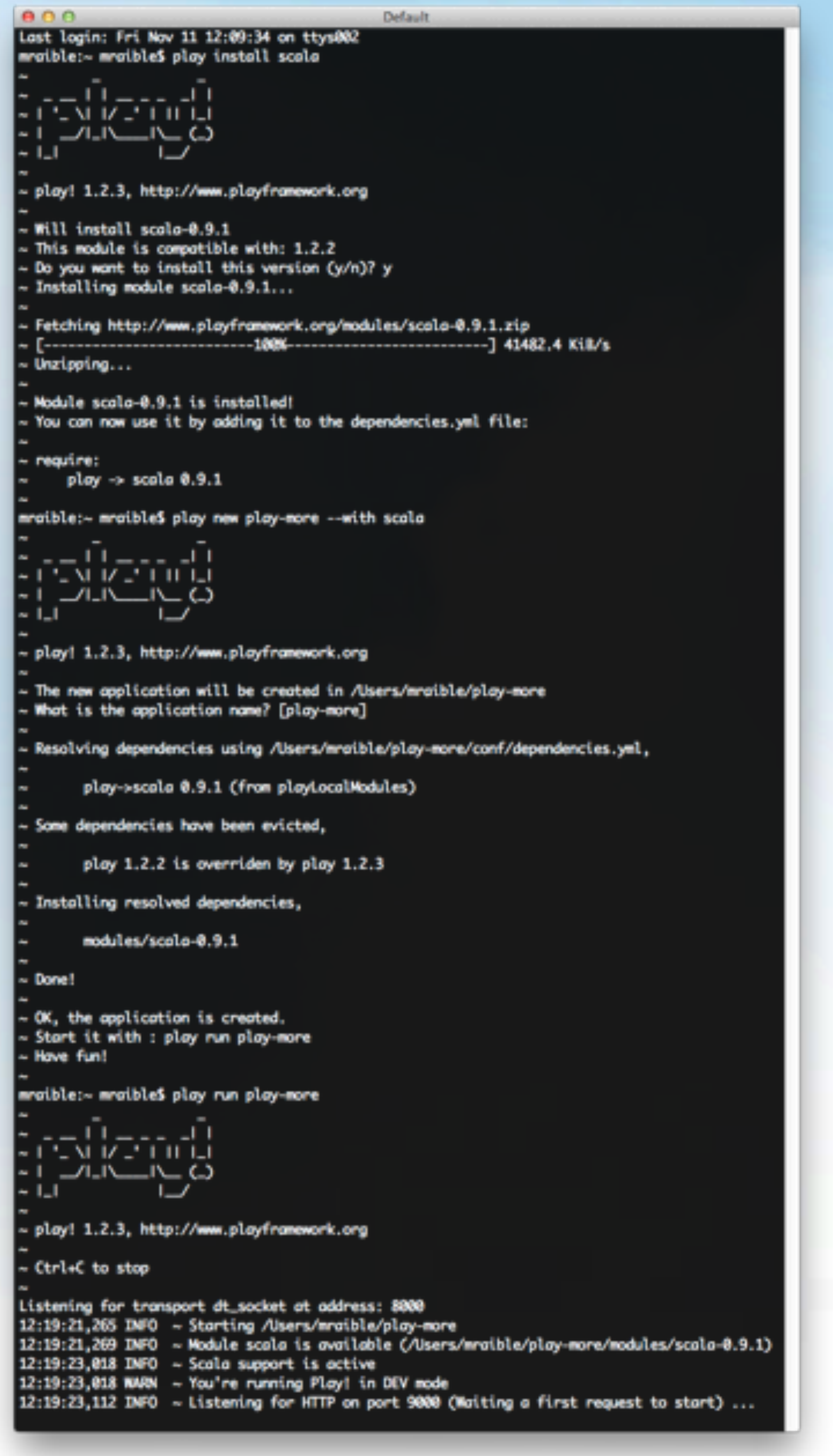


* Spring MVC and Vaadin use Forums, which don't provide this data.

Play Scala

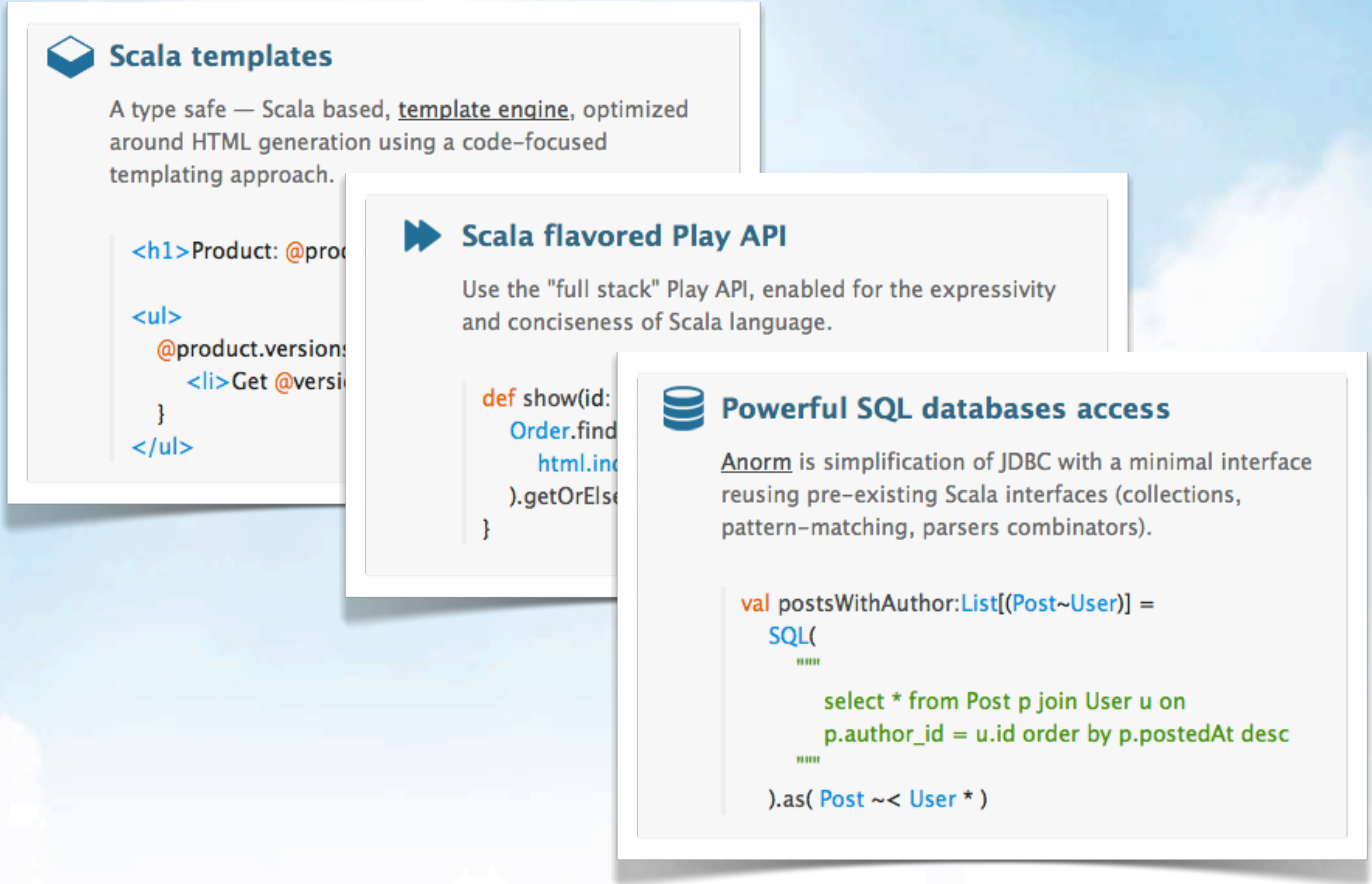
```
$ play install scala
$ play new myScalaWebapp --with scala
$ play run
```

But really, it’s more like this



```
Last login: Fri Nov 11 12:09:34 on ttys002
mraible:~ mraible$ play install scala
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.2.3, http://www.playframework.org
~
~ Will install scala-0.9.1
~ This module is compatible with: 1.2.2
~ Do you want to install this version (y/n)? y
~ Installing module scala-0.9.1...
~
~ Fetching http://www.playframework.org/modules/scala-0.9.1.zip
~ [--------------------------100%-------------------------] 41482.4 KiB/s
~ Unzipping...
~
~ Module scala-0.9.1 is installed!
~ You can now use it by adding it to the dependencies.yml file:
~
~ require:
~     play -> scala 0.9.1
~
mraible:~ mraible$ play new play-more --with scala
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.2.3, http://www.playframework.org
~
~ The new application will be created in /Users/mraible/play-more
~ What is the application name? [play-more]
~
~ Resolving dependencies using /Users/mraible/play-more/conf/dependencies.yml,
~
~       play->scala 0.9.1 (from playLocalModules)
~
~ Some dependencies have been evicted,
~
~       play 1.2.2 is overriden by play 1.2.3
~
~ Installing resolved dependencies,
~
~       modules/scala-0.9.1
~
~ Done!
~
~ OK, the application is created.
~ Start it with : play run play-more
~ Have fun!
~
mraible:~ mraible$ play run play-more
~        _            _
~  _ __ | | __ _ _  _| |
~ | '_ \| |/ _' | || |_|
~ |  __/|_|\____|\__ (_)
~ |_|            |__/
~
~ play! 1.2.3, http://www.playframework.org
~
~ Ctrl+C to stop
~
Listening for transport dt_socket at address: 8000
12:19:21,265 INFO  ~ Starting /Users/mraible/play-more
12:19:21,269 INFO  ~ Module scala is available (/Users/mraible/play-more/modules/scala-0.9.1)
12:19:23,018 INFO  ~ Scala support is active
12:19:23,018 WARN  ~ You're running Play! in DEV mode
12:19:23,112 INFO  ~ Listening for HTTP on port 9000 (Waiting a first request to start) ...
```

Play Scala



Scala templates

A type safe — Scala based, template engine, optimized around HTML generation using a code-focused templating approach.

```
<h1>Product: @proc

<ul>
  @product.versions
     <li>Get @versi
  }
</ul>
```

Scala flavored Play API

Use the "full stack" Play API, enabled for the expressivity and conciseness of Scala language.

```
def show(id:
  Order.find
     html.inc
  ).getOrElse
}
```

Powerful SQL databases access

Anorm is simplification of JDBC with a minimal interface reusing pre-existing Scala interfaces (collections, pattern-matching, parsers combinators).

```
val postsWithAuthor:List[(Post~User)] =
  SQL(
    """
       select * from Post p join User u on
       p.author_id = u.id order by p.postedAt desc
    """
  ).as( Post ~< User * )
```

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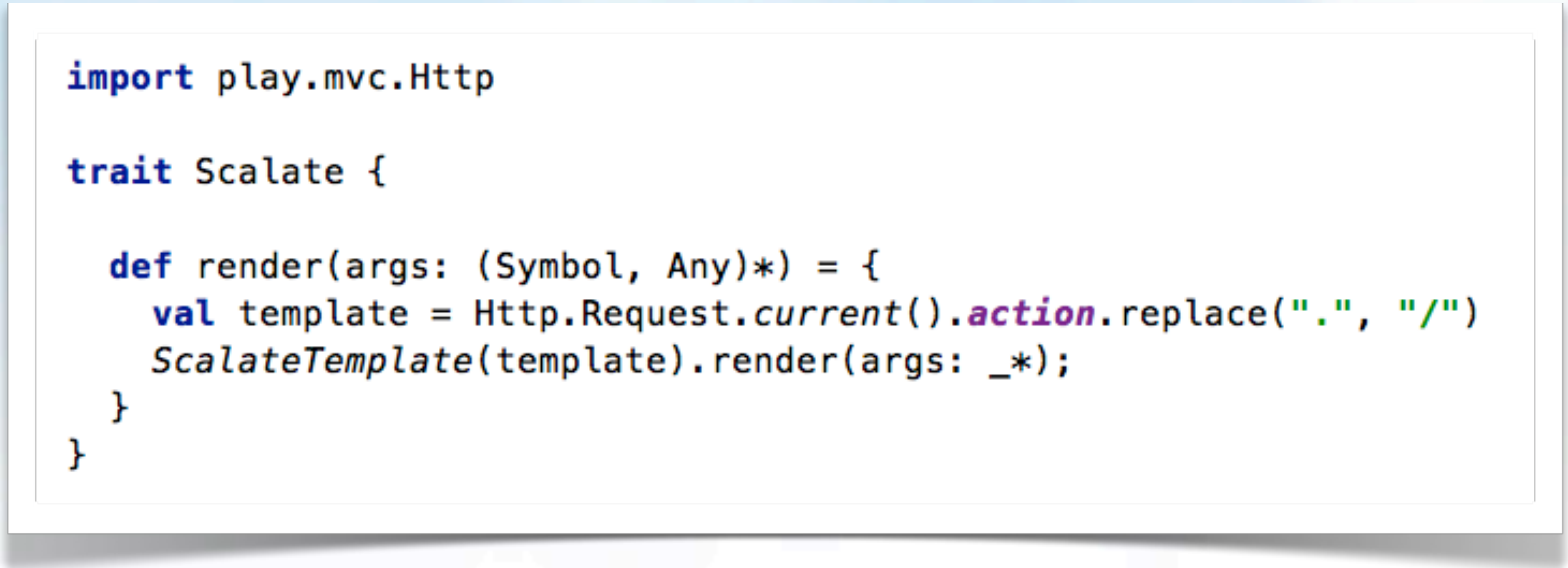
Scala

“Scala is like the dragon in Avatar. It will try to kill you, but if you master it, you can fly great distances with it and have a wonderful time.”

-- Venkat Subramaniam

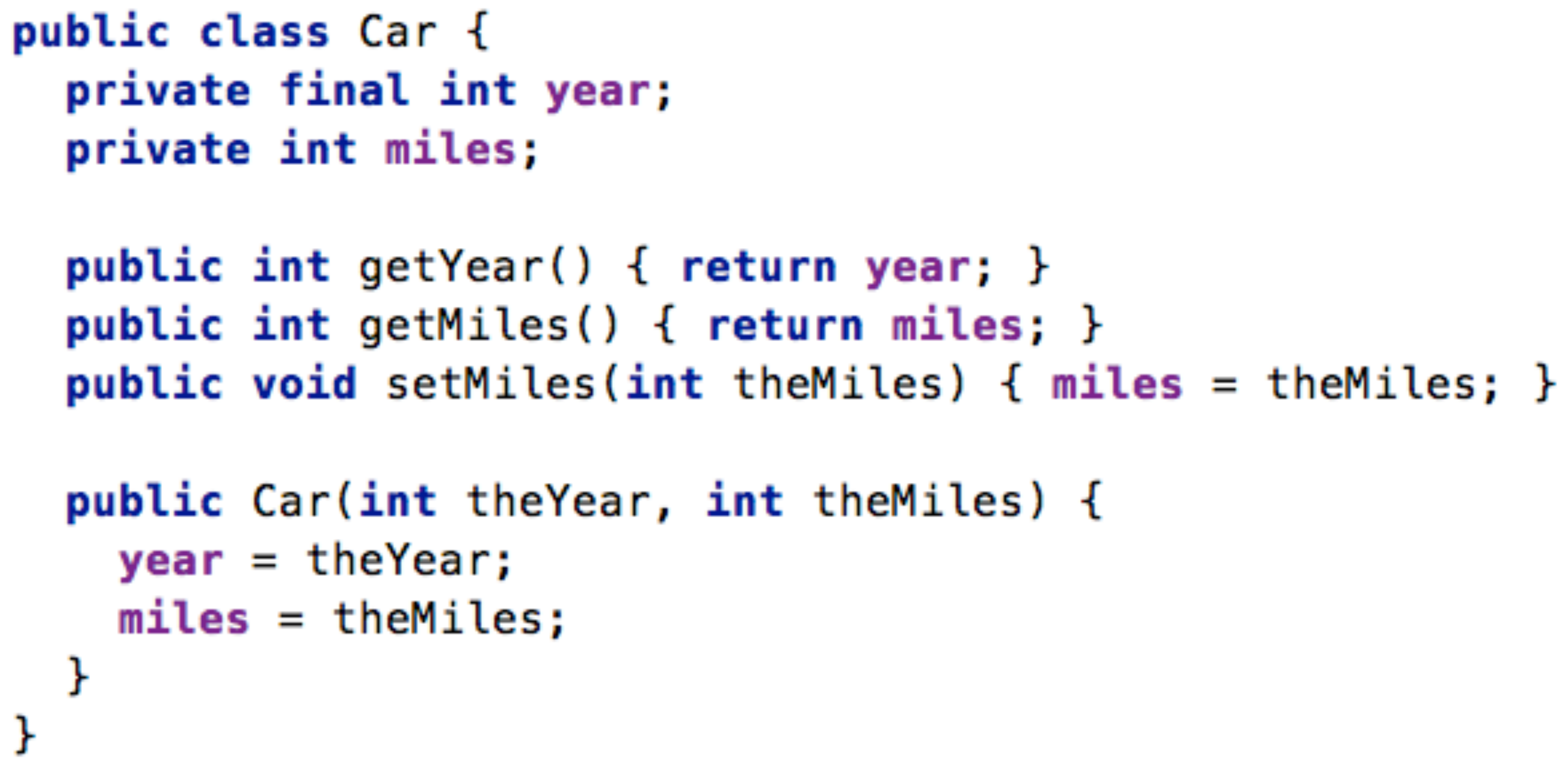
Scala Basics

- `def` starts a method
- variables are started with `var` or `val`
- variables are defined with name:type
- semicolons are not required

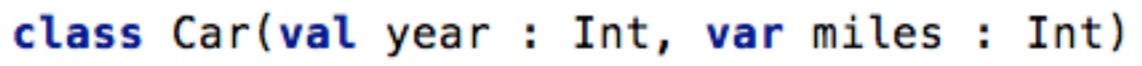


```
import play.mvc.Http

trait Scalate {

  def render(args: (Symbol, Any)*) = {
    val template = Http.Request.current().action.replace(".", "/")
    ScalateTemplate(template).render(args: _*);
  }
}
```

Scala vs. Java

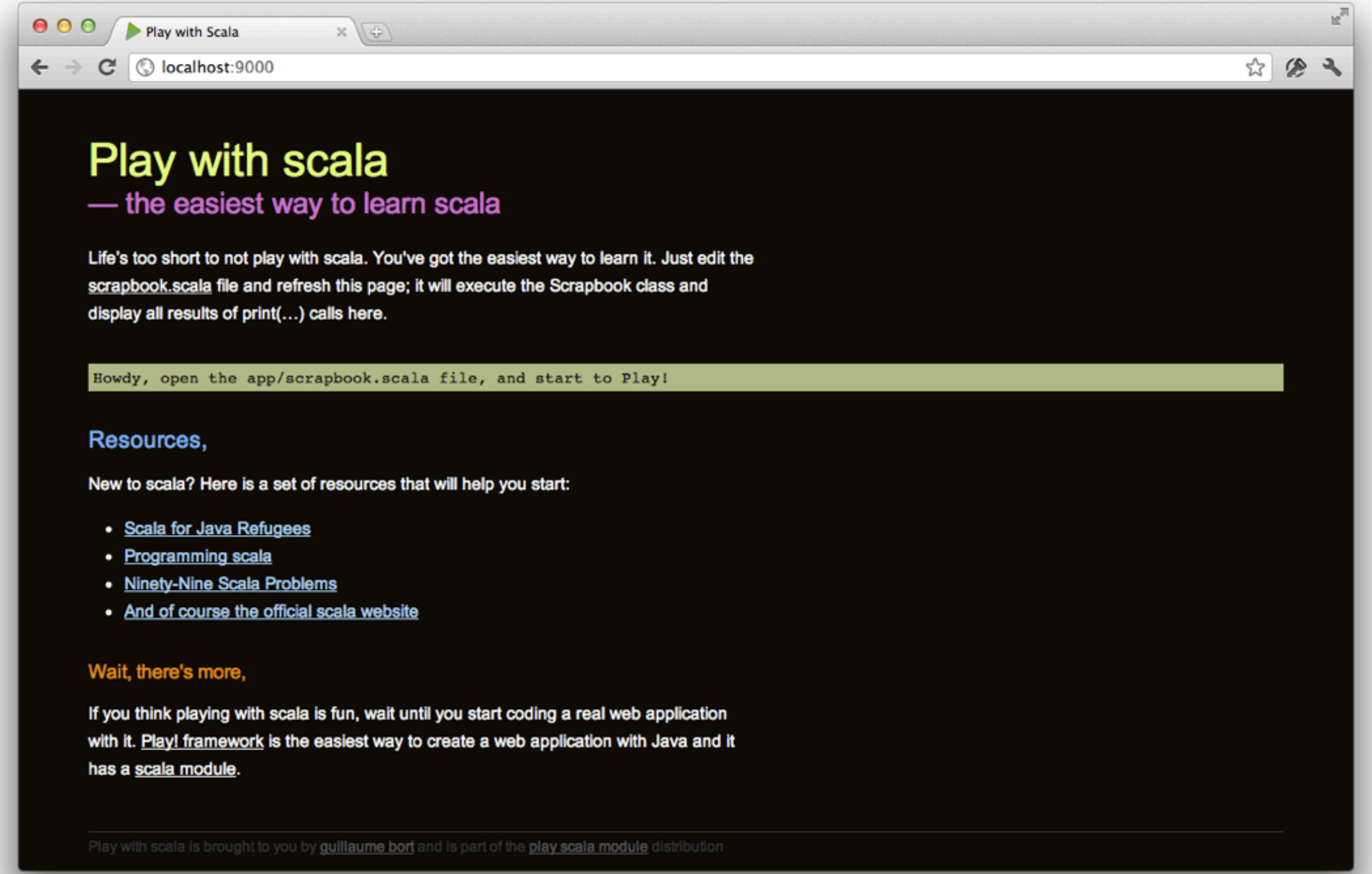


```java
public class Car {
  private final int year;
  private int miles;

  public int getYear() { return year; }
  public int getMiles() { return miles; }
  public void setMiles(int theMiles) { miles = theMiles; }

  public Car(int theYear, int theMiles) {
    year = theYear;
    miles = theMiles;
  }
}
```



```scala
class Car(val year : Int, var miles : Int)
```

Play with Scala



Play with scala

— the easiest way to learn scala

Life's too short to not play with scala. You've got the easiest way to learn it. Just edit the scrapbook.scala file and refresh this page; it will execute the Scrapbook class and display all results of print(…) calls here.

```
Howdy, open the app/scrapbook.scala file, and start to Play!
```

Resources,

New to scala? Here is a set of resources that will help you start:

- Scala for Java Refugees
- Programming scala
- Ninety-Nine Scala Problems
- And of course the official scala website

Wait, there's more,

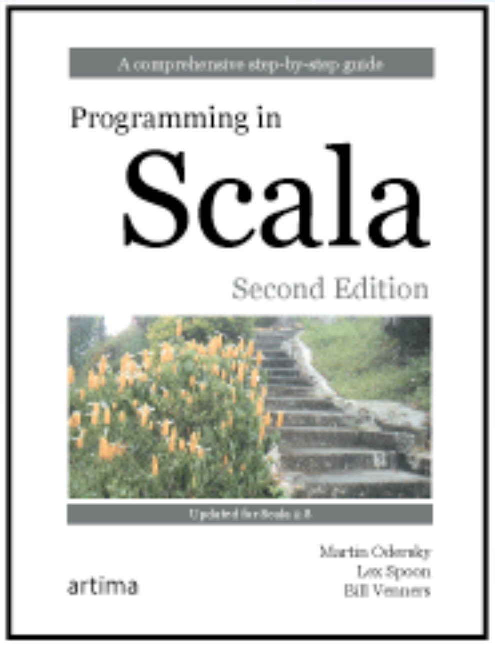
If you think playing with scala is fun, wait until you start coding a real web application with it. Play! framework is the easiest way to create a web application with Java and it has a scala module.

Play with scala is brought to you by guillaume bort and is part of the play scala module distribution

Learning Scala

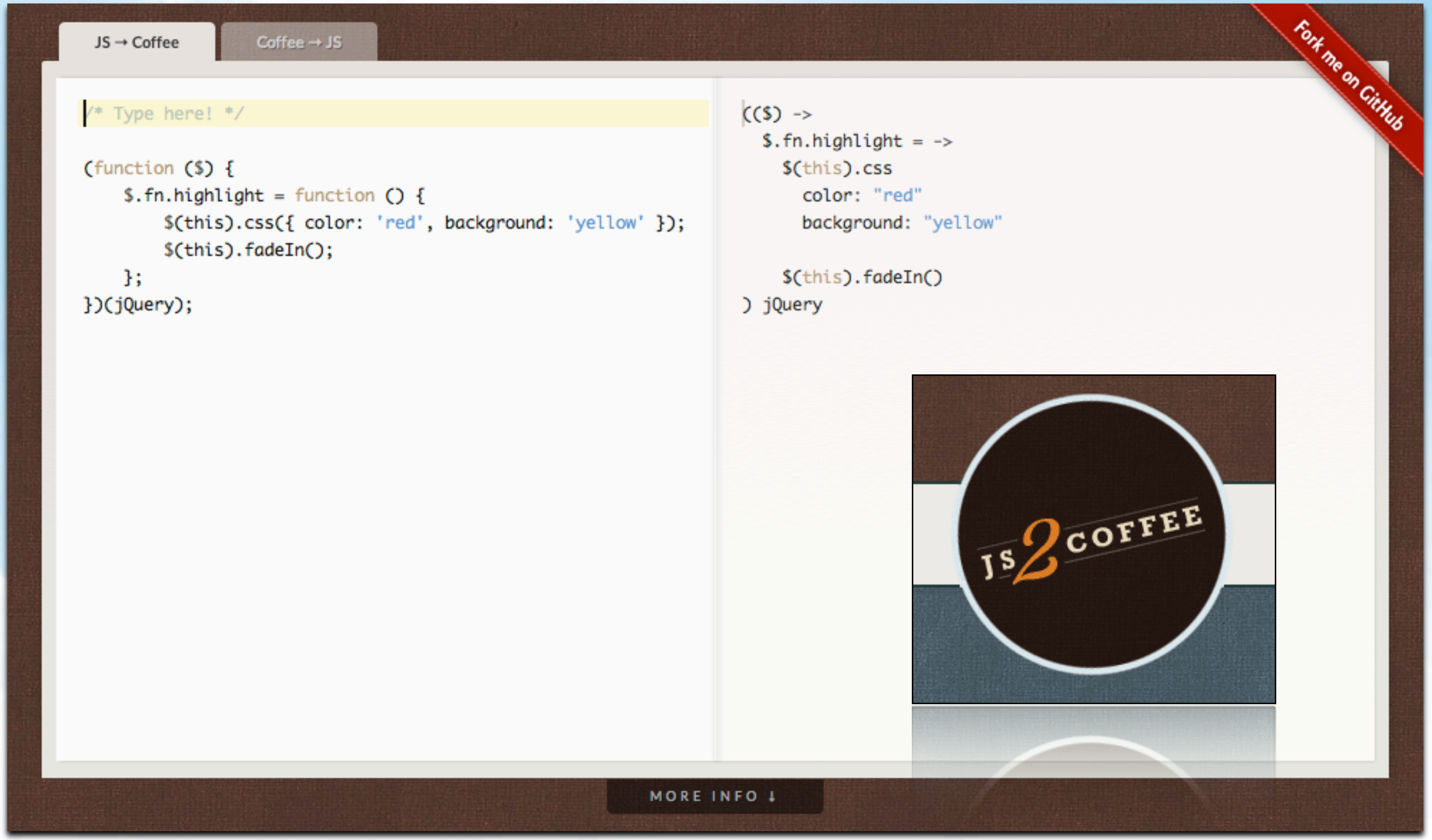
- Venkat’s **Scala for the Intrigued**
  - PragPub Magazine, starting in Sep 2011

- **Scala for the Impatient** - Cay Horstmann
- **Programming in Scala, 2nd Edition** - Martin Odersky, Lex Spoon, and Bill Venners



- Twitter’s **Scala School**

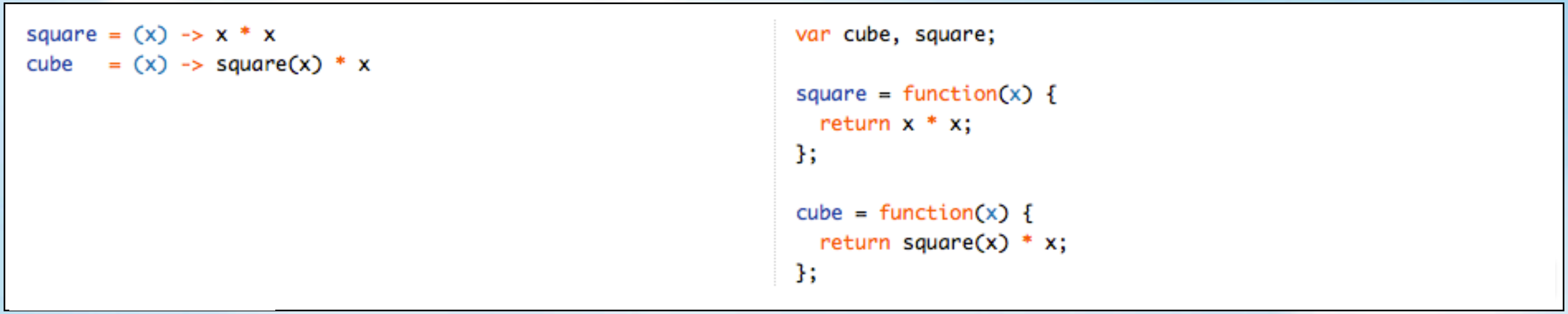
CoffeeScript



```
/* Type here! */

(function ($) {
    $.fn.highlight = function () {
        $(this).css({ color: 'red', background: 'yellow' });
        $(this).fadeIn();
    };
})(jQuery);
```

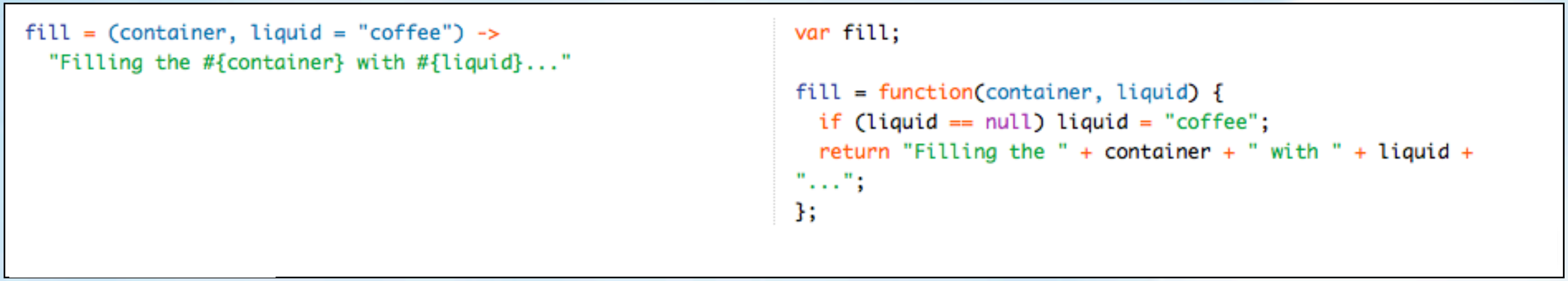
```
(($) ->
  $.fn.highlight = ->
    $(this).css
      color: "red"
      background: "yellow"

    $(this).fadeIn()
) jQuery
```

JavaScript: The Good Parts



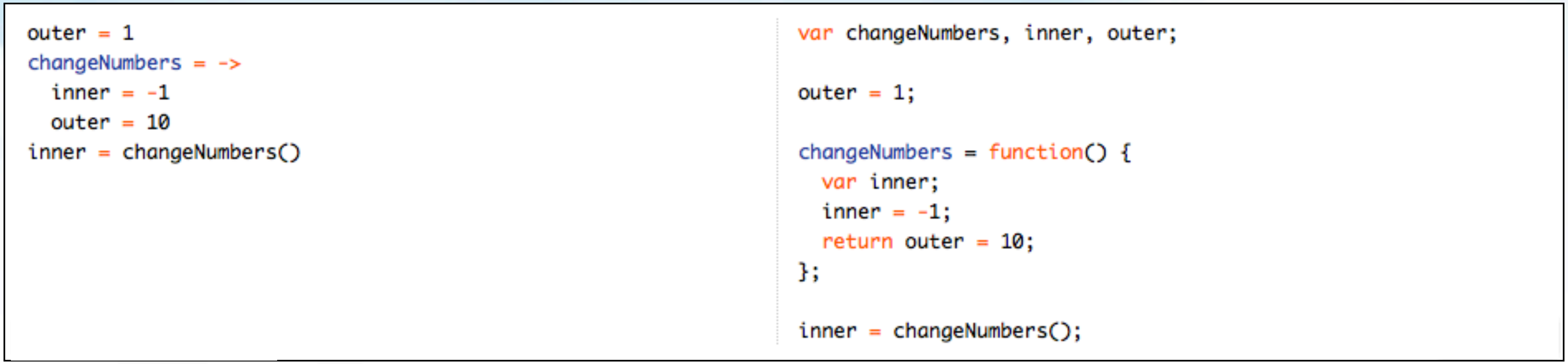
```
square = (x) -> x * x
cube   = (x) -> square(x) * x
```

```
var cube, square;

square = function(x) {
  return x * x;
};

cube = function(x) {
  return square(x) * x;
};
```



```
fill = (container, liquid = "coffee") ->
  "Filling the #{container} with #{liquid}..."
```

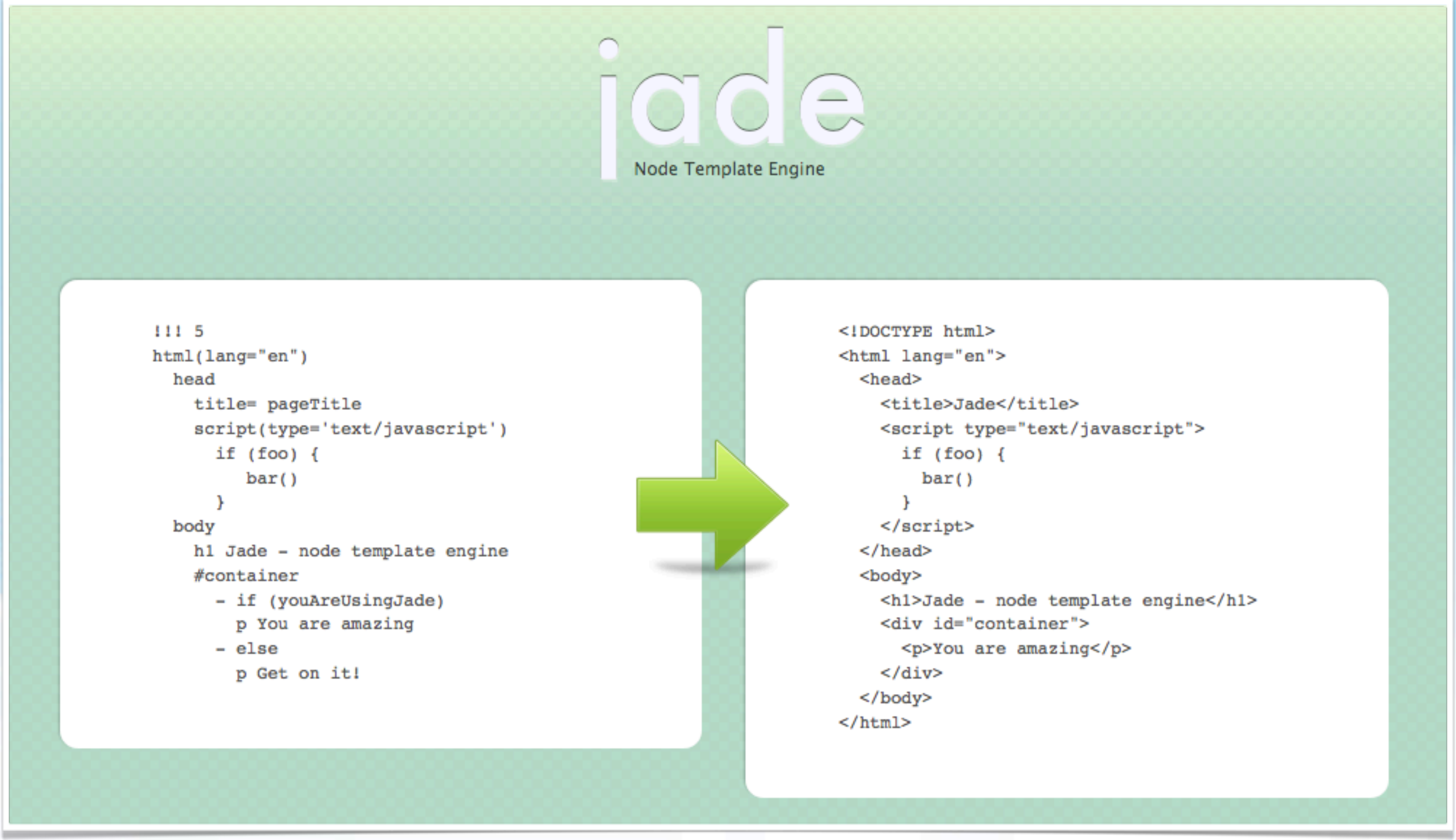
```
var fill;

fill = function(container, liquid) {
  if (liquid == null) liquid = "coffee";
  return "Filling the " + container + " with " + liquid +
"...";
};
```



```
outer = 1
changeNumbers = ->
  inner = -1
  outer = 10
inner = changeNumbers()
```

```
var changeNumbers, inner, outer;

outer = 1;

changeNumbers = function() {
  var inner;
  inner = -1;
  return outer = 10;
};

inner = changeNumbers();
```

Jade



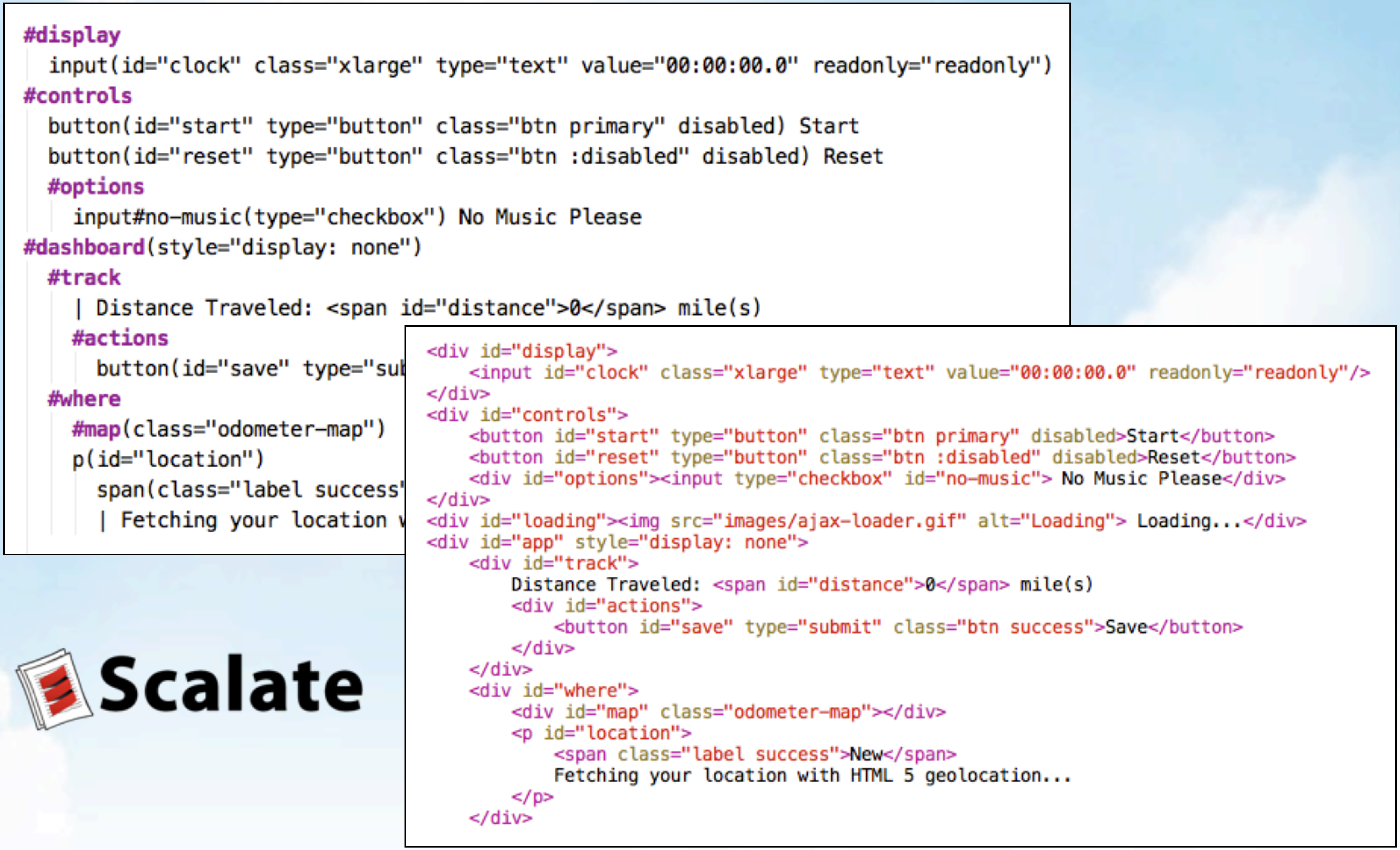
jade

Node Template Engine

```
!!! 5
html(lang="en")
  head
    title= pageTitle
    script(type='text/javascript')
      if (foo) {
         bar()
      }
  body
    h1 Jade - node template engine
    #container
      - if (youAreUsingJade)
        p You are amazing
      - else
        p Get on it!
```

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Jade</title>
    <script type="text/javascript">
      if (foo) {
        bar()
      }
    </script>
  </head>
  <body>
    <h1>Jade - node template engine</h1>
    <div id="container">
      <p>You are amazing</p>
    </div>
  </body>
</html>
```

Jade Example

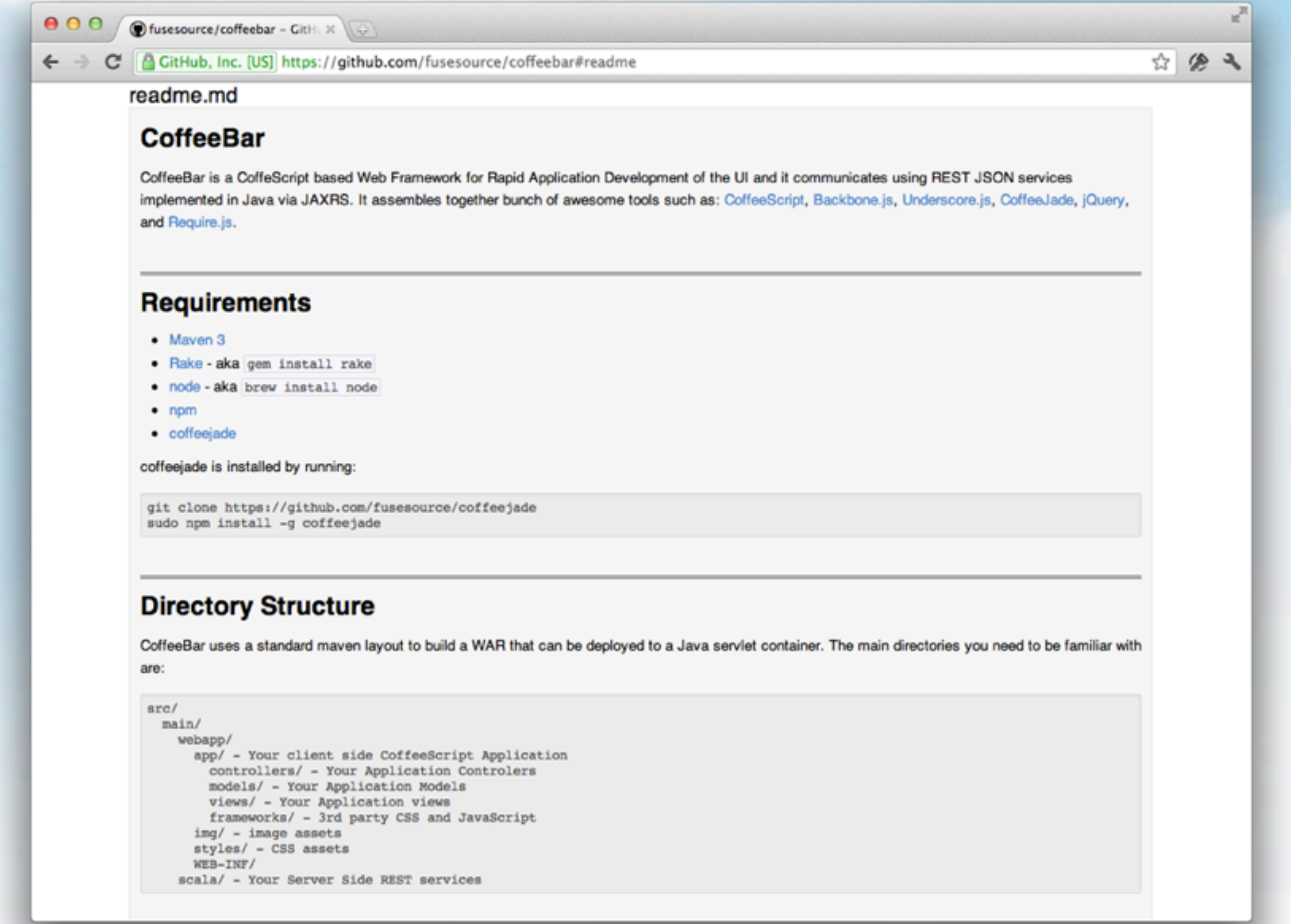


```
#display
  input(id="clock" class="xlarge" type="text" value="00:00:00.0" readonly="readonly")
#controls
  button(id="start" type="button" class="btn primary" disabled) Start
  button(id="reset" type="button" class="btn :disabled" disabled) Reset
  #options
    input#no-music(type="checkbox") No Music Please
#dashboard(style="display: none")
  #track
    | Distance Traveled: <span id="distance">0</span> mile(s)
    #actions
      button(id="save" type="sul
  #where
    #map(class="odometer-map")
    p(id="location")
      span(class="label success'
      | Fetching your location v
```

```
<div id="display">
    <input id="clock" class="xlarge" type="text" value="00:00:00.0" readonly="readonly"/>
</div>
<div id="controls">
    <button id="start" type="button" class="btn primary" disabled>Start</button>
    <button id="reset" type="button" class="btn :disabled" disabled>Reset</button>
    <div id="options"><input type="checkbox" id="no-music"> No Music Please</div>
</div>
<div id="loading"><img src="images/ajax-loader.gif" alt="Loading"> Loading...</div>
<div id="app" style="display: none">
    <div id="track">
        Distance Traveled: <span id="distance">0</span> mile(s)
        <div id="actions">
            <button id="save" type="submit" class="btn success">Save</button>
        </div>
    </div>
    <div id="where">
        <div id="map" class="odometer-map"></div>
        <p id="location">
            <span class="label success">New</span>
            Fetching your location with HTML 5 geolocation...
        </p>
    </div>
```

Scalate

CoffeeBar



fusesource/coffeebar - GitH
GitHub, Inc. [US] https://github.com/fusesource/coffeebar#readme

readme.md

CoffeeBar

CoffeeBar is a CoffeScript based Web Framework for Rapid Application Development of the UI and it communicates using REST JSON services implemented in Java via JAXRS. It assembles together bunch of awesome tools such as: CoffeeScript, Backbone.js, Underscore.js, CoffeeJade, jQuery, and Require.js.

Requirements

- Maven 3
- Rake - aka `gem install rake`
- node - aka `brew install node`
- npm
- coffeejade

coffeejade is installed by running:

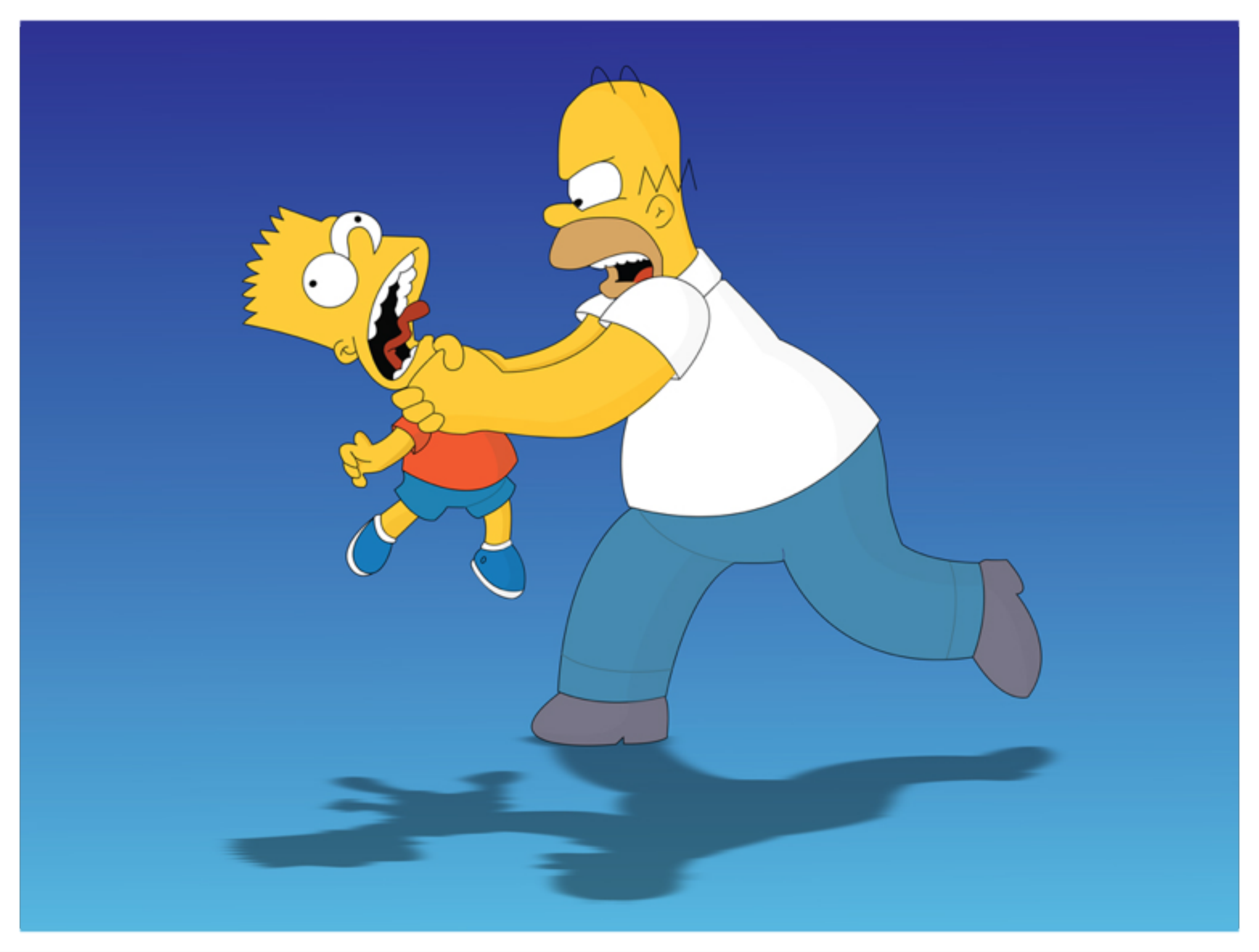
```
git clone https://github.com/fusesource/coffeejade
sudo npm install -g coffeejade
```

Directory Structure

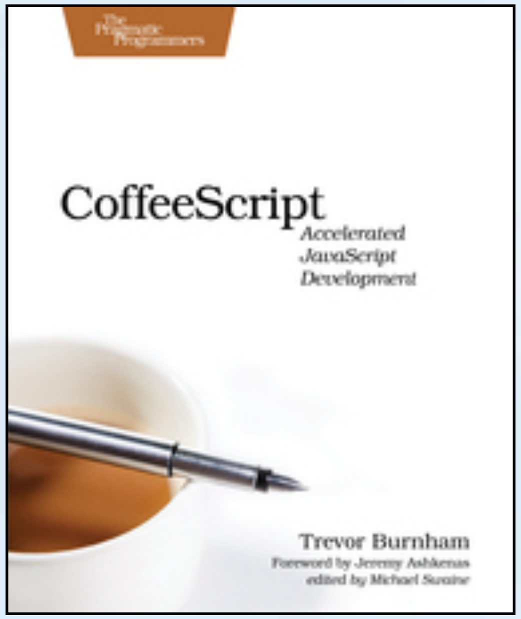
CoffeeBar uses a standard maven layout to build a WAR that can be deployed to a Java servlet container. The main directories you need to be familiar with are:

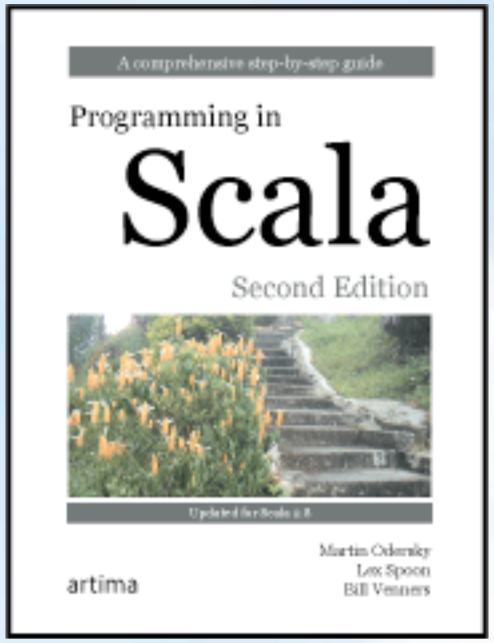
```
src/
  main/
    webapp/
      app/ - Your client side CoffeeScript Application
        controllers/ - Your Application Controlers
        models/ - Your Application Models
        views/ - Your Application views
        frameworks/ - 3rd party CSS and JavaScript
      img/ - image assets
      styles/ - CSS assets
      WEB-INF/
    scala/ - Your Server Side REST services
```

My Development Experience

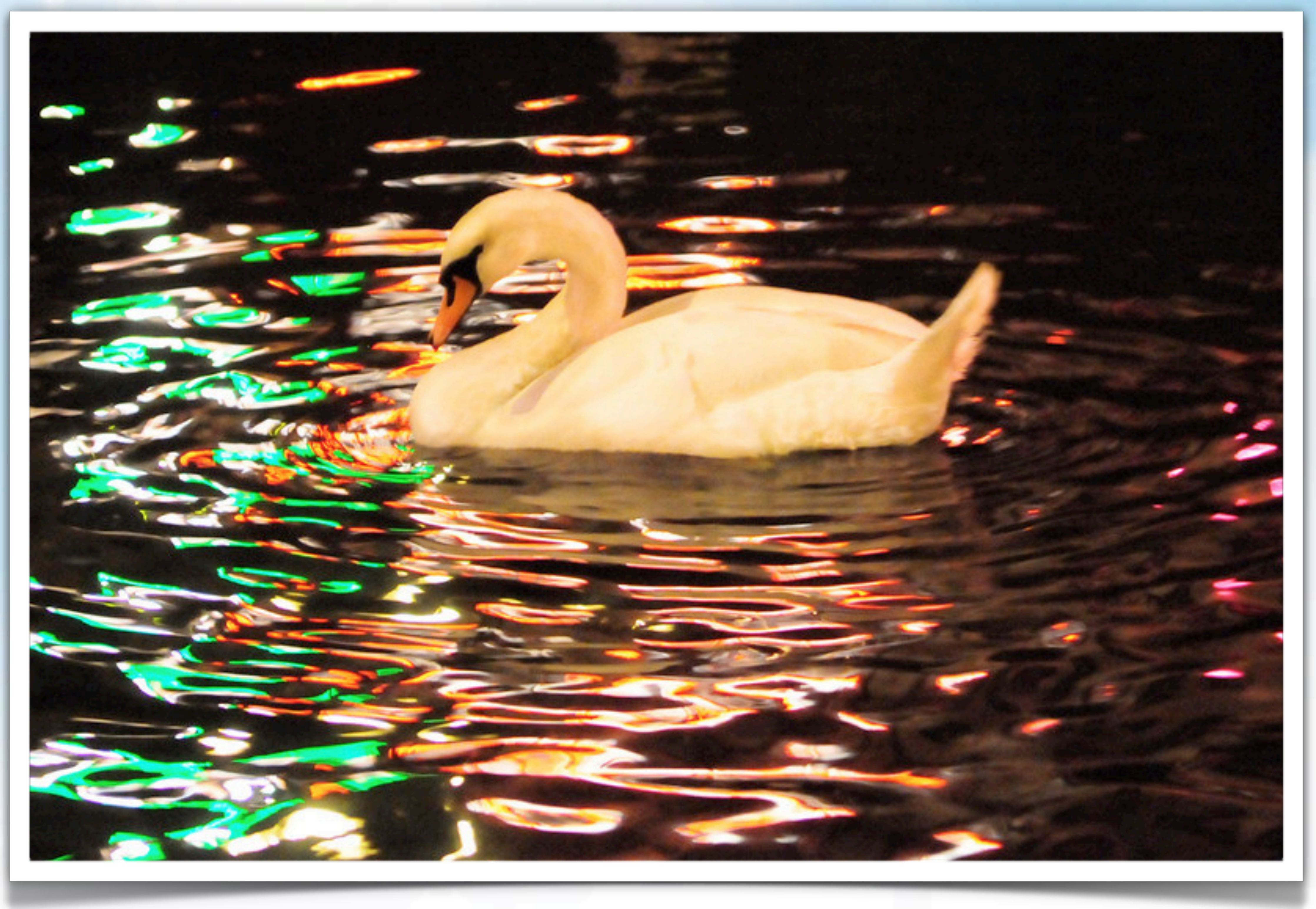


Getting Started


The Pragmatic Programmers
CoffeeScript
Accelerated JavaScript Development
Trevor Burnham
Foreword by Jeremy Ashkenas
edited by Michael Swaine



Developing with Play Scala



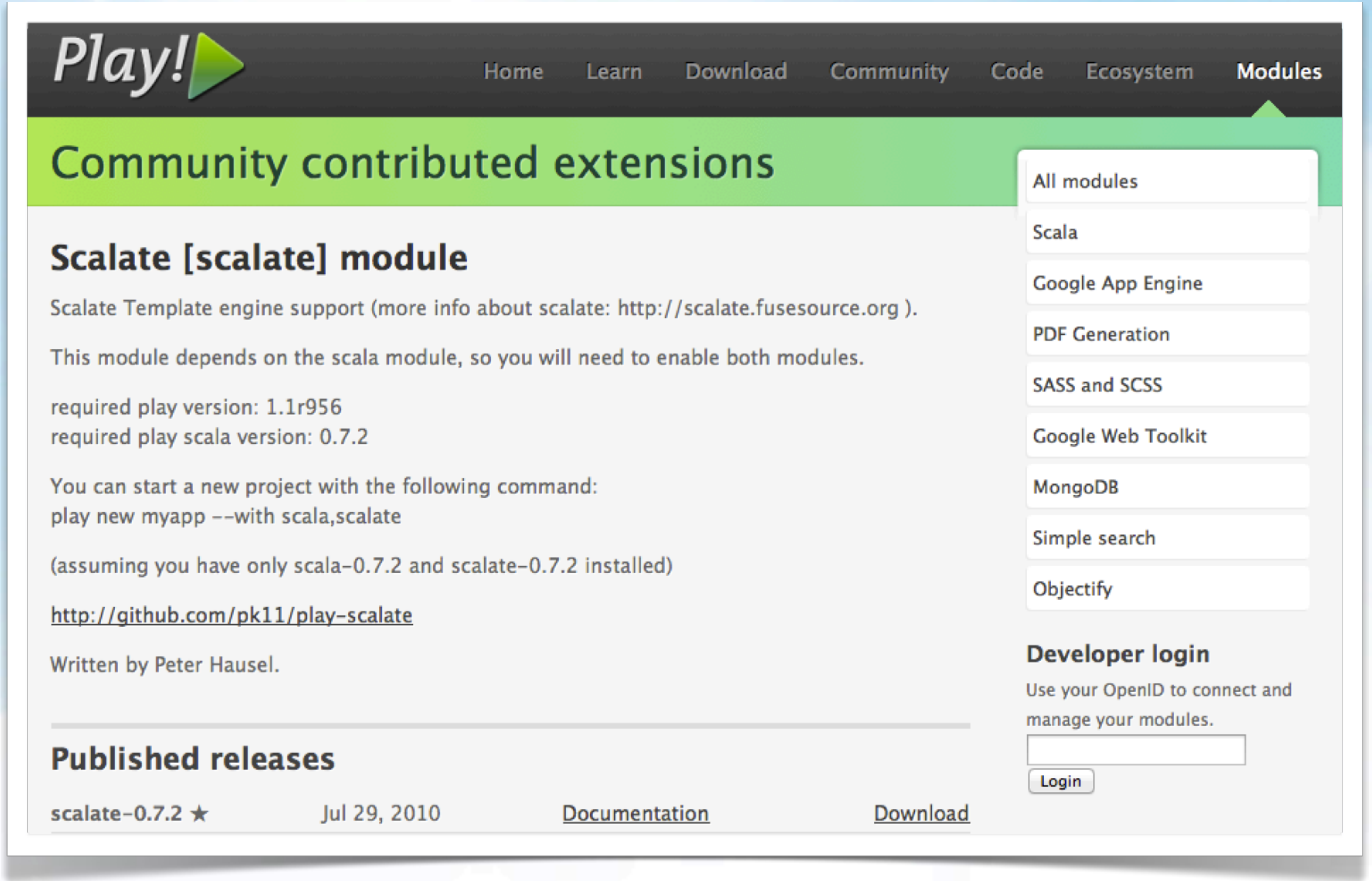
Tools I started with...

iTerm 2

iTerm 2 is a terminal emulator for
Mac OS X that does amazing things.

Google

Scalate Module



Community contributed extensions

Scalate [scalate] module

Scalate Template engine support (more info about scalate: http://scalate.fusesource.org).

This module depends on the scala module, so you will need to enable both modules.

required play version: 1.1r956
required play scala version: 0.7.2

You can start a new project with the following command:
play new myapp --with scala,scalate

(assuming you have only scala-0.7.2 and scalate-0.7.2 installed)

http://github.com/pk11/play-scalate

Written by Peter Hausel.

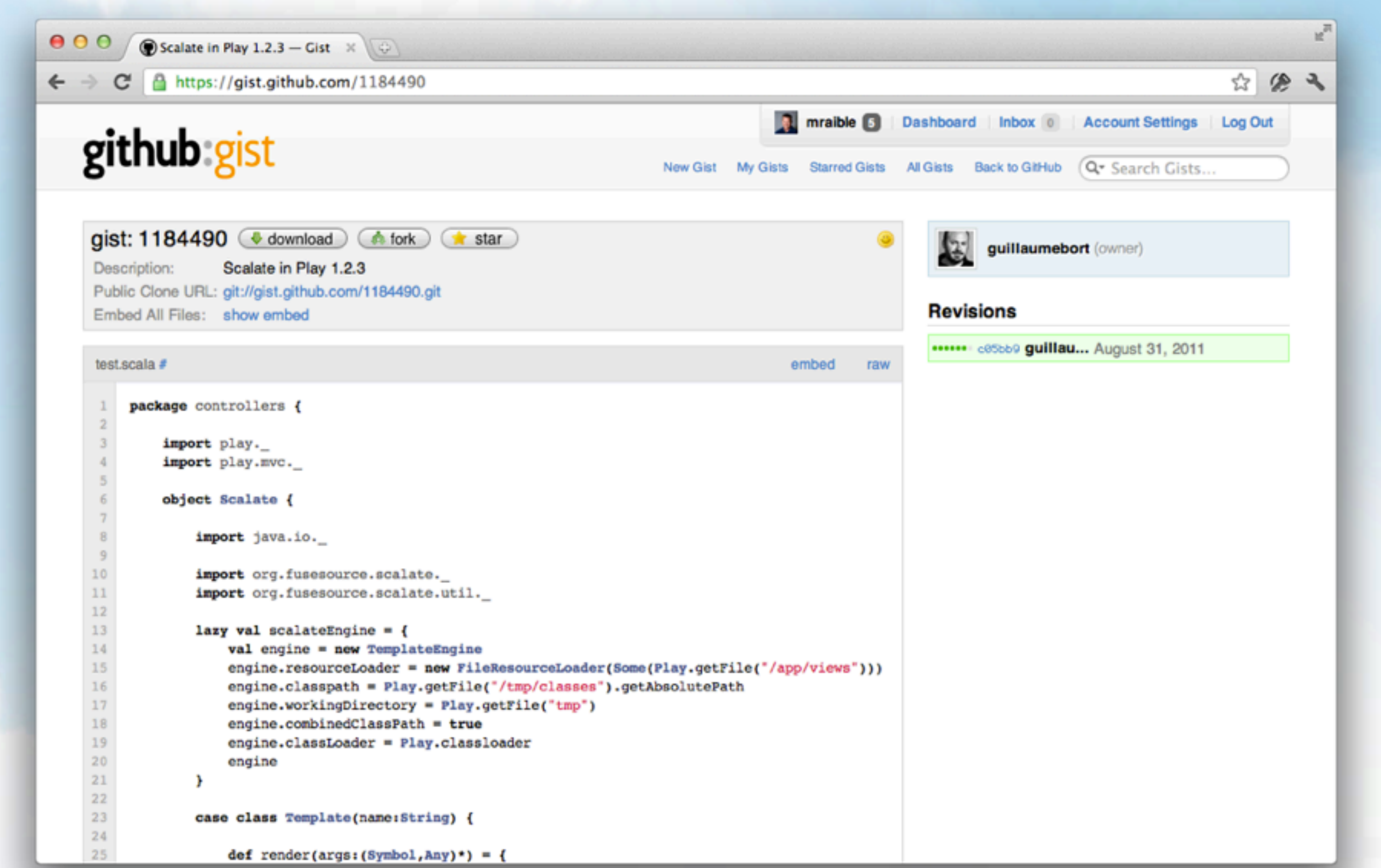
Published releases

scalate-0.7.2 ★	Jul 29, 2010	Documentation	Download

Developer login

Use your OpenID to connect and manage your modules.

Scalate Integration Solution



gist: 1184490

Description: Scalate in Play 1.2.3

Public Clone URL: git://gist.github.com/1184490.git

Embed All Files: show embed

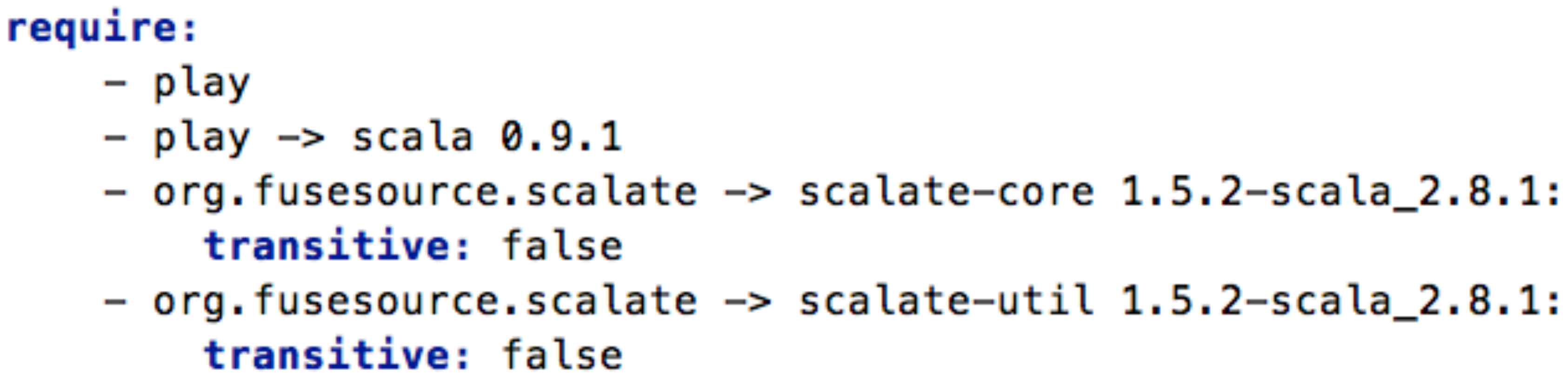
Revisions

c05bb9 guillau... August 31, 2011

test.scala #

```scala
package controllers {

    import play._
    import play.mvc._

    object Scalate {

        import java.io._

        import org.fusesource.scalate._
        import org.fusesource.scalate.util._

        lazy val scalateEngine = {
            val engine = new TemplateEngine
            engine.resourceLoader = new FileResourceLoader(Some(Play.getFile("/app/views")))
            engine.classpath = Play.getFile("/tmp/classes").getAbsolutePath
            engine.workingDirectory = Play.getFile("tmp")
            engine.combinedClassPath = true
            engine.classLoader = Play.classloader
            engine
        }

        case class Template(name:String) {

            def render(args:(Symbol,Any)*) = {
```

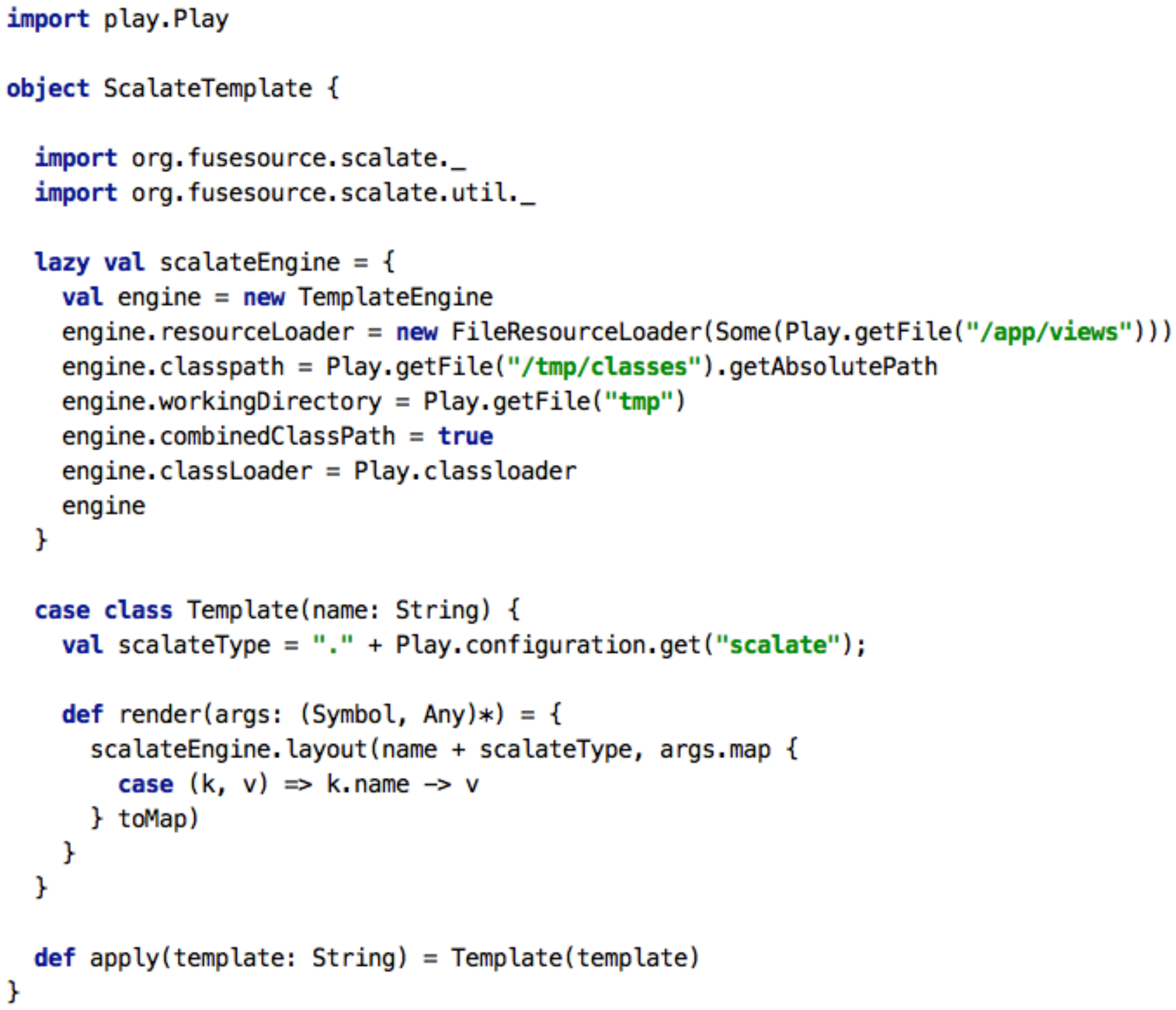
Integrating Scalate with Play



```
require:
    - play
    - play -> scala 0.9.1
    - org.fusesource.scalate -> scalate-core 1.5.2-scala_2.8.1:
        transitive: false
    - org.fusesource.scalate -> scalate-util 1.5.2-scala_2.8.1:
        transitive: false
```

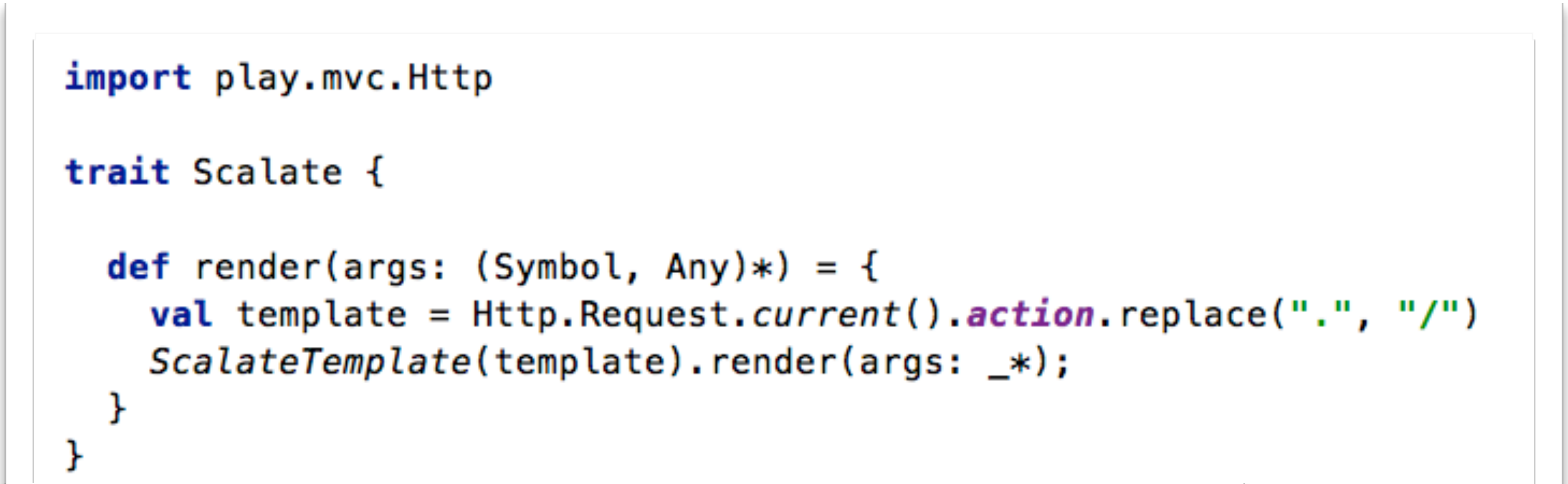
```
play deps --sync
```

Integrating Scalate with Play

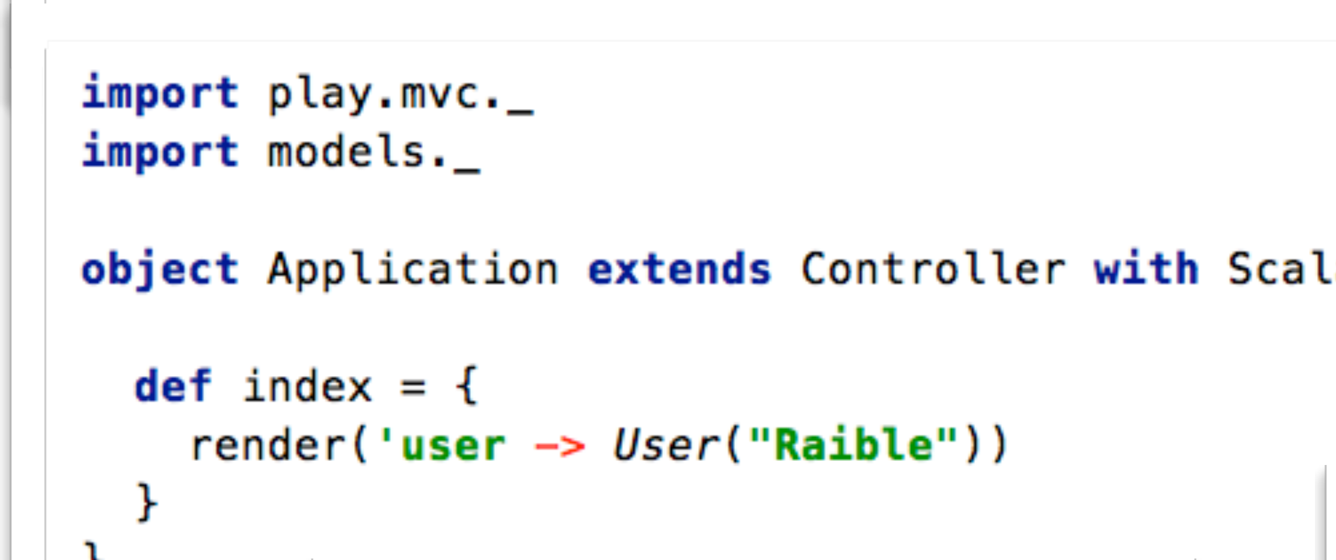


```scala
import play.Play

object ScalateTemplate {

  import org.fusesource.scalate._
  import org.fusesource.scalate.util._

  lazy val scalateEngine = {
    val engine = new TemplateEngine
    engine.resourceLoader = new FileResourceLoader(Some(Play.getFile("/app/views")))
    engine.classpath = Play.getFile("/tmp/classes").getAbsolutePath
    engine.workingDirectory = Play.getFile("tmp")
    engine.combinedClassPath = true
    engine.classLoader = Play.classloader
    engine
  }

  case class Template(name: String) {
    val scalateType = "." + Play.configuration.get("scalate");

    def render(args: (Symbol, Any)*) = {
      scalateEngine.layout(name + scalateType, args.map {
        case (k, v) => k.name -> v
      } toMap)
    }
  }

  def apply(template: String) = Template(template)
}
```

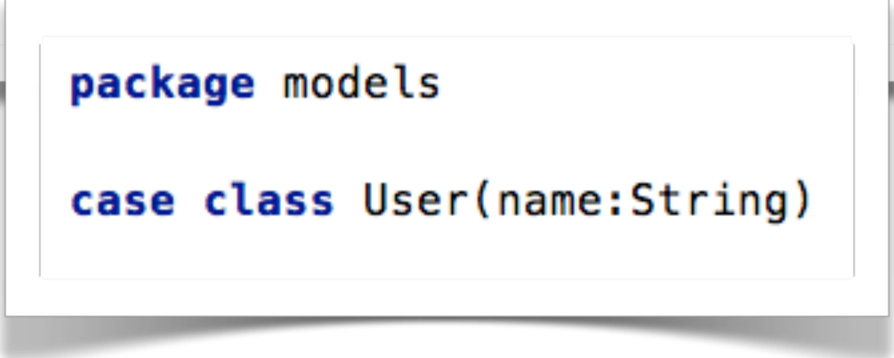
Integrating Scalate with Play



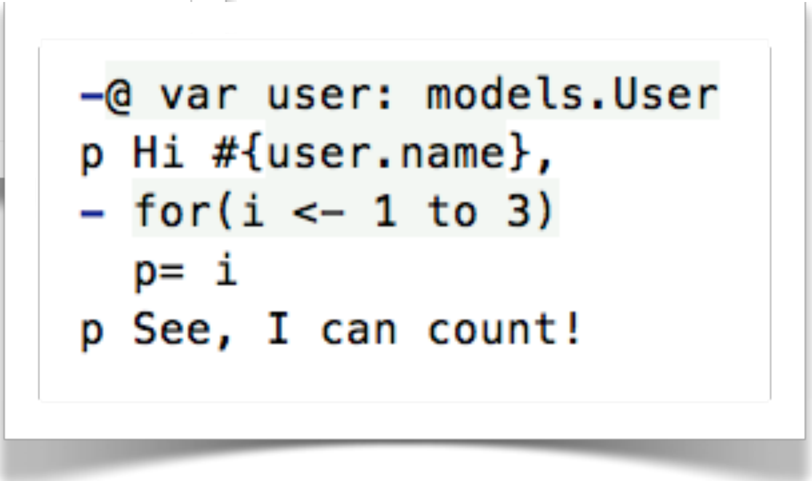
```scala
import play.mvc.Http

trait Scalate {

  def render(args: (Symbol, Any)*) = {
    val template = Http.Request.current().action.replace(".", "/")
    ScalateTemplate(template).render(args: _*);
  }
}
```



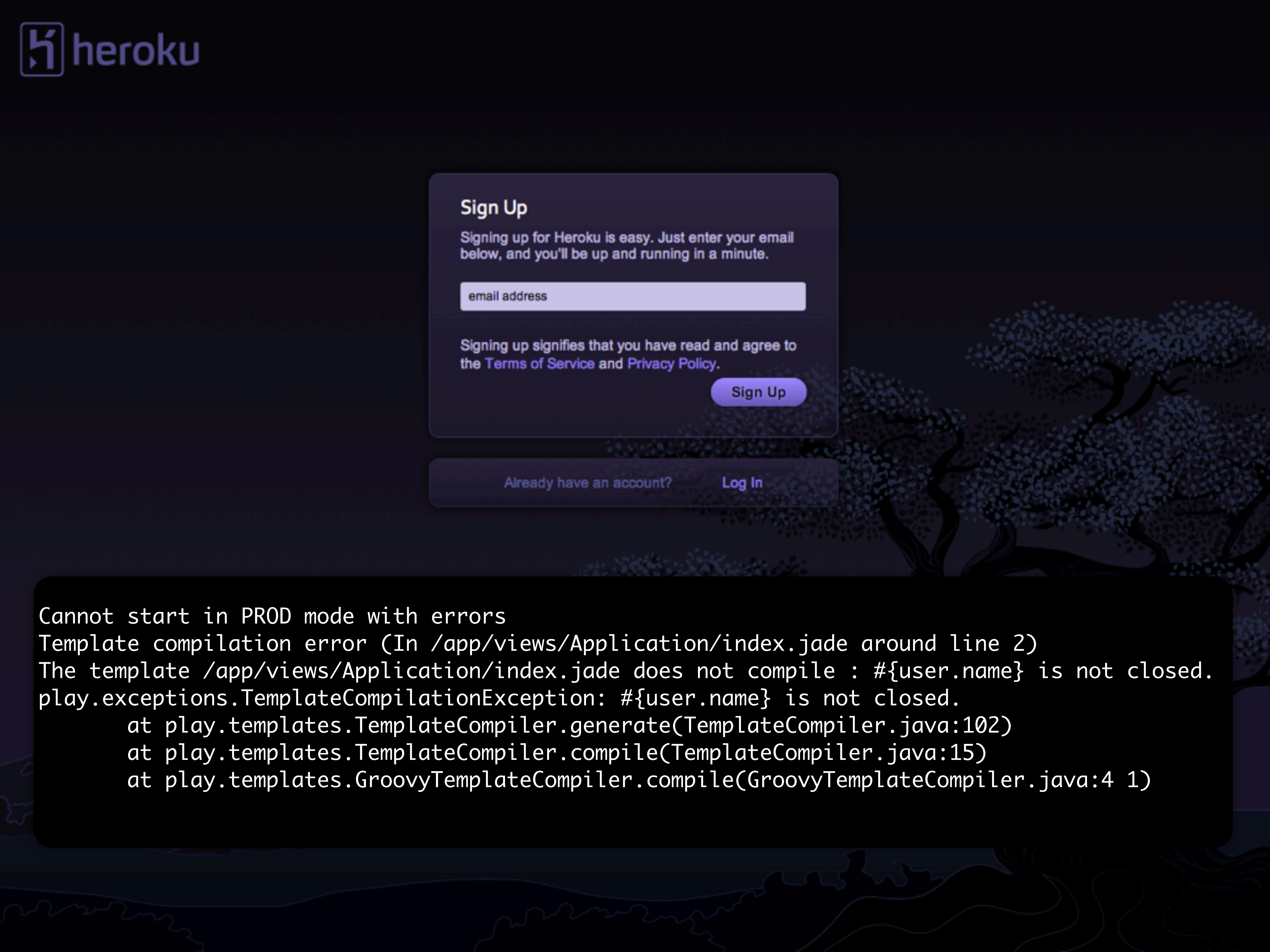
```scala
import play.mvc._
import models._

object Application extends Controller with Scalate {

  def index = {
    render('user -> User("Raible"))
  }
}
```



```scala
package models

case class User(name:String)
```



```
-@ var user: models.User
p Hi #{user.name},
- for(i <- 1 to 3)
  p= i
p See, I can count!
```



Sign Up

Signing up for Heroku is easy. Just enter your email below, and you'll be up and running in a minute.

Signing up signifies that you have read and agree to the Terms of Service and Privacy Policy.

```
Cannot start in PROD mode with errors
Template compilation error (In /app/views/Application/index.jade around line 2)
The template /app/views/Application/index.jade does not compile : #{user.name} is not closed.
play.exceptions.TemplateCompilationException: #{user.name} is not closed.
       at play.templates.TemplateCompiler.generate(TemplateCompiler.java:102)
       at play.templates.TemplateCompiler.compile(TemplateCompiler.java:15)
       at play.templates.GroovyTemplateCompiler.compile(GroovyTemplateCompiler.java:4 1)
```

Integrating Scalate with Play

Wednesday September 07, 2011

Integrating Scalate and Jade with Play 1.2.3

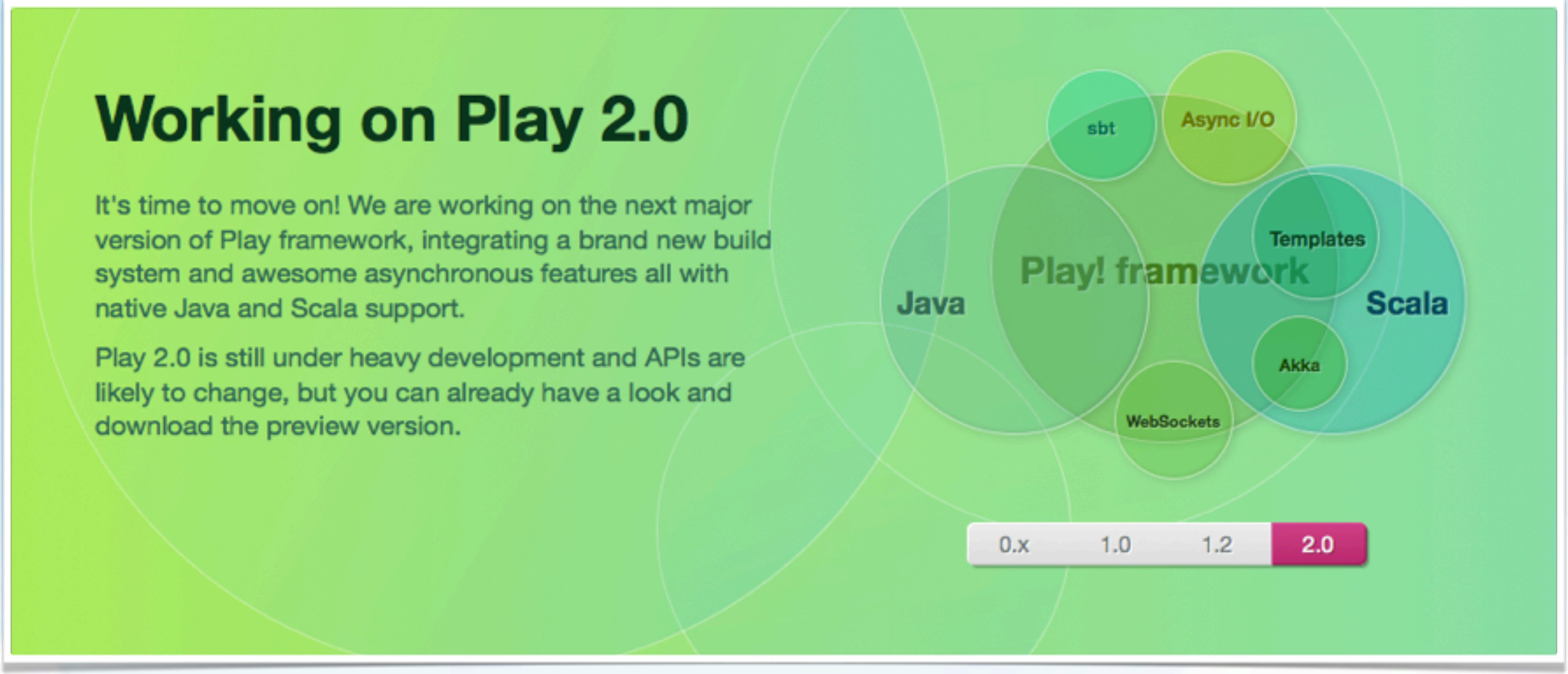
At the beginning of this year, I decided I wanted to learn **Scala**. Since I'm a Web Frameworks Aficionado, I figured the best way to do that would be to learn **Lift**. I entered these two items on my todo list and let them lie for a couple months. After attending **TSSJS 2011** and having a conversation with **James Strachan**, I added a couple more technologies to my learning list. James had great things to say about both **CoffeeScript** and **Jade** and I decided to learn those as well.

In May, **Devoxx** announced their Call For Papers and I started reminiscing about how awesome **last year's trip** was. I decided I'd try to get accepted again and started brainstorming about talks I'd like to give. I came up with "Comparing Scala Web Frameworks" and "HTML5 with Play Scala, CoffeeScript and Jade". The reason I chose Play over Lift for the latter talk is because I think it fits a lot more with the MVC mindset I have and the easy-to-learn nature of web frameworks I enjoy using. Both topics sounded very interesting to me, and I figured they'd also inspire me to learn the technologies in a brute-force fashion; where I was under a time constraint and would be embarrassed in front of a large audience if I didn't succeed.

In mid-July, I got an email from **Stephan** inviting me to speak again at the 10th edition of Devoxx. I smile splashed across my face and I quickly realized I had a lot to learn. Since I was still in vacation mode after **summer vacation in Montana**, I decided to wait until I returned from **Cape Cod** to start studying. While on my 2nd summer vacation, I received an email from Devoxx stating that they'd like me present "HTML5 with Play/Scala, CoffeeScript and Jade".

http://raibledesigns.com/rd/entry/integrating_scalate_and_jade_with

Play 2.0



Working on Play 2.0

It's time to move on! We are working on the next major version of Play framework, integrating a brand new build system and awesome asynchronous features all with native Java and Scala support.

Play 2.0 is still under heavy development and APIs are likely to change, but you can already have a look and download the preview version.

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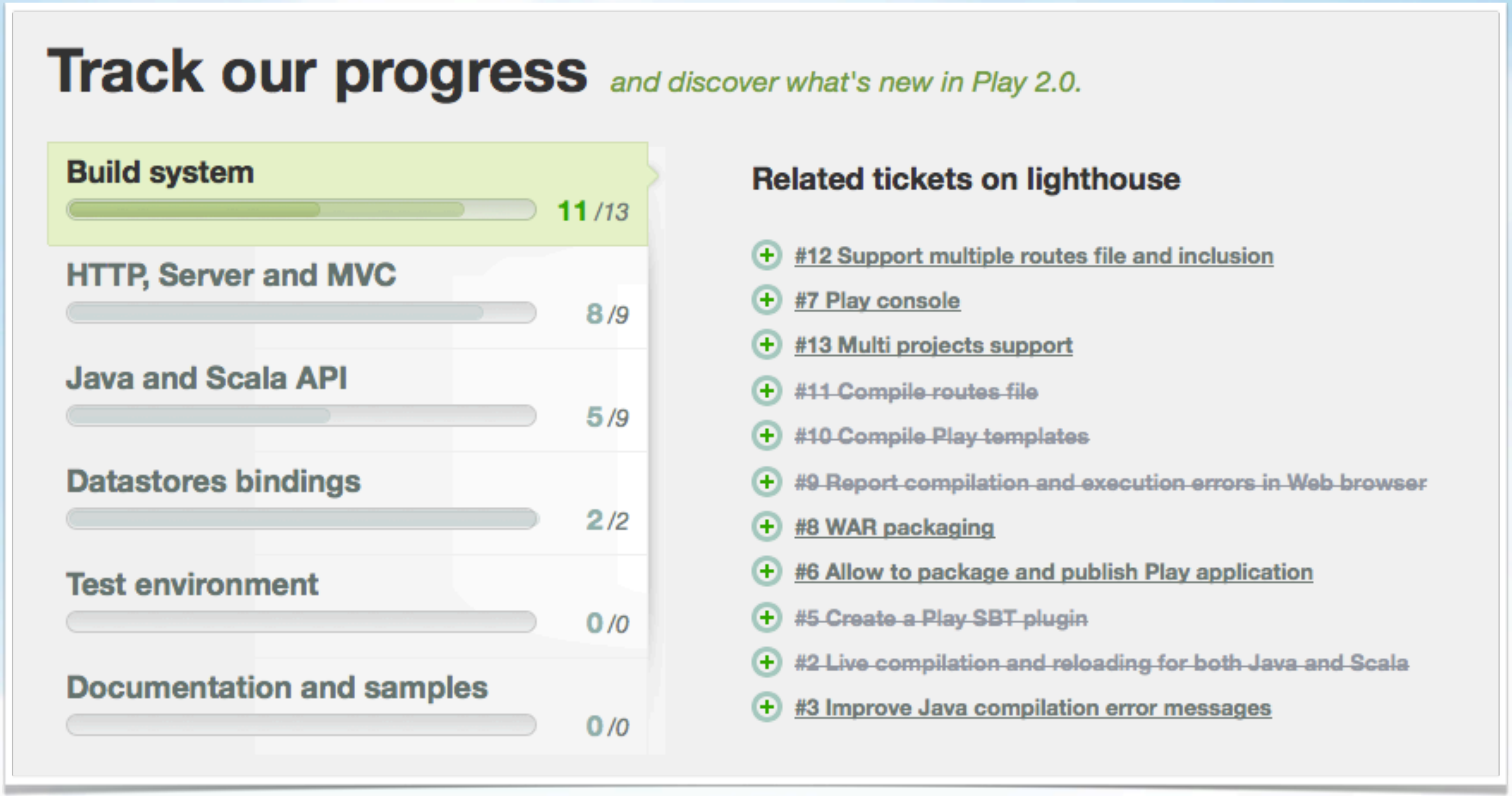
Play 2.0



Track our progress *and discover what's new in Play 2.0.*

Build system 11 /13

HTTP, Server and MVC 8 /9

Java and Scala API 5 /9

Datastores bindings 2 /2

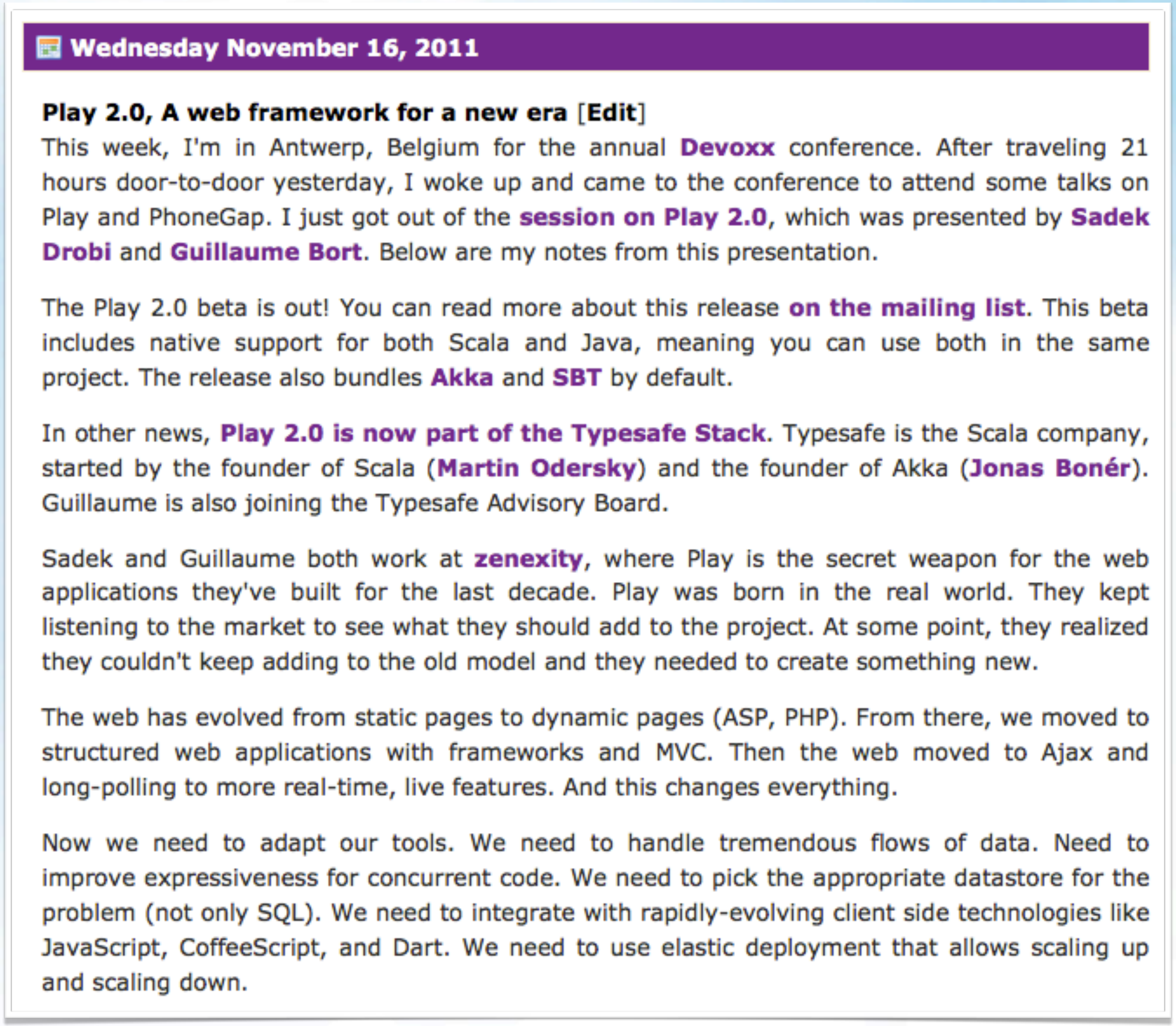
Test environment 0 /0

Documentation and samples 0 /0

Related tickets on lighthouse

- #12 Support multiple routes file and inclusion
- #7 Play console
- #13 Multi projects support
- ~~#11 Compile routes file~~
- ~~#10 Compile Play templates~~
- ~~#9 Report compilation and execution errors in Web browser~~
- #8 WAR packaging
- #6 Allow to package and publish Play application
- ~~#5 Create a Play SBT plugin~~
- ~~#2 Live compilation and reloading for both Java and Scala~~
- #3 Improve Java compilation error messages

Play 2.0 Beta



Wednesday November 16, 2011

Play 2.0, A web framework for a new era [Edit]

This week, I'm in Antwerp, Belgium for the annual **Devoxx** conference. After traveling 21 hours door-to-door yesterday, I woke up and came to the conference to attend some talks on Play and PhoneGap. I just got out of the **session on Play 2.0**, which was presented by **Sadek Drobi** and **Guillaume Bort**. Below are my notes from this presentation.

The Play 2.0 beta is out! You can read more about this release **on the mailing list**. This beta includes native support for both Scala and Java, meaning you can use both in the same project. The release also bundles **Akka** and **SBT** by default.

In other news, **Play 2.0 is now part of the Typesafe Stack**. Typesafe is the Scala company, started by the founder of Scala (**Martin Odersky**) and the founder of Akka (**Jonas Bonér**). Guillaume is also joining the Typesafe Advisory Board.

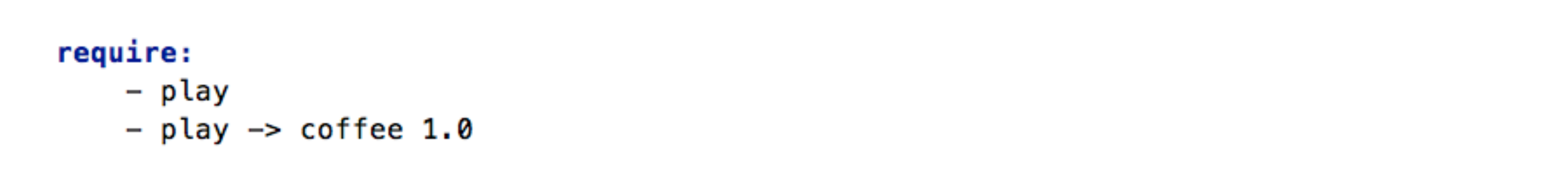
Sadek and Guillaume both work at **zenexity**, where Play is the secret weapon for the web applications they've built for the last decade. Play was born in the real world. They kept listening to the market to see what they should add to the project. At some point, they realized they couldn't keep adding to the old model and they needed to create something new.

The web has evolved from static pages to dynamic pages (ASP, PHP). From there, we moved to structured web applications with frameworks and MVC. Then the web moved to Ajax and long-polling to more real-time, live features. And this changes everything.

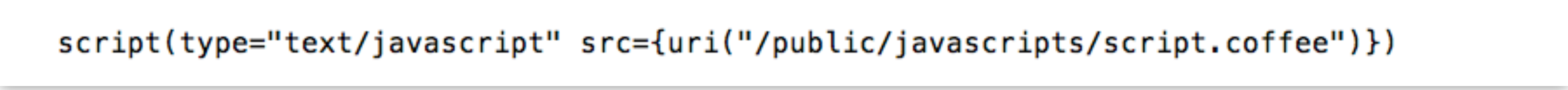
Now we need to adapt our tools. We need to handle tremendous flows of data. Need to improve expressiveness for concurrent code. We need to pick the appropriate datastore for the problem (not only SQL). We need to integrate with rapidly-evolving client side technologies like JavaScript, CoffeeScript, and Dart. We need to use elastic deployment that allows scaling up and scaling down.

A Nice Break ...

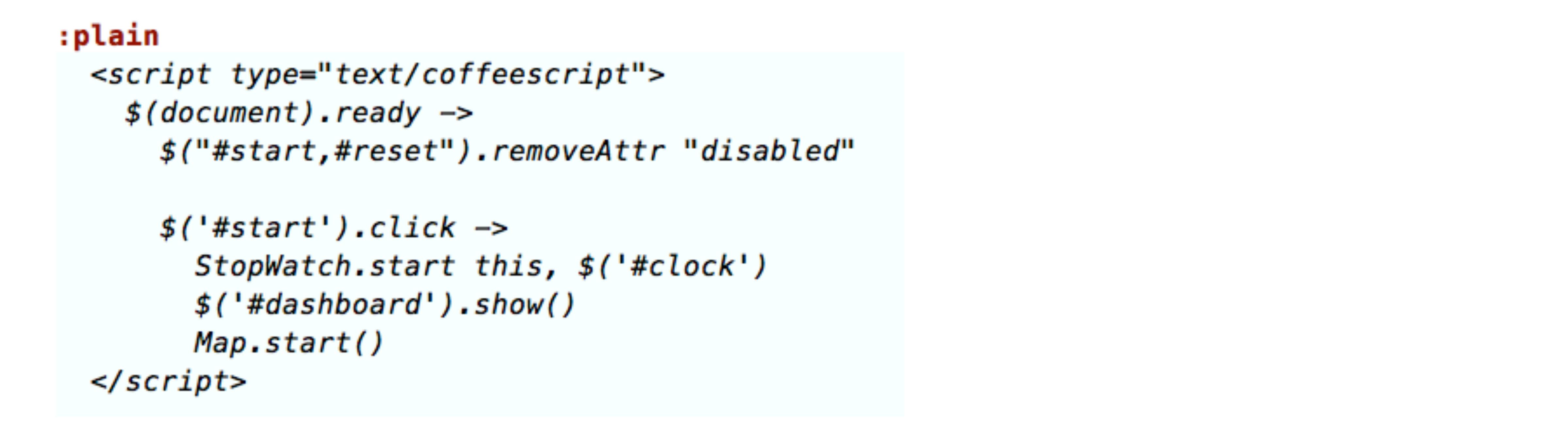
CoffeeScript with Play



```
require:
    - play
    - play -> coffee 1.0
```

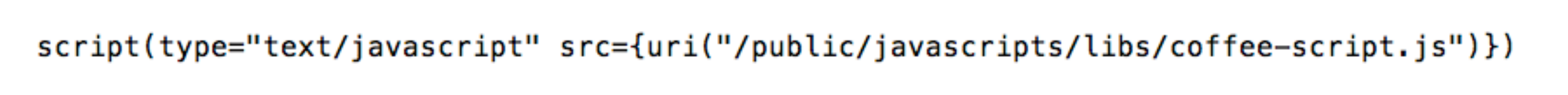


```
script(type="text/javascript" src={uri("/public/javascripts/script.coffee")})
```



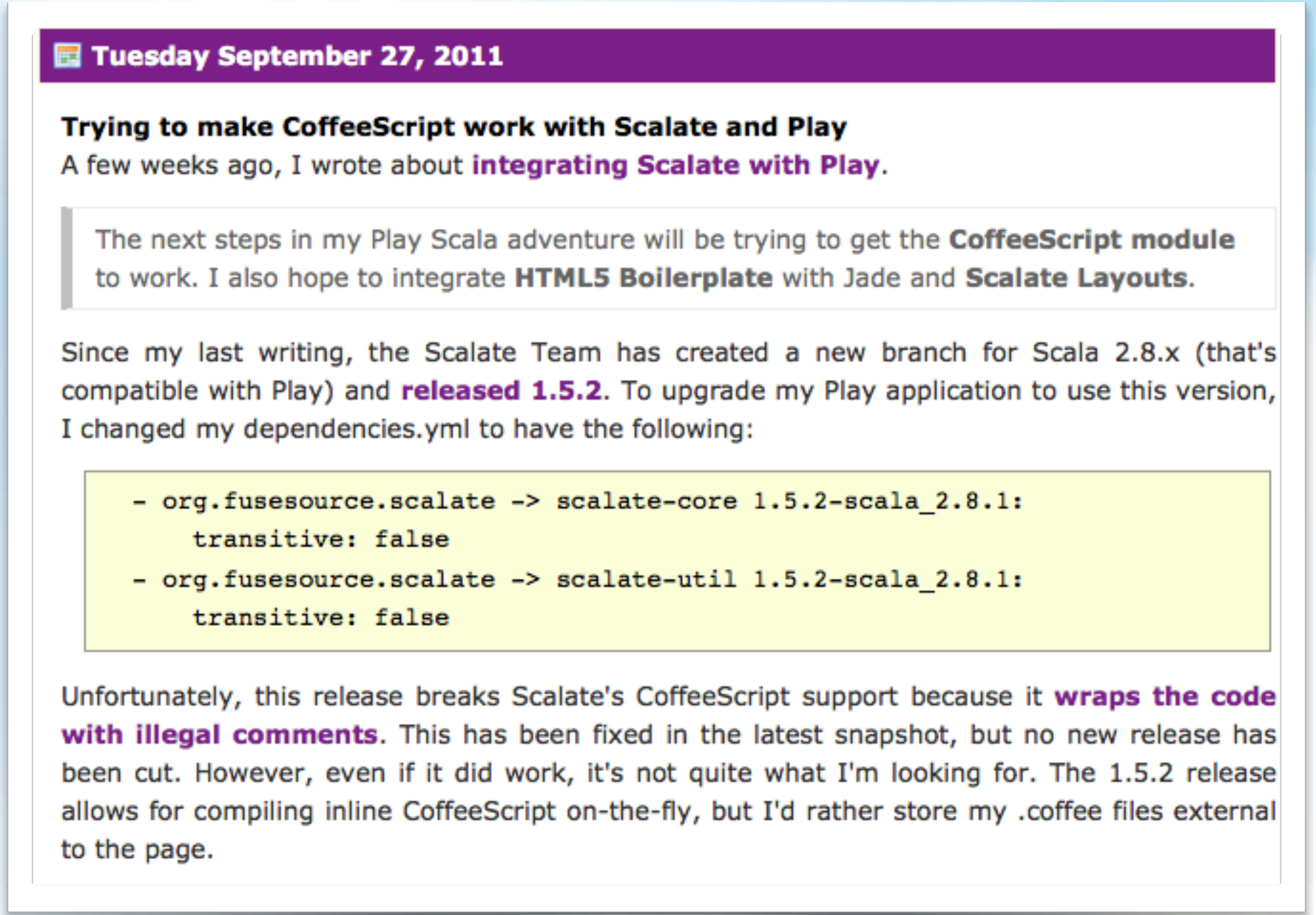
```
:plain
  <script type="text/coffeescript">
    $(document).ready ->
      $("#start,#reset").removeAttr "disabled"

      $('#start').click ->
        StopWatch.start this, $('#clock')
        $('#dashboard').show()
        Map.start()
  </script>
```



```
script(type="text/javascript" src={uri("/public/javascripts/libs/coffee-script.js")})
```

CoffeeScript with Play



Tuesday September 27, 2011

Trying to make CoffeeScript work with Scalate and Play

A few weeks ago, I wrote about **integrating Scalate with Play**.

> The next steps in my Play Scala adventure will be trying to get the **CoffeeScript module** to work. I also hope to integrate **HTML5 Boilerplate** with Jade and **Scalate Layouts**.

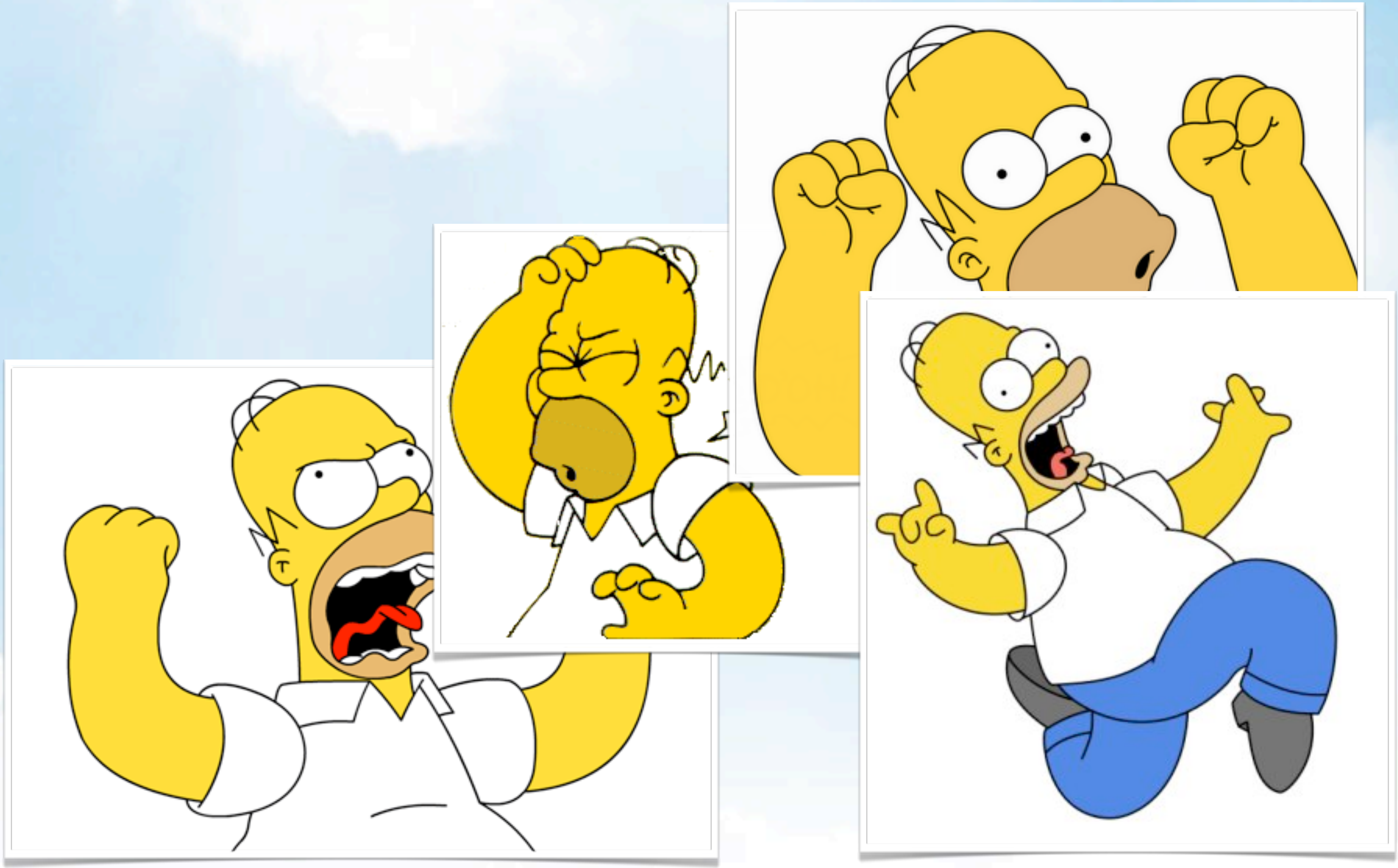
Since my last writing, the Scalate Team has created a new branch for Scala 2.8.x (that's compatible with Play) and **released 1.5.2**. To upgrade my Play application to use this version, I changed my dependencies.yml to have the following:

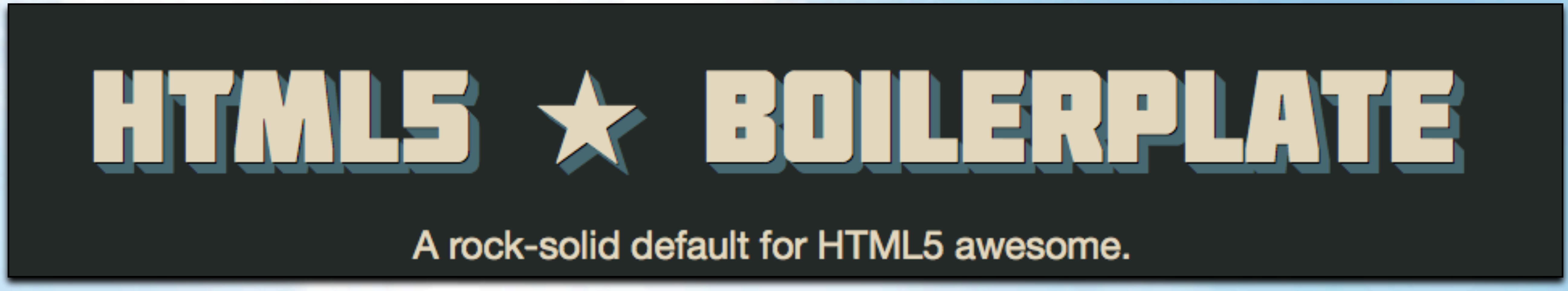
```
  - org.fusesource.scalate -> scalate-core 1.5.2-scala_2.8.1:
      transitive: false
  - org.fusesource.scalate -> scalate-util 1.5.2-scala_2.8.1:
      transitive: false
```

Unfortunately, this release breaks Scalate's CoffeeScript support because it **wraps the code with illegal comments**. This has been fixed in the latest snapshot, but no new release has been cut. However, even if it did work, it's not quite what I'm looking for. The 1.5.2 release allows for compiling inline CoffeeScript on-the-fly, but I'd rather store my .coffee files external to the page.

http://raibledesigns.com/rd/entry/trying_to_make_coffeescript_work

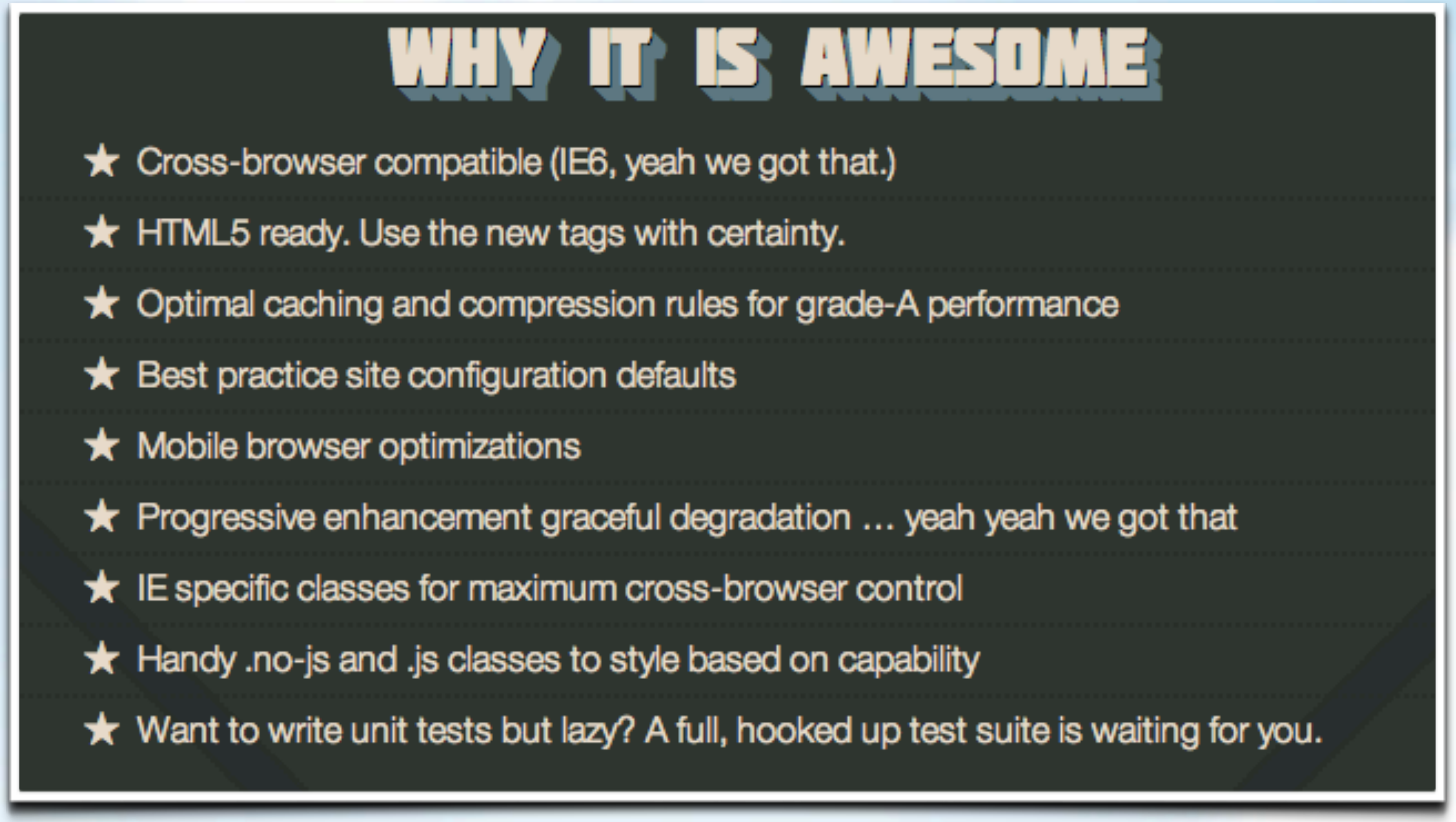
My Development Experience





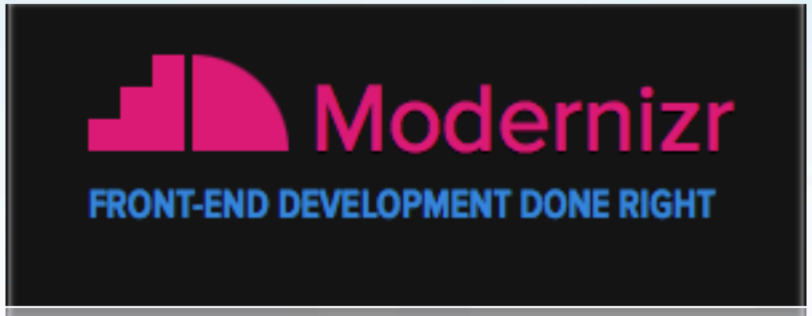
HTML5 ★ BOILERPLATE

A rock-solid default for HTML5 awesome.



WHY IT IS AWESOME

- ★ Cross-browser compatible (IE6, yeah we got that.)
- ★ HTML5 ready. Use the new tags with certainty.
- ★ Optimal caching and compression rules for grade-A performance
- ★ Best practice site configuration defaults
- ★ Mobile browser optimizations
- ★ Progressive enhancement graceful degradation … yeah yeah we got that
- ★ IE specific classes for maximum cross-browser control
- ★ Handy .no-js and .js classes to style based on capability
- ★ Want to write unit tests but lazy? A full, hooked up test suite is waiting for you.



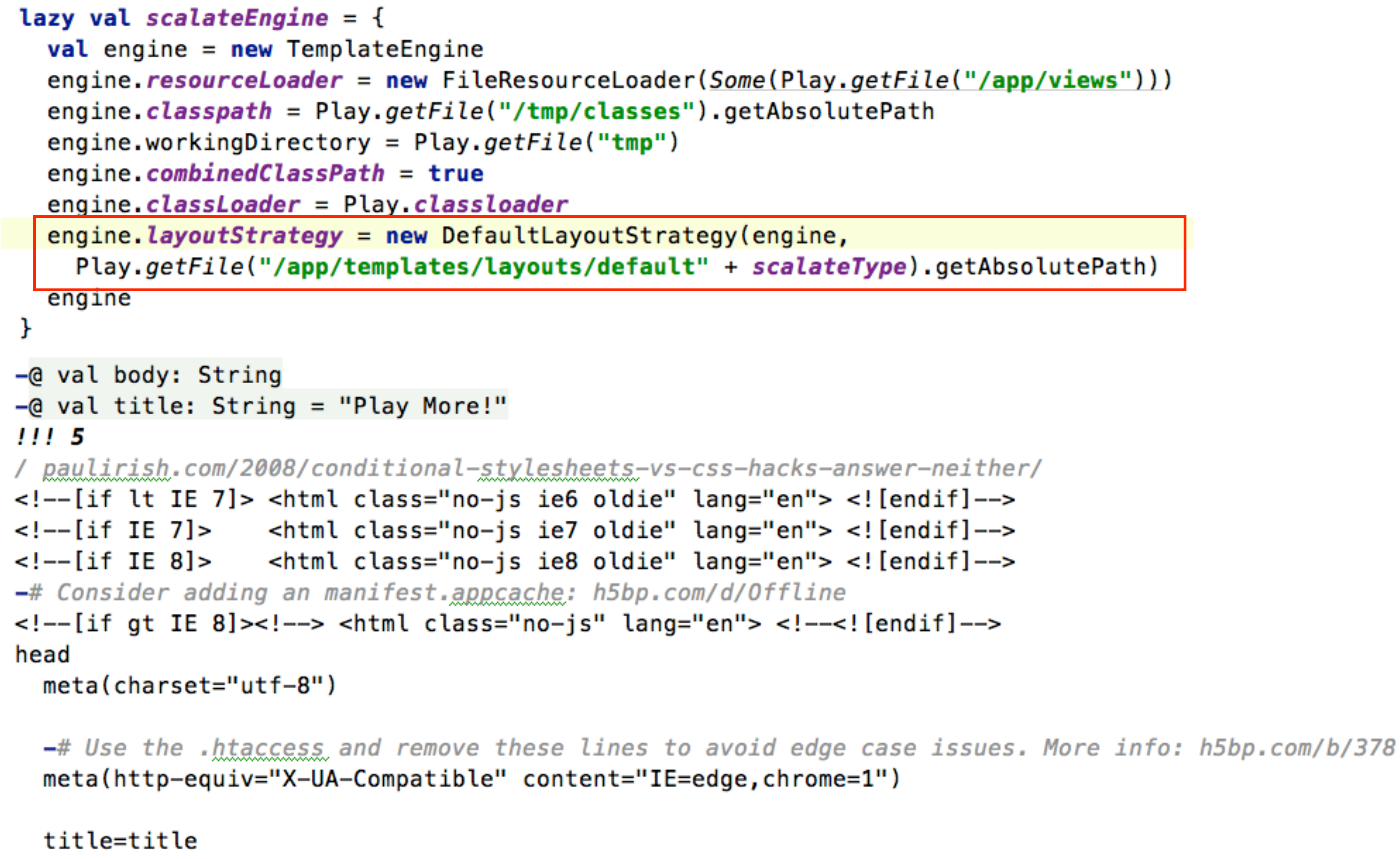
Modernizr

FRONT-END DEVELOPMENT DONE RIGHT

H5BP and Play

```
cd $boilerplate-download
cp 404.html ~/dev/play-more/app/views/errors/404.html
cp *.png ~/dev/play-more/public/.
cp crossdomain.xml ~/dev/play-more/public/.
cp -r css ~/dev/play-more/public/stylesheets/.
cp favicon.ico ~/dev/play-more/public/.
cp humans.txt ~/dev/play-more/public/.
cp -r js/libs ~/dev/play-more/public/javascripts/.
cp robots.txt ~/dev/play-more/public/.
```

Scalate Layouts



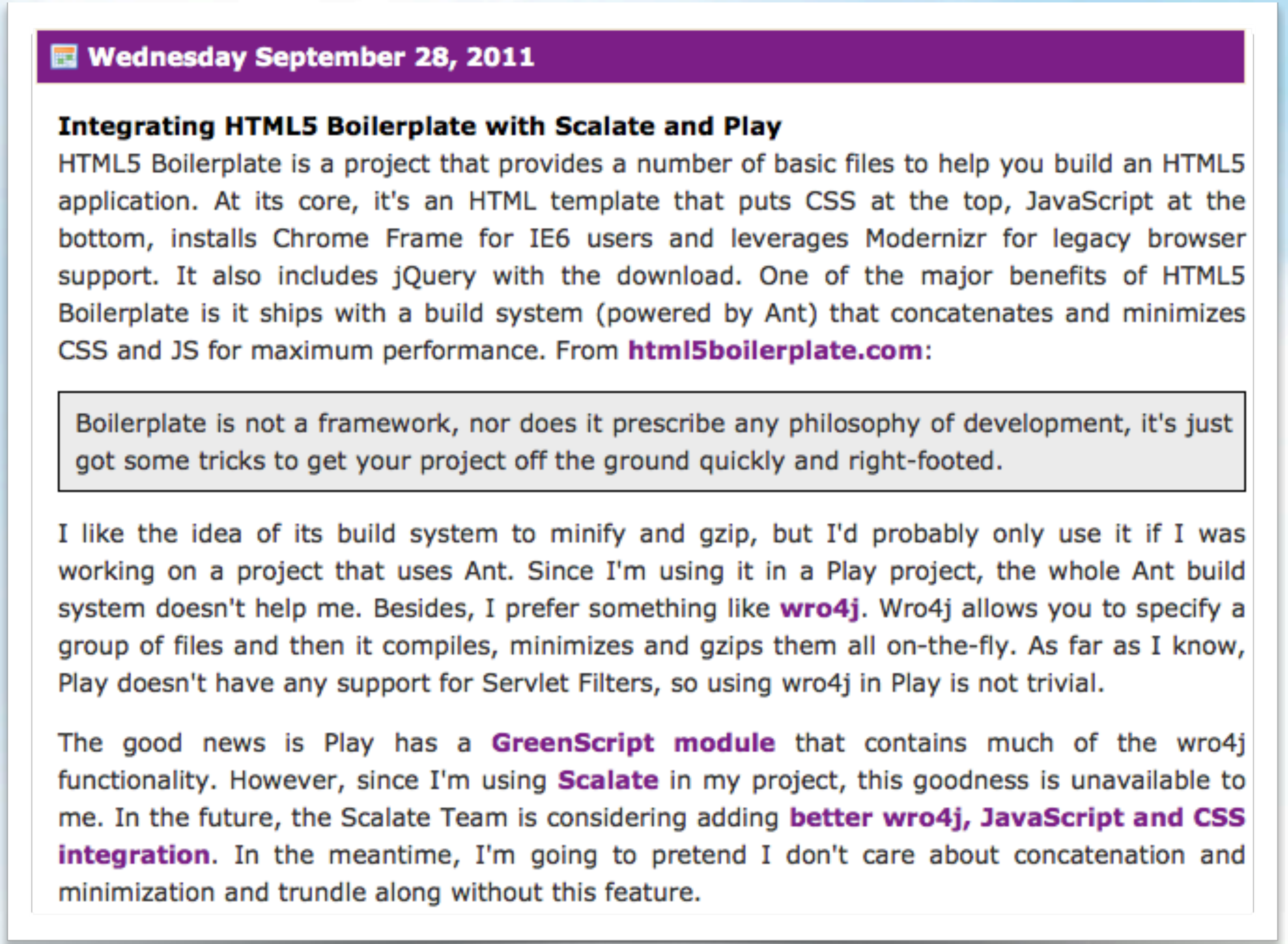
```
lazy val scalateEngine = {
  val engine = new TemplateEngine
  engine.resourceLoader = new FileResourceLoader(Some(Play.getFile("/app/views")))
  engine.classpath = Play.getFile("/tmp/classes").getAbsolutePath
  engine.workingDirectory = Play.getFile("tmp")
  engine.combinedClassPath = true
  engine.classLoader = Play.classloader
  engine.layoutStrategy = new DefaultLayoutStrategy(engine,
    Play.getFile("/app/templates/layouts/default" + scalateType).getAbsolutePath)
  engine
}
```

```
-@ val body: String
-@ val title: String = "Play More!"
!!! 5
/ paulirish.com/2008/conditional-stylesheets-vs-css-hacks-answer-neither/
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en"> <![endif]-->
<!--[if IE 7]>    <html class="no-js ie7 oldie" lang="en"> <![endif]-->
<!--[if IE 8]>    <html class="no-js ie8 oldie" lang="en"> <![endif]-->
-# Consider adding an manifest.appcache: h5bp.com/d/Offline
<!--[if gt IE 8]><!--> <html class="no-js" lang="en"> <!--<![endif]-->
head
  meta(charset="utf-8")

  -# Use the .htaccess and remove these lines to avoid edge case issues. More info: h5bp.com/b/378
  meta(http-equiv="X-UA-Compatible" content="IE=edge,chrome=1")

  title=title
```

HTML5 Boilerplate



Wednesday September 28, 2011

Integrating HTML5 Boilerplate with Scalate and Play

HTML5 Boilerplate is a project that provides a number of basic files to help you build an HTML5 application. At its core, it's an HTML template that puts CSS at the top, JavaScript at the bottom, installs Chrome Frame for IE6 users and leverages Modernizr for legacy browser support. It also includes jQuery with the download. One of the major benefits of HTML5 Boilerplate is it ships with a build system (powered by Ant) that concatenates and minimizes CSS and JS for maximum performance. From **html5boilerplate.com**:

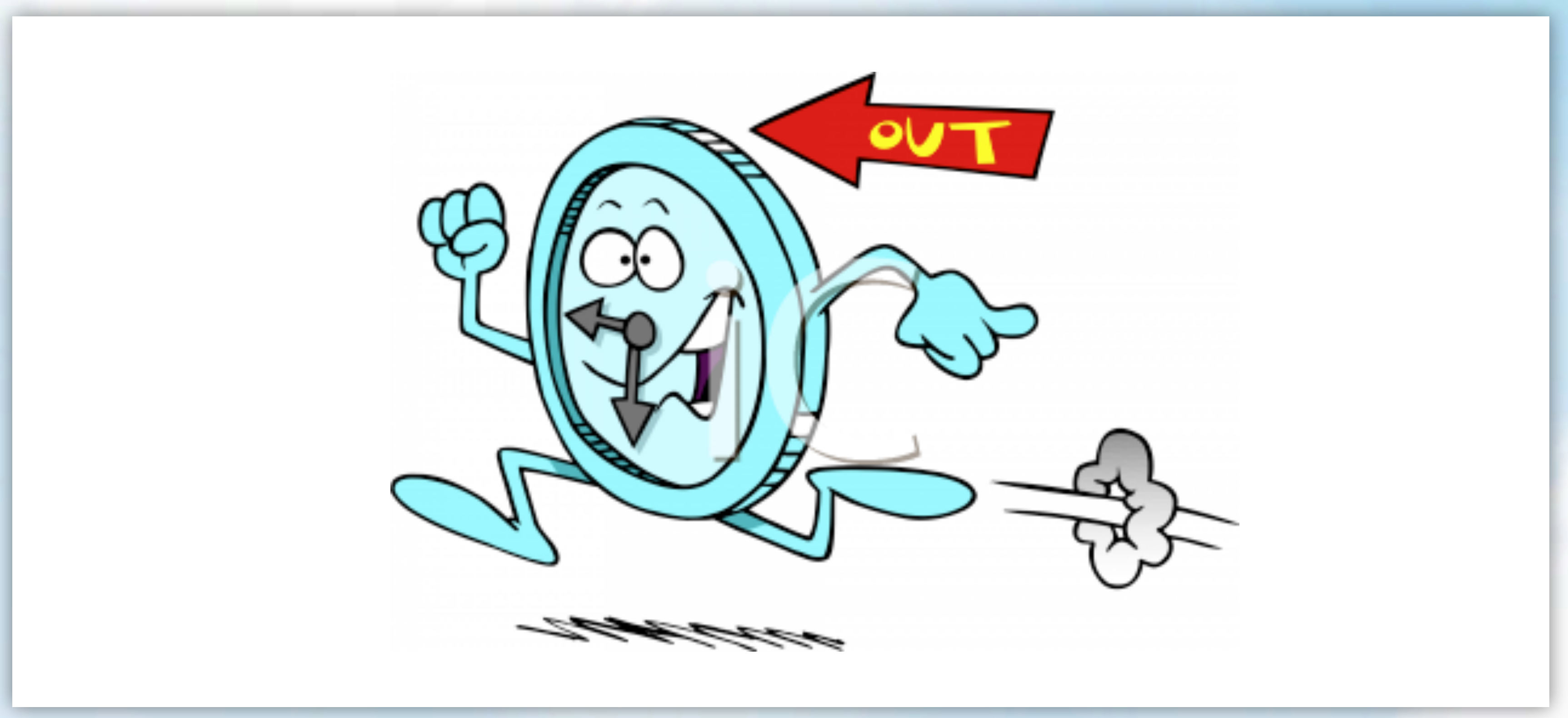
> Boilerplate is not a framework, nor does it prescribe any philosophy of development, it's just got some tricks to get your project off the ground quickly and right-footed.

I like the idea of its build system to minify and gzip, but I'd probably only use it if I was working on a project that uses Ant. Since I'm using it in a Play project, the whole Ant build system doesn't help me. Besides, I prefer something like **wro4j**. Wro4j allows you to specify a group of files and then it compiles, minimizes and gzips them all on-the-fly. As far as I know, Play doesn't have any support for Servlet Filters, so using wro4j in Play is not trivial.

The good news is Play has a **GreenScript module** that contains much of the wro4j functionality. However, since I'm using **Scalate** in my project, this goodness is unavailable to me. In the future, the Scalate Team is considering adding **better wro4j, JavaScript and CSS integration**. In the meantime, I'm going to pretend I don't care about concatenation and minimization and trundle along without this feature.

http://raibledesigns.com/rd/entry/integrating_html5_boilerplate_with_scalate

HTML5 Development



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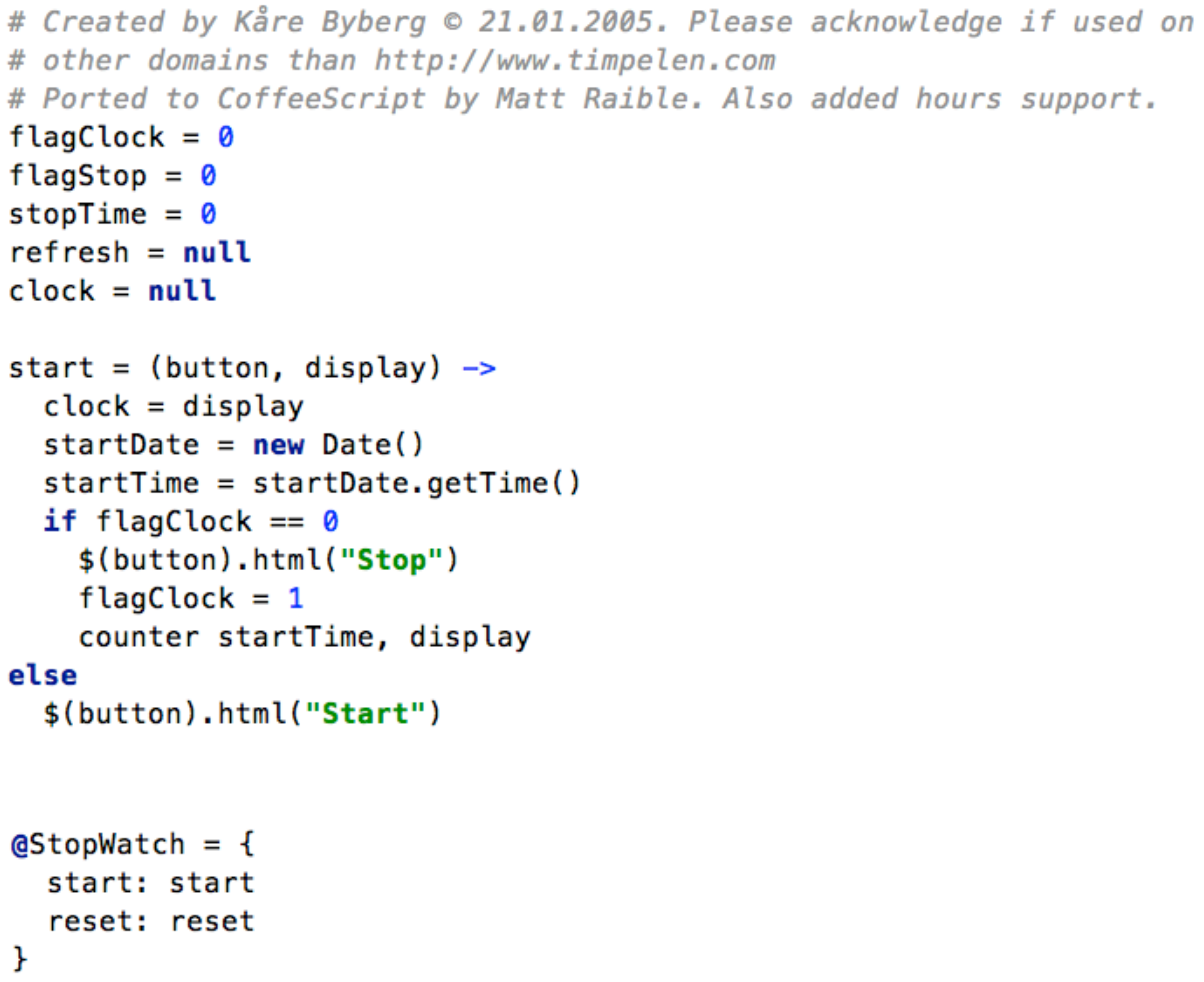
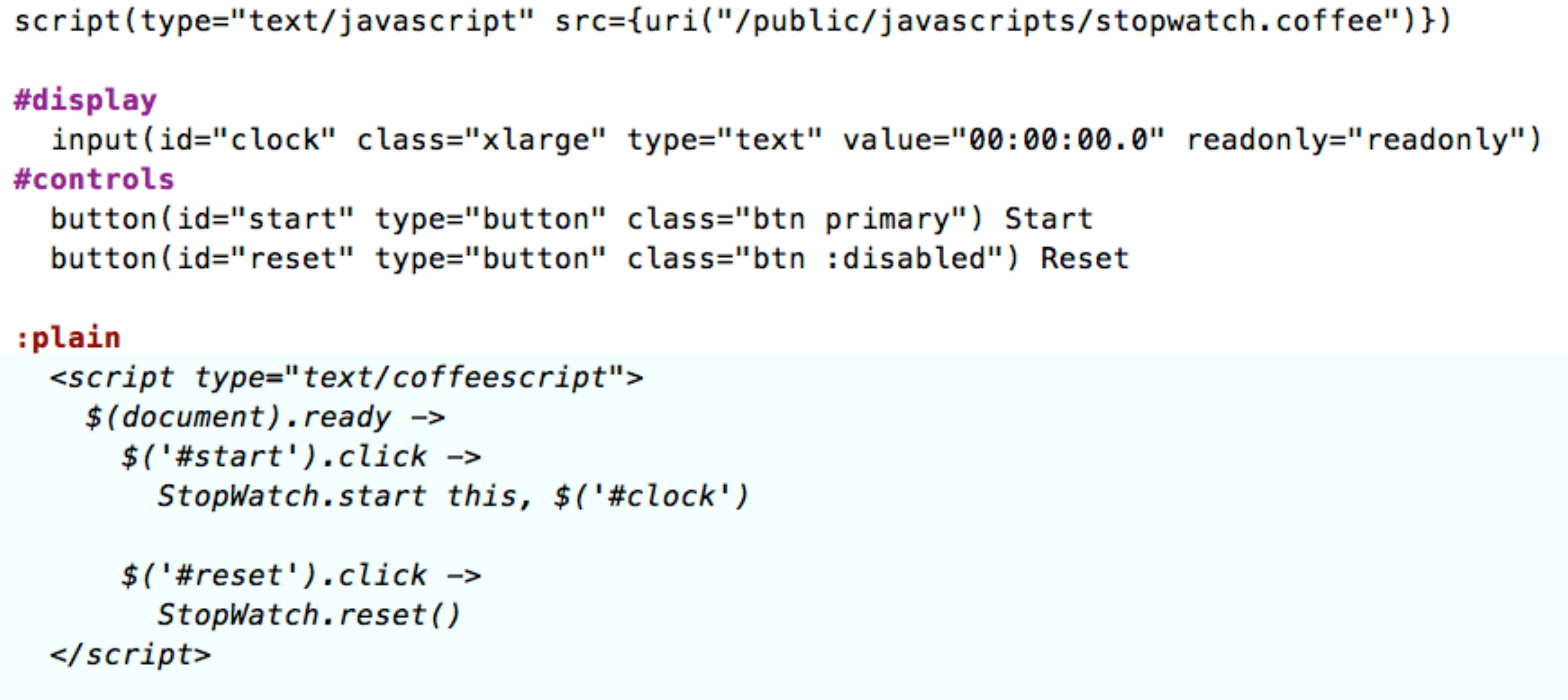
StopWatch with Coffee



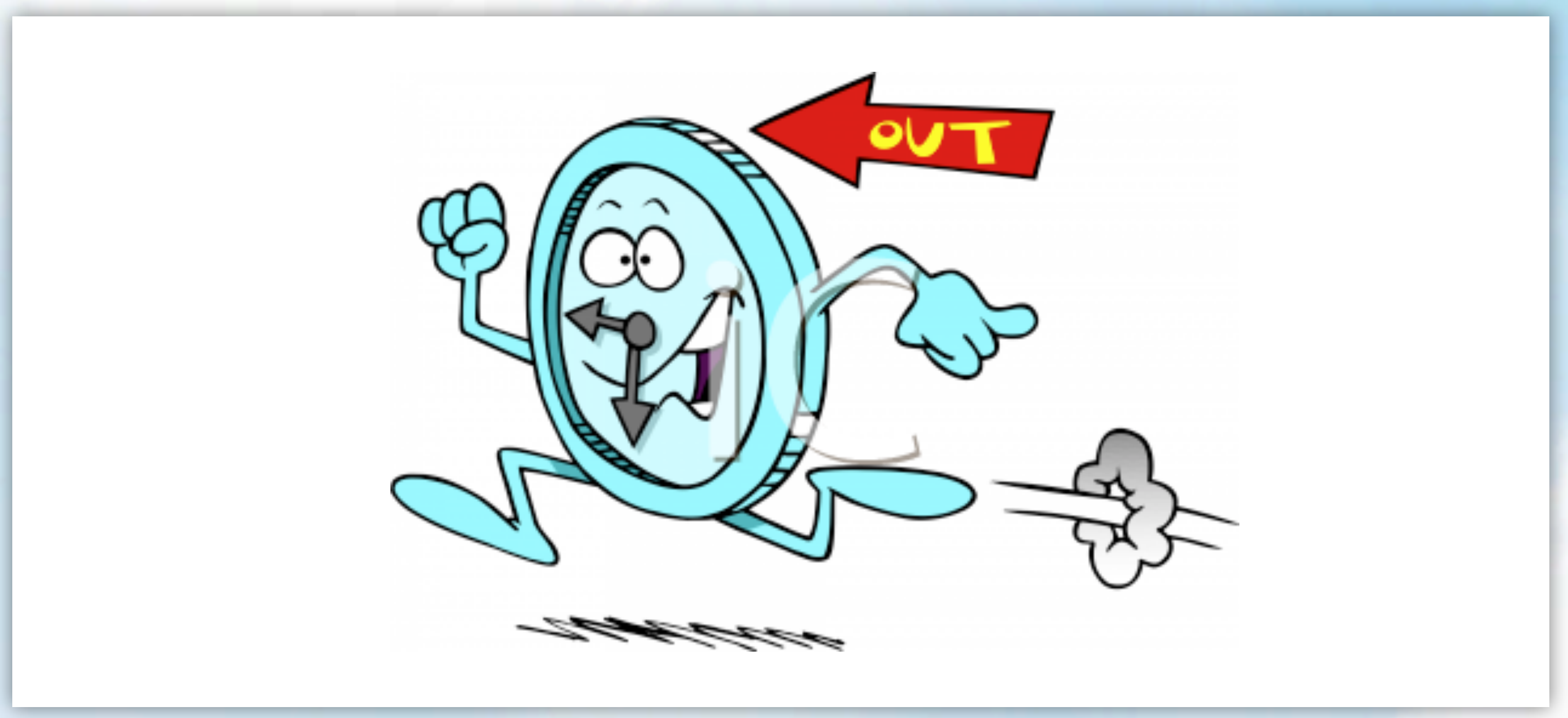
```
# Created by Kåre Byberg © 21.01.2005. Please acknowledge if used on
# other domains than http://www.timpelen.com
# Ported to CoffeeScript by Matt Raible. Also added hours support.
flagClock = 0
flagStop = 0
stopTime = 0
refresh = null
clock = null

start = (button, display) ->
  clock = display
  startDate = new Date()
  startTime = startDate.getTime()
  if flagClock == 0
    $(button).html("Stop")
    flagClock = 1
    counter startTime, display
else
  $(button).html("Start")


@StopWatch = {
  start: start
  reset: reset
}
```

Jade Template for Watch

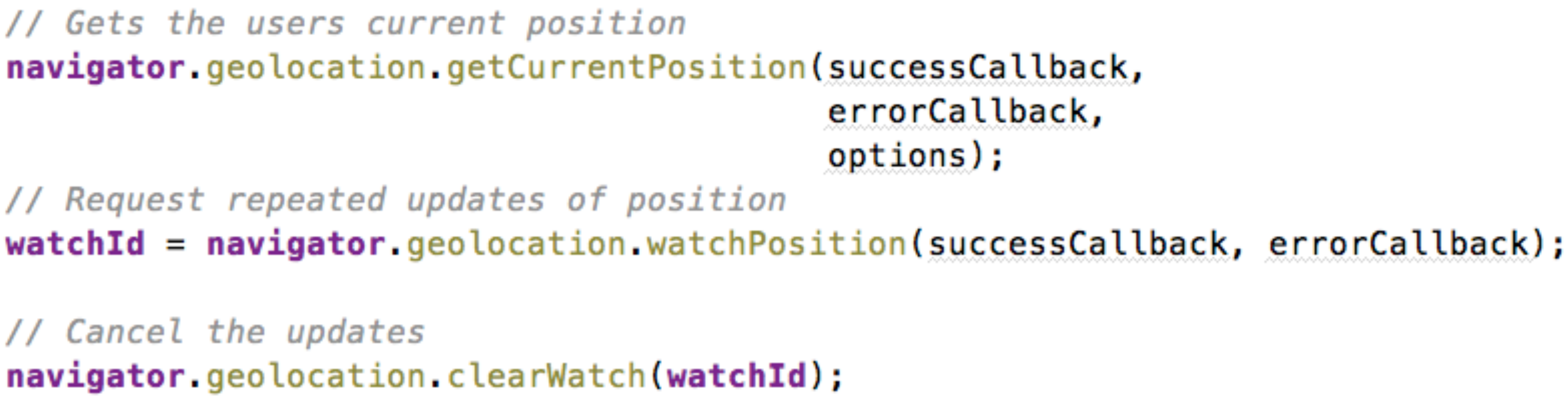


```
script(type="text/javascript" src={uri("/public/javascripts/stopwatch.coffee")})

#display
  input(id="clock" class="xlarge" type="text" value="00:00:00.0" readonly="readonly")
#controls
  button(id="start" type="button" class="btn primary") Start
  button(id="reset" type="button" class="btn :disabled") Reset

:plain
  <script type="text/coffeescript">
    $(document).ready ->
      $('#start').click ->
        StopWatch.start this, $('#clock')

      $('#reset').click ->
        StopWatch.reset()
  </script>
```

HTML5 Development

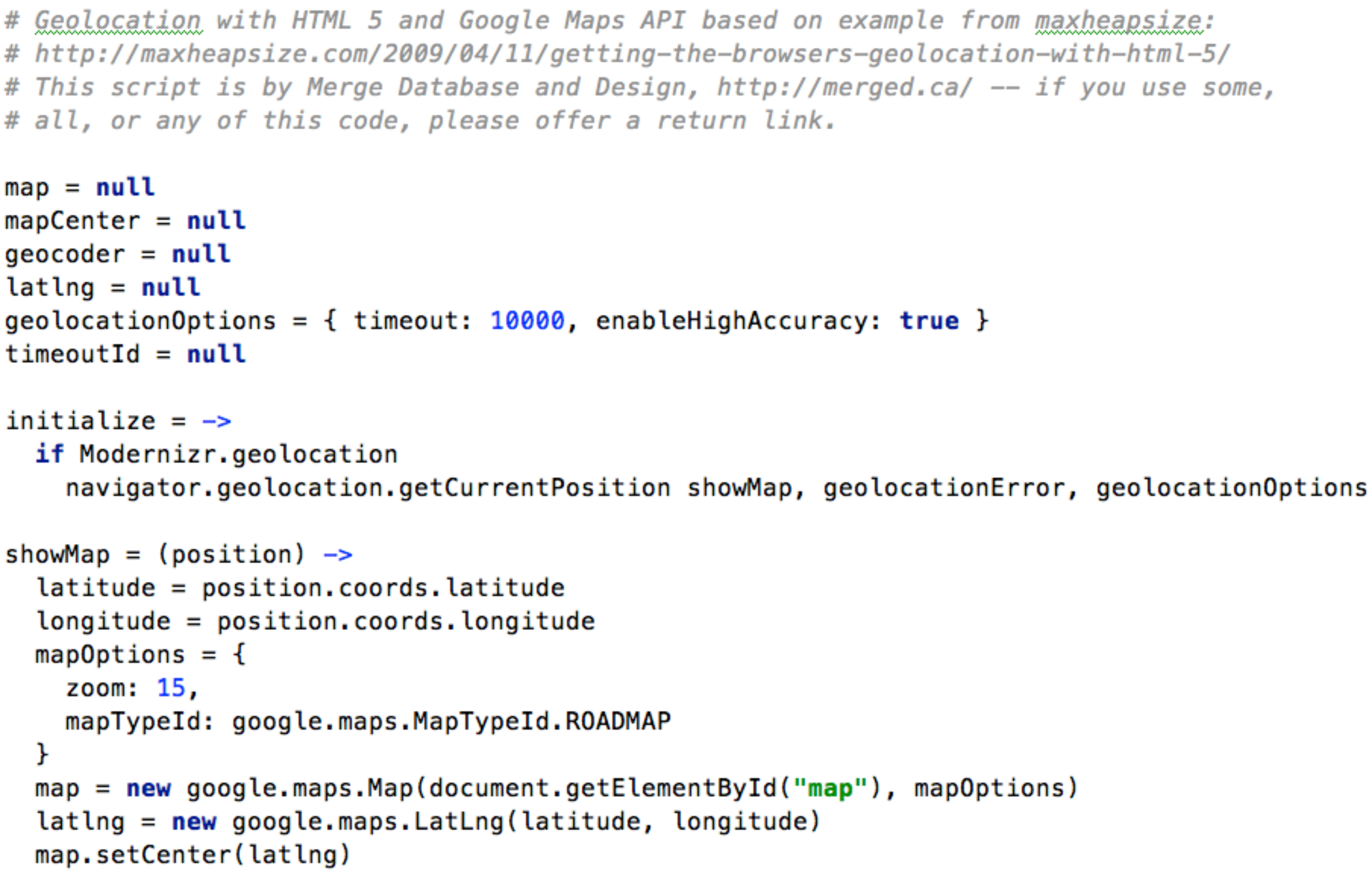


HTML5 Geo API



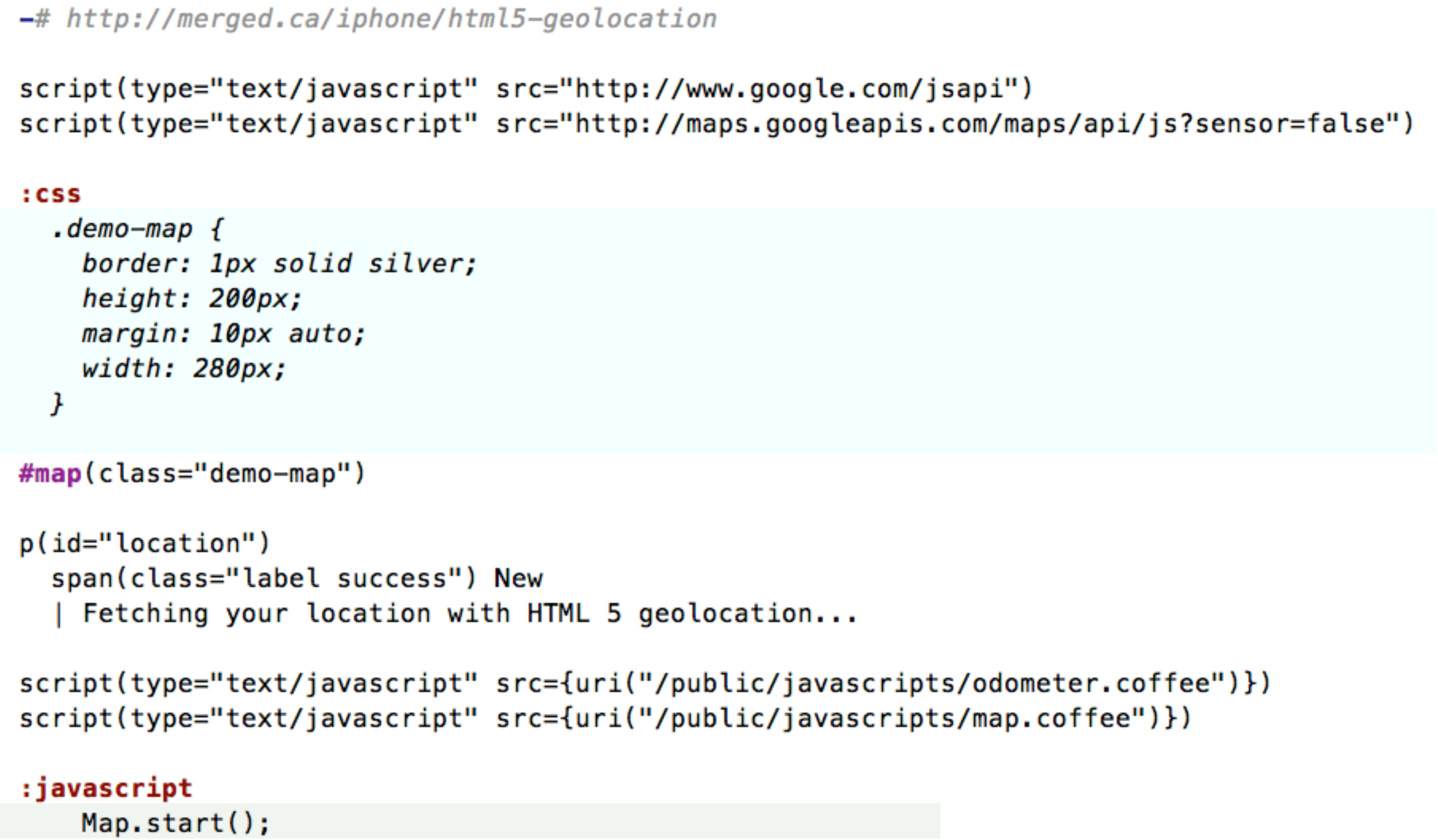
```
// Gets the users current position
navigator.geolocation.getCurrentPosition(successCallback,
                                         errorCallback,
                                         options);
// Request repeated updates of position
watchId = navigator.geolocation.watchPosition(successCallback, errorCallback);

// Cancel the updates
navigator.geolocation.clearWatch(watchId);
```

Google Maps JS API



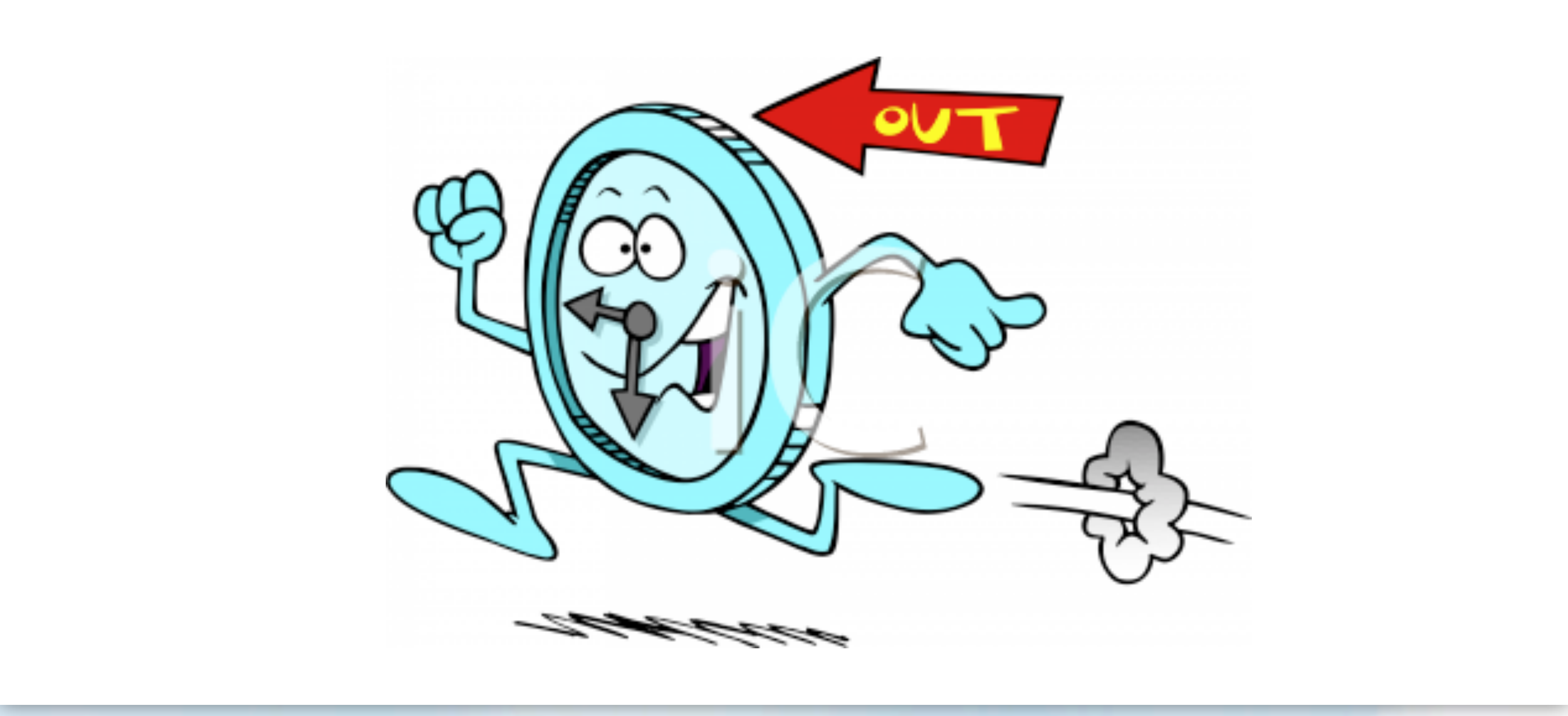
```
# Geolocation with HTML 5 and Google Maps API based on example from maxheapsize:
# http://maxheapsize.com/2009/04/11/getting-the-browsers-geolocation-with-html-5/
# This script is by Merge Database and Design, http://merged.ca/ -- if you use some,
# all, or any of this code, please offer a return link.

map = null
mapCenter = null
geocoder = null
latlng = null
geolocationOptions = { timeout: 10000, enableHighAccuracy: true }
timeoutId = null

initialize = ->
  if Modernizr.geolocation
    navigator.geolocation.getCurrentPosition showMap, geolocationError, geolocationOptions

showMap = (position) ->
  latitude = position.coords.latitude
  longitude = position.coords.longitude
  mapOptions = {
    zoom: 15,
    mapTypeId: google.maps.MapTypeId.ROADMAP
  }
  map = new google.maps.Map(document.getElementById("map"), mapOptions)
  latlng = new google.maps.LatLng(latitude, longitude)
  map.setCenter(latlng)
```

Jade View for Map



```
-# http://merged.ca/iphone/html5-geolocation

script(type="text/javascript" src="http://www.google.com/jsapi")
script(type="text/javascript" src="http://maps.googleapis.com/maps/api/js?sensor=false")

:css
  .demo-map {
    border: 1px solid silver;
    height: 200px;
    margin: 10px auto;
    width: 280px;
  }

#map(class="demo-map")

p(id="location")
  span(class="label success") New
  | Fetching your location with HTML 5 geolocation...

script(type="text/javascript" src={uri("/public/javascripts/odometer.coffee")})
script(type="text/javascript" src={uri("/public/javascripts/map.coffee")})

:javascript
    Map.start();
```

HTML5 Development



Odometer

```
start = (config) ->
  log = config.log
  callback = config.callback
  map = config.map

  if Modernizr.geolocation
    if not config.position
      navigator.geolocation.getCurrentPosition ((position) ->
        startPos = position
        lastPos = position
        $("#startLat").html(startPos.coords.latitude)
        $("#startLon").html(startPos.coords.longitude)
      ), null, geolocationOptions
    else
      startPos = config.position
      lastPos = config.position

    watchId = navigator.geolocation.watchPosition showDistance, null, geolocationOptions

showDistance = (position) ->
  lat = position.coords.latitude
  lng = position.coords.longitude
  $("#currentLat").html(lat)
  $("#currentLon").html(lng)
```

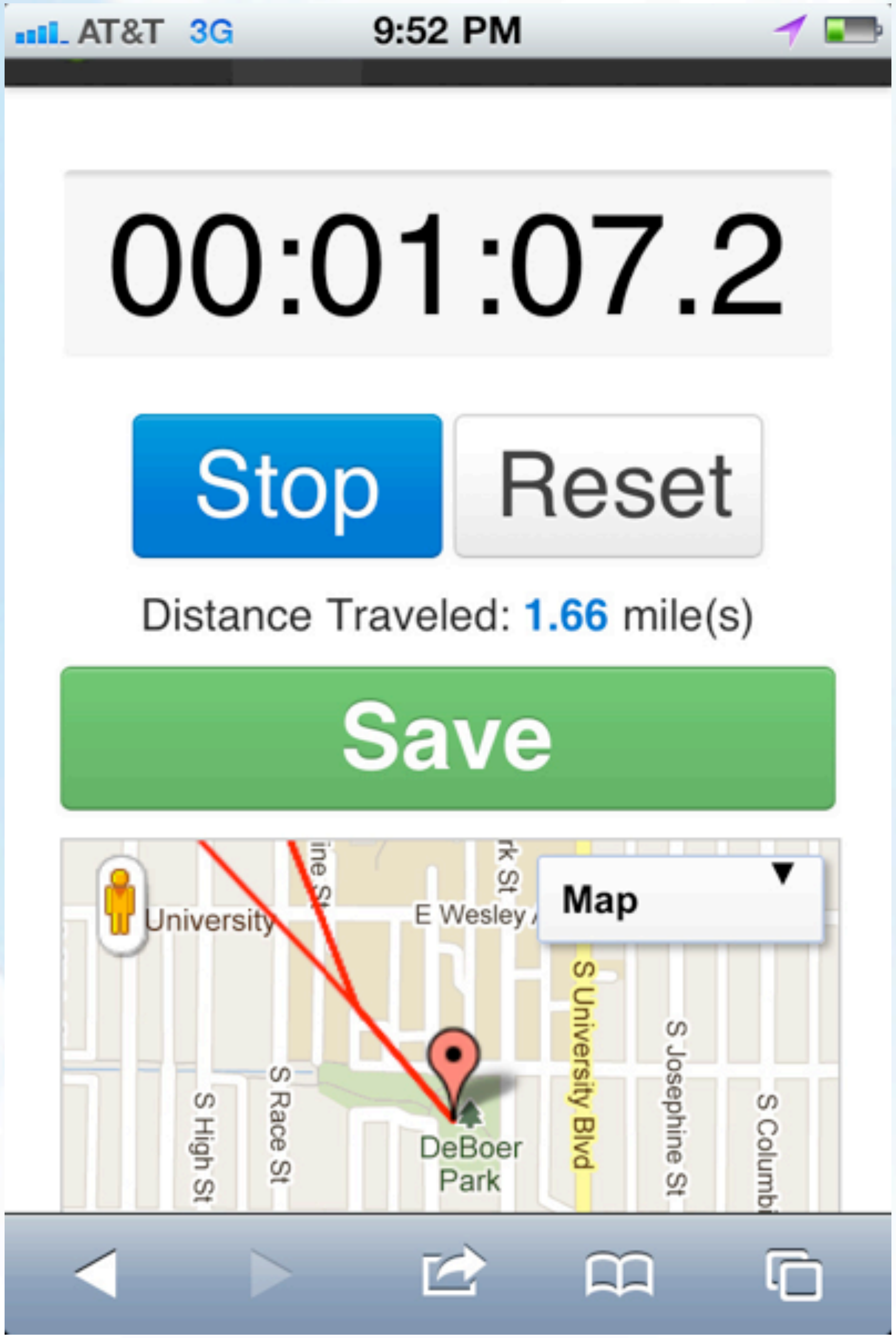
Testing

- Tried Trip Meter on a bike ride
- Said I'd traveled 5 km, when I knew I'd gone 10
  - Was calculating start to end w/o waypoints
- To Visualize: integrated odometer with maps using Google Maps Polylines

Discovered

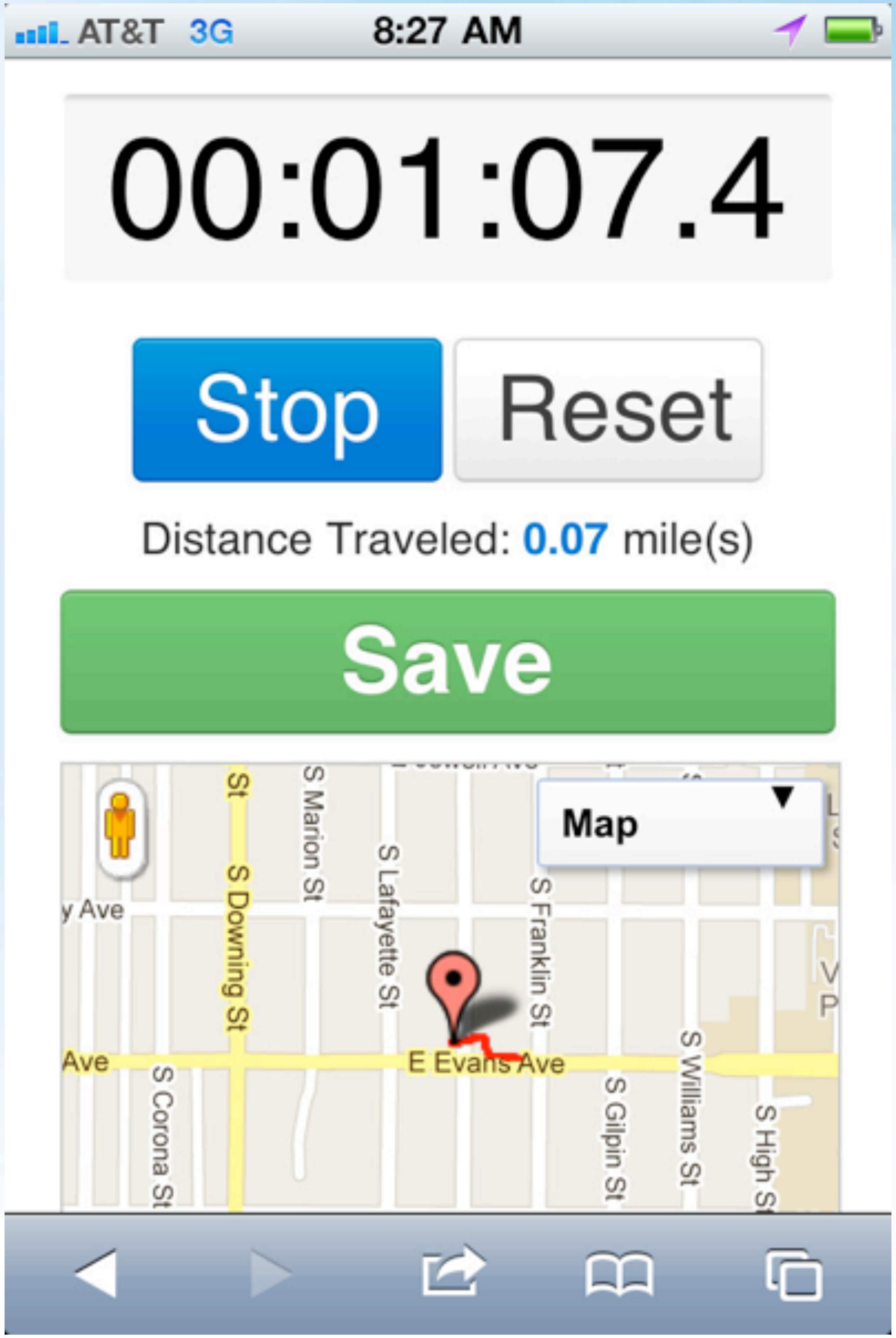
- HTML5 Geolocation was highly inaccurate
  - Fixed by passing {enableHighAccuracy: true} to navigator.geolocation.watchPosition()

Discovered


AT&T 3G 9:52 PM

00:01:07.2

Distance Traveled: 1.66 mile(s)


AT&T 3G 8:27 AM

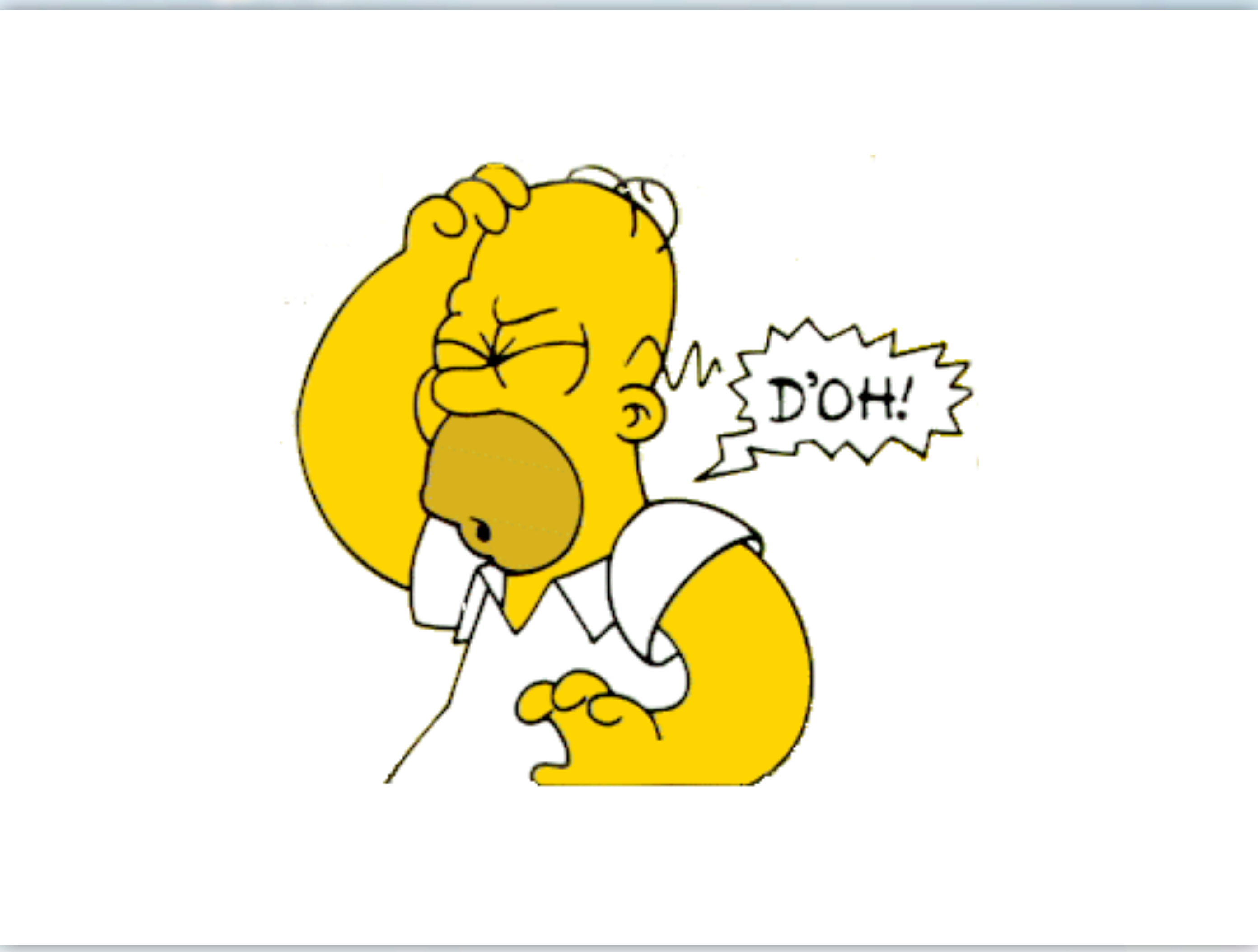
00:01:07.4

Distance Traveled: 0.07 mile(s)

© 2011 Raible Designs

Show Stopper?

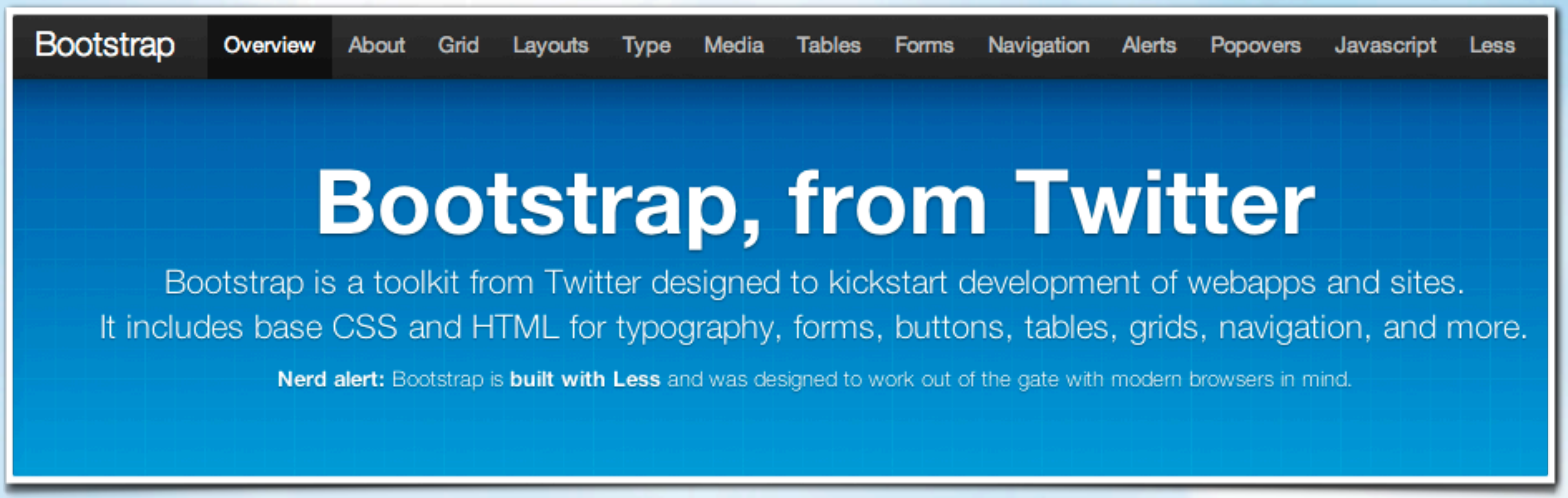
- Geolocation doesn't run in the background



Making it look good

→

Twitter's Bootstrap

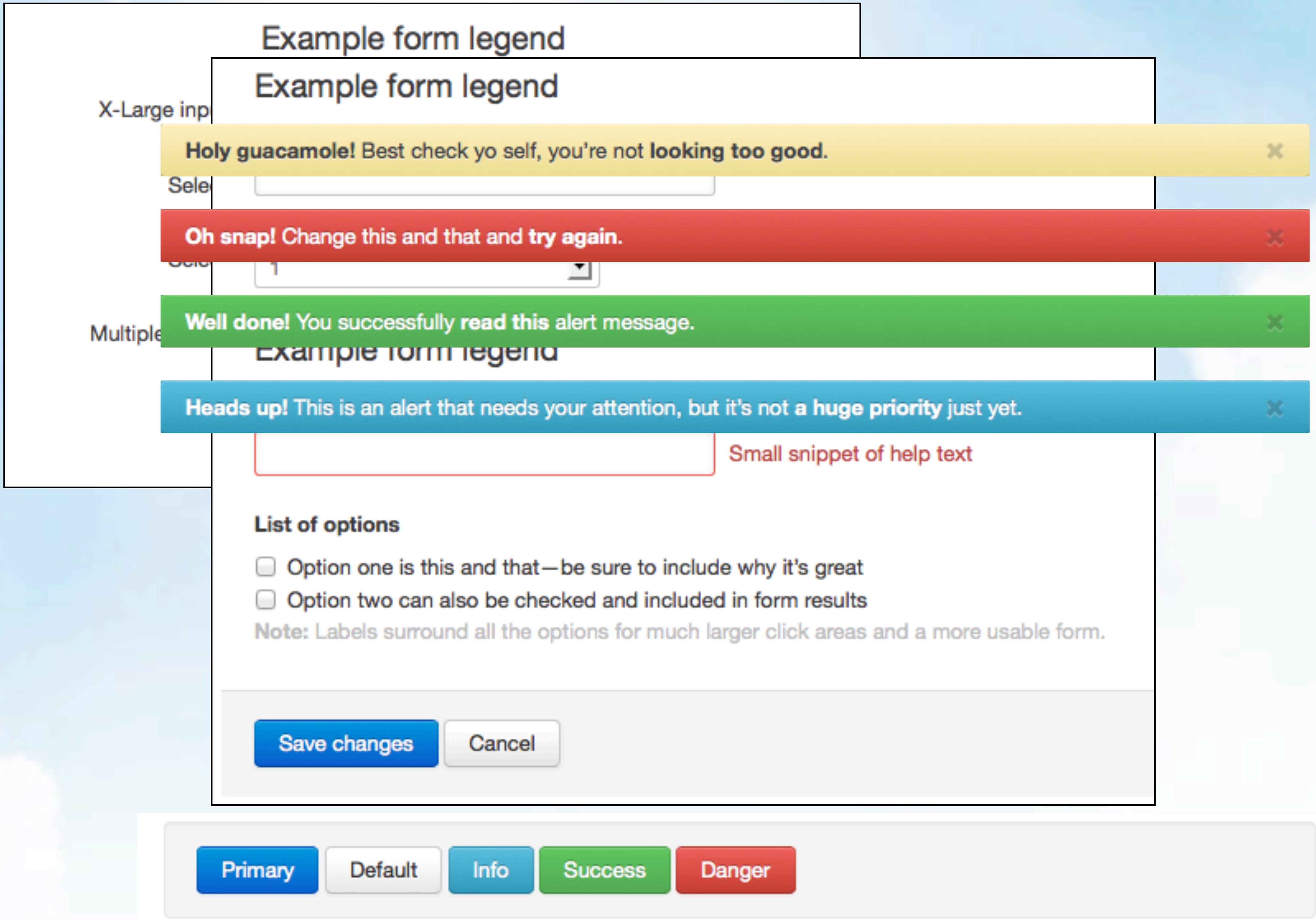


Bootstrap, from Twitter

Bootstrap is a toolkit from Twitter designed to kickstart development of webapps and sites.
It includes base CSS and HTML for typography, forms, buttons, tables, grids, navigation, and more.

Nerd alert: Bootstrap is **built with Less** and was designed to work out of the gate with modern browsers in mind.

Bootstrap



Example form legend

X-Large inp

Sele

Multiple

Example form legend

Holy guacamole! Best check yo self, you're not looking too good. ×

Oh snap! Change this and that and try again. ×

Well done! You successfully read this alert message. ×

Heads up! This is an alert that needs your attention, but it's not a huge priority just yet. ×

Small snippet of help text

List of options

□ Option one is this and that—be sure to include why it's great

□ Option two can also be checked and included in form results

Note: Labels surround all the options for much larger click areas and a more usable form.

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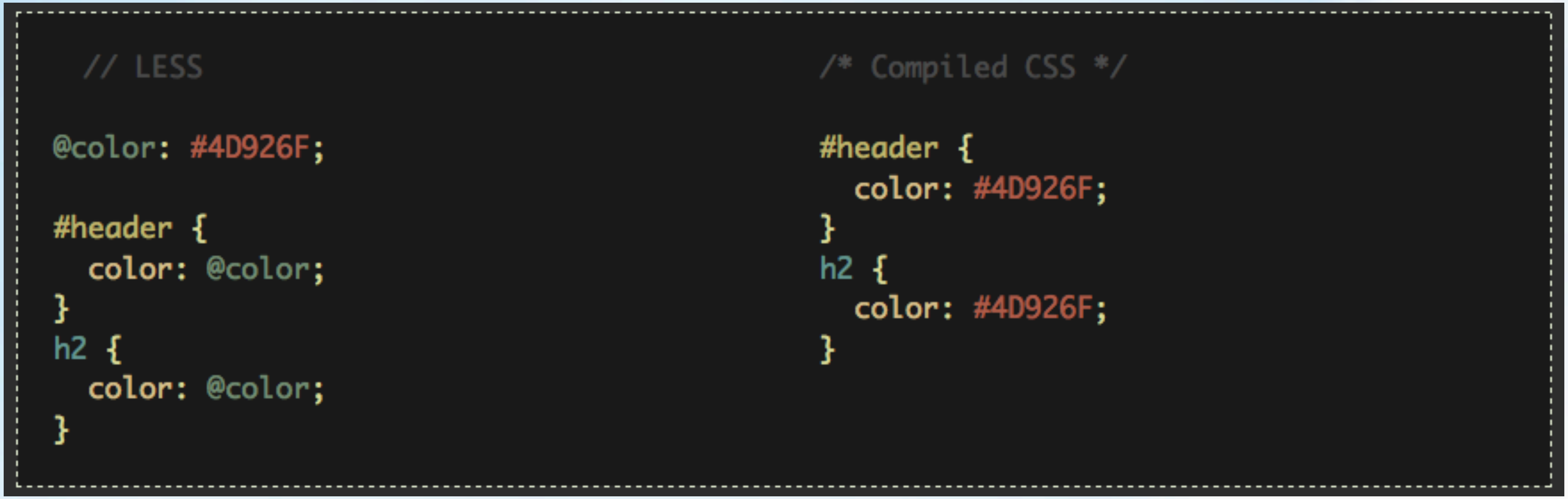
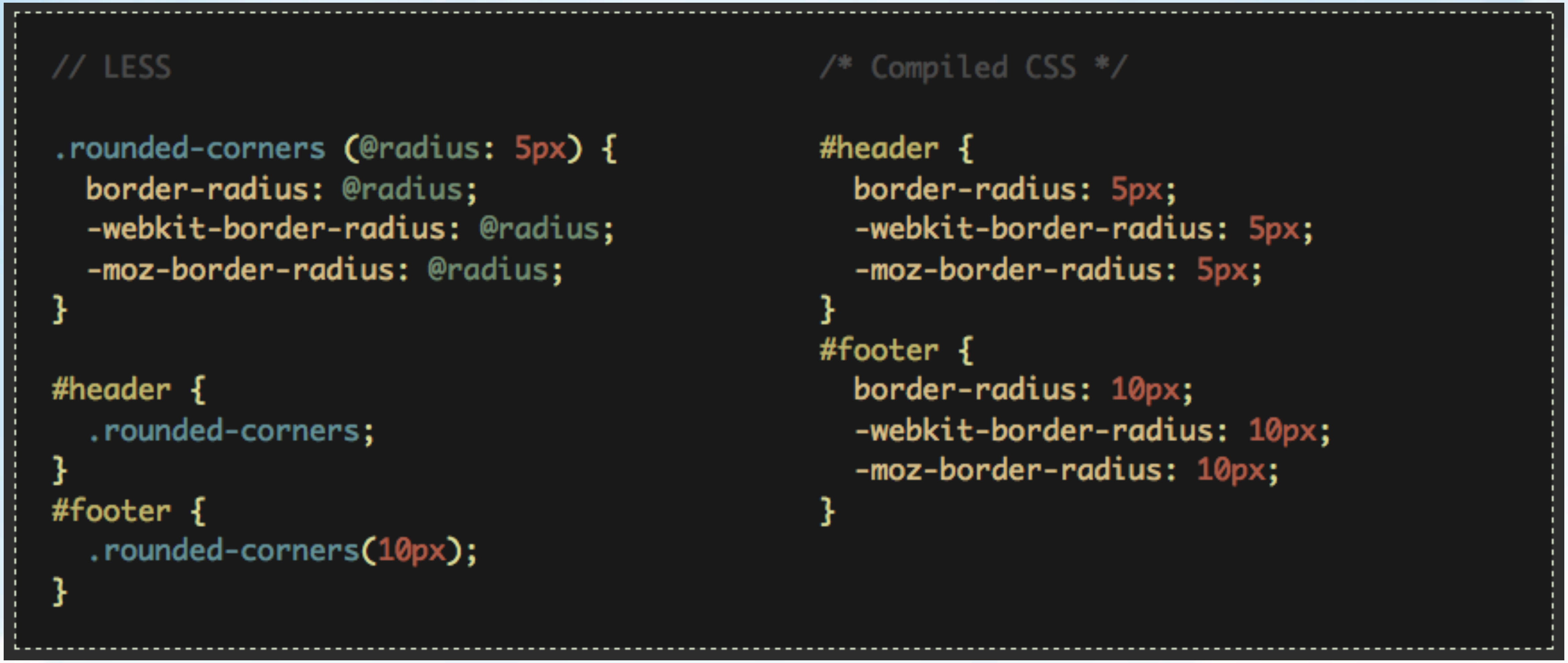
LESS



```
// LESS

@color: #4D926F;

#header {
  color: @color;
}
h2 {
  color: @color;
}
```

```
/* Compiled CSS */

#header {
  color: #4D926F;
}
h2 {
  color: #4D926F;
}
```

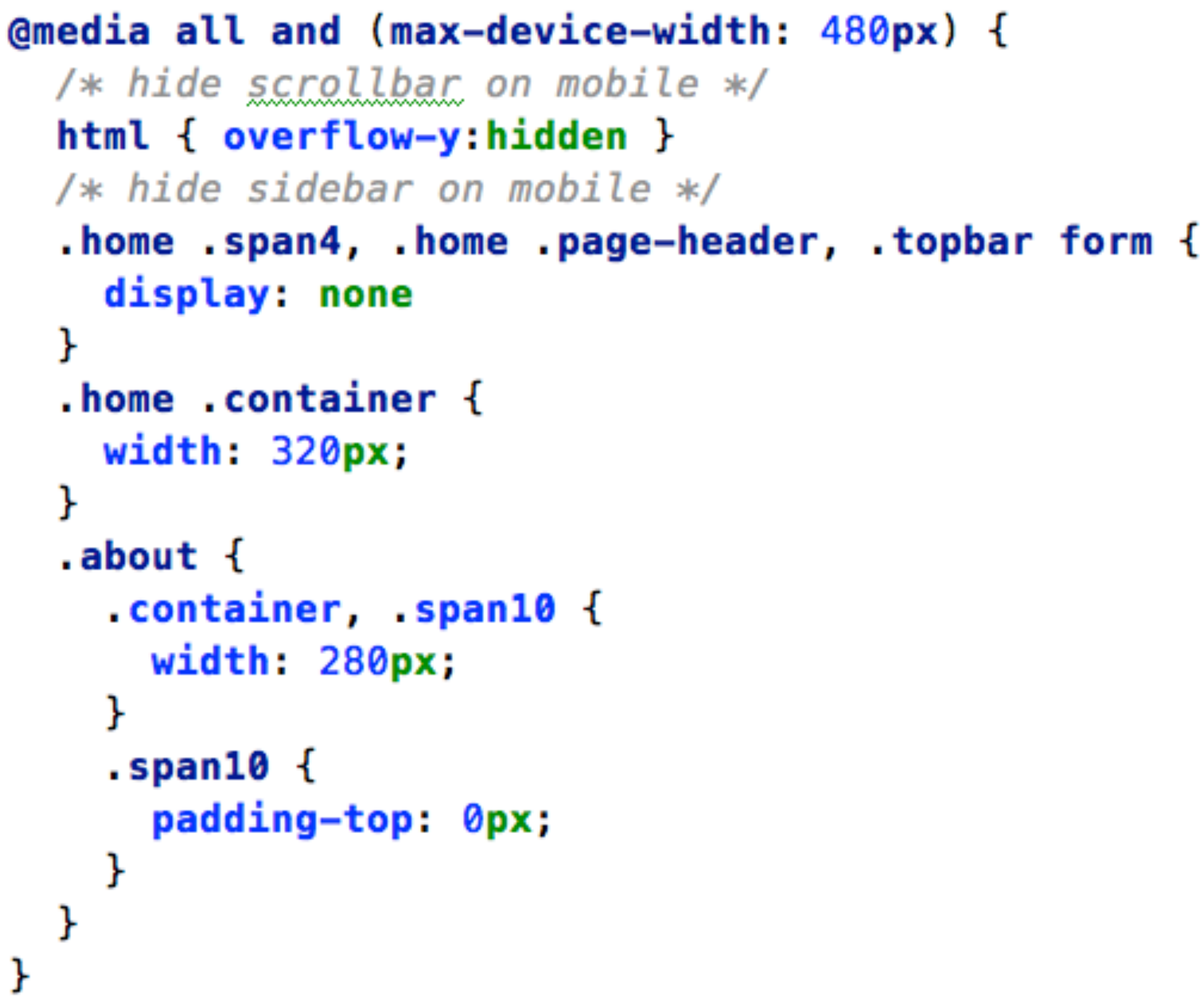
LESS



```
// LESS

.rounded-corners (@radius: 5px) {
  border-radius: @radius;
  -webkit-border-radius: @radius;
  -moz-border-radius: @radius;
}

#header {
  .rounded-corners;
}
#footer {
  .rounded-corners(10px);
}
```

```
/* Compiled CSS */

#header {
  border-radius: 5px;
  -webkit-border-radius: 5px;
  -moz-border-radius: 5px;
}
#footer {
  border-radius: 10px;
  -webkit-border-radius: 10px;
  -moz-border-radius: 10px;
}
```

CSS3 Media Queries

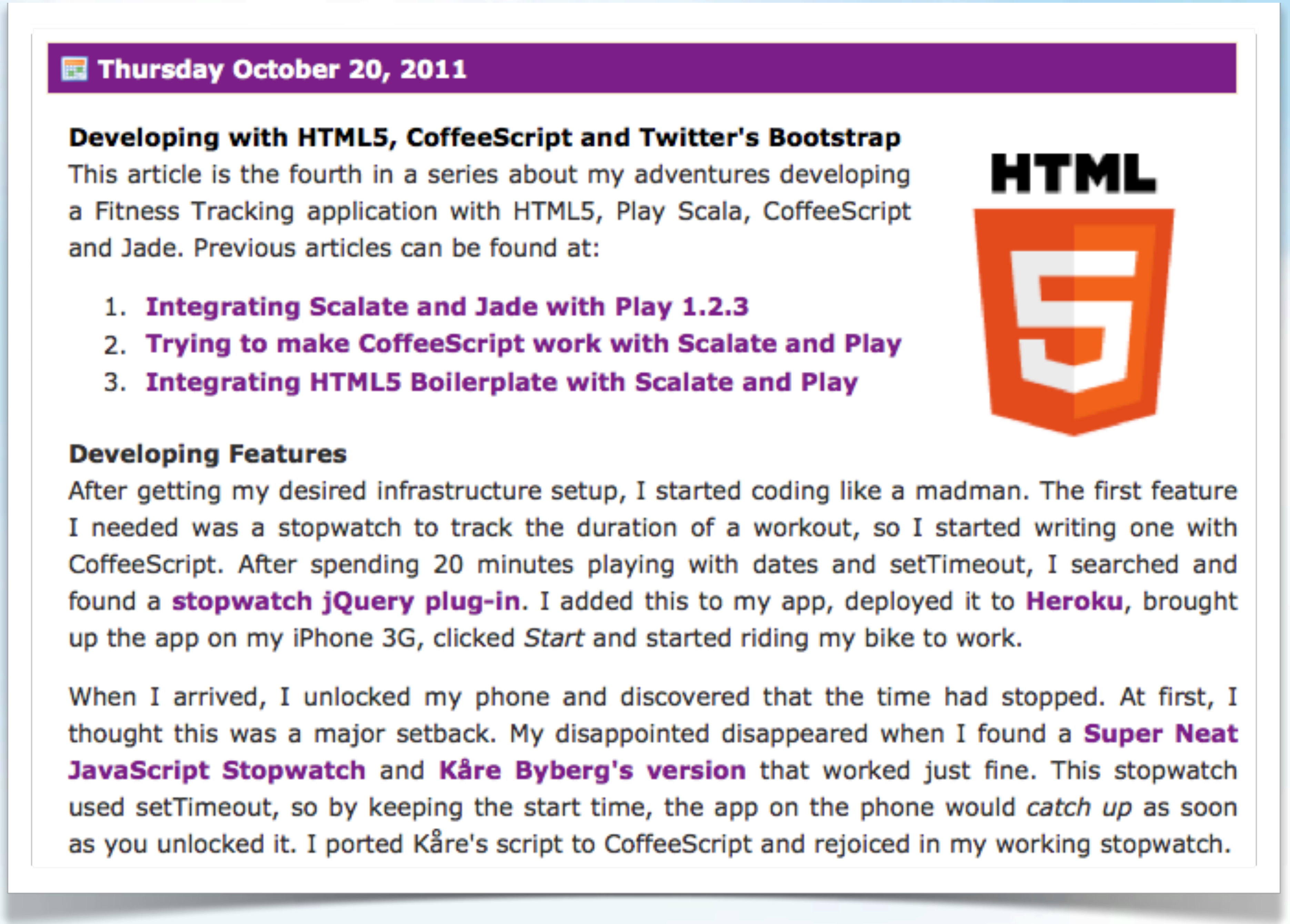


```
@media all and (max-device-width: 480px) {
  /* hide scrollbar on mobile */
  html { overflow-y:hidden }
  /* hide sidebar on mobile */
  .home .span4, .home .page-header, .topbar form {
    display: none
  }
  .home .container {
    width: 320px;
  }
  .about {
    .container, .span10 {
      width: 280px;
    }
    .span10 {
      padding-top: 0px;
    }
  }
}
```

HTML5 Features

- Geolocation
- CSS 3
- Audio
- History
- Local Storage
- Canvas

HTML5 and Bootstrap



Thursday October 20, 2011

Developing with HTML5, CoffeeScript and Twitter's Bootstrap

This article is the fourth in a series about my adventures developing a Fitness Tracking application with HTML5, Play Scala, CoffeeScript and Jade. Previous articles can be found at:

1. **Integrating Scalate and Jade with Play 1.2.3**
2. **Trying to make CoffeeScript work with Scalate and Play**
3. **Integrating HTML5 Boilerplate with Scalate and Play**

Developing Features

After getting my desired infrastructure setup, I started coding like a madman. The first feature I needed was a stopwatch to track the duration of a workout, so I started writing one with CoffeeScript. After spending 20 minutes playing with dates and setTimeout, I searched and found a **stopwatch jQuery plug-in**. I added this to my app, deployed it to **Heroku**, brought up the app on my iPhone 3G, clicked *Start* and started riding my bike to work.

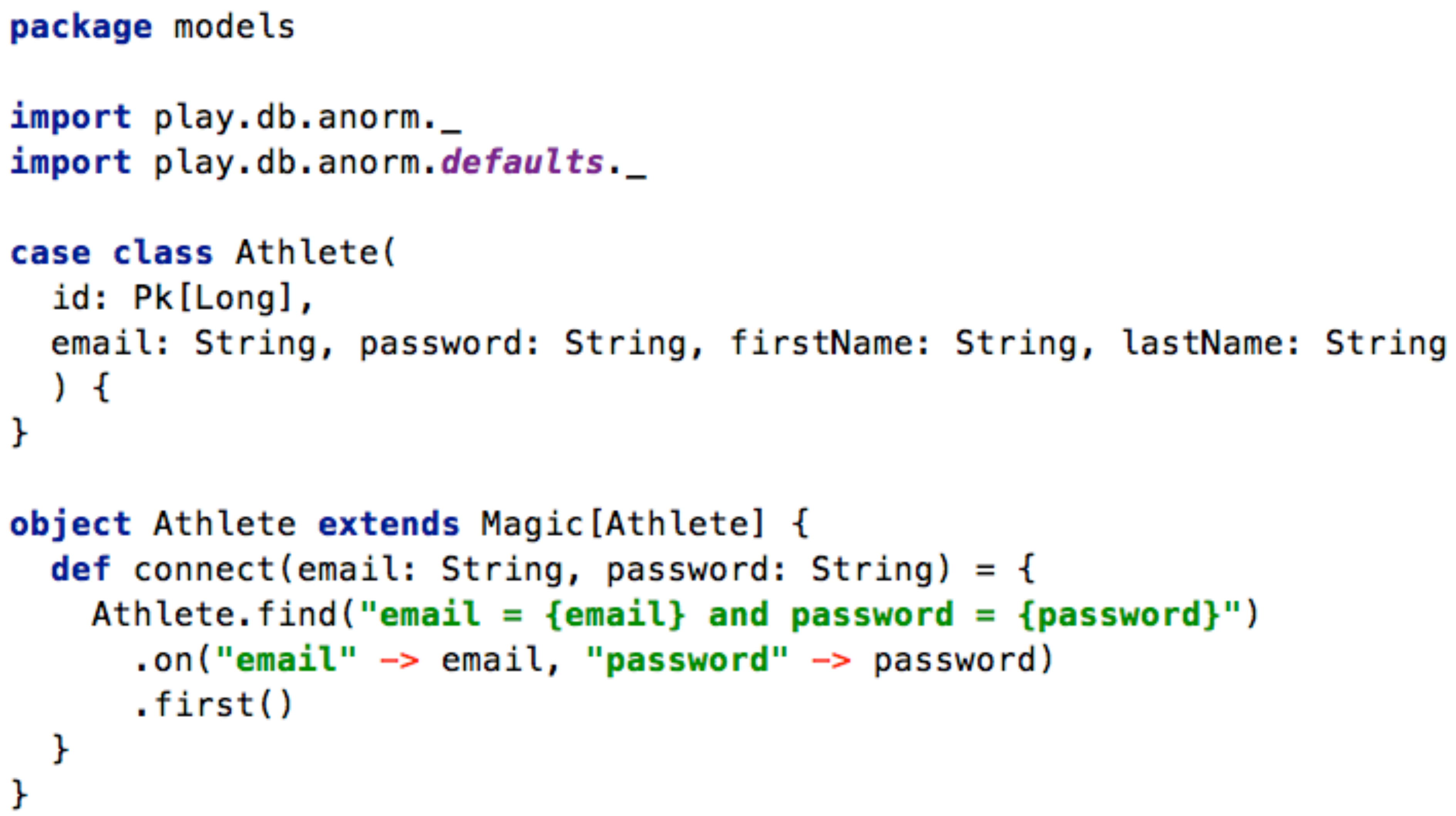
When I arrived, I unlocked my phone and discovered that the time had stopped. At first, I thought this was a major setback. My disappointed disappeared when I found a **Super Neat JavaScript Stopwatch** and **Kåre Byberg's version** that worked just fine. This stopwatch used setTimeout, so by keeping the start time, the app on the phone would *catch up* as soon as you unlocked it. I ported Kåre's script to CoffeeScript and rejoiced in my working stopwatch.

http://raibledesigns.com/rd/entry/developing_with_html5_coffeescript_and

Anorm and PostgreSQL

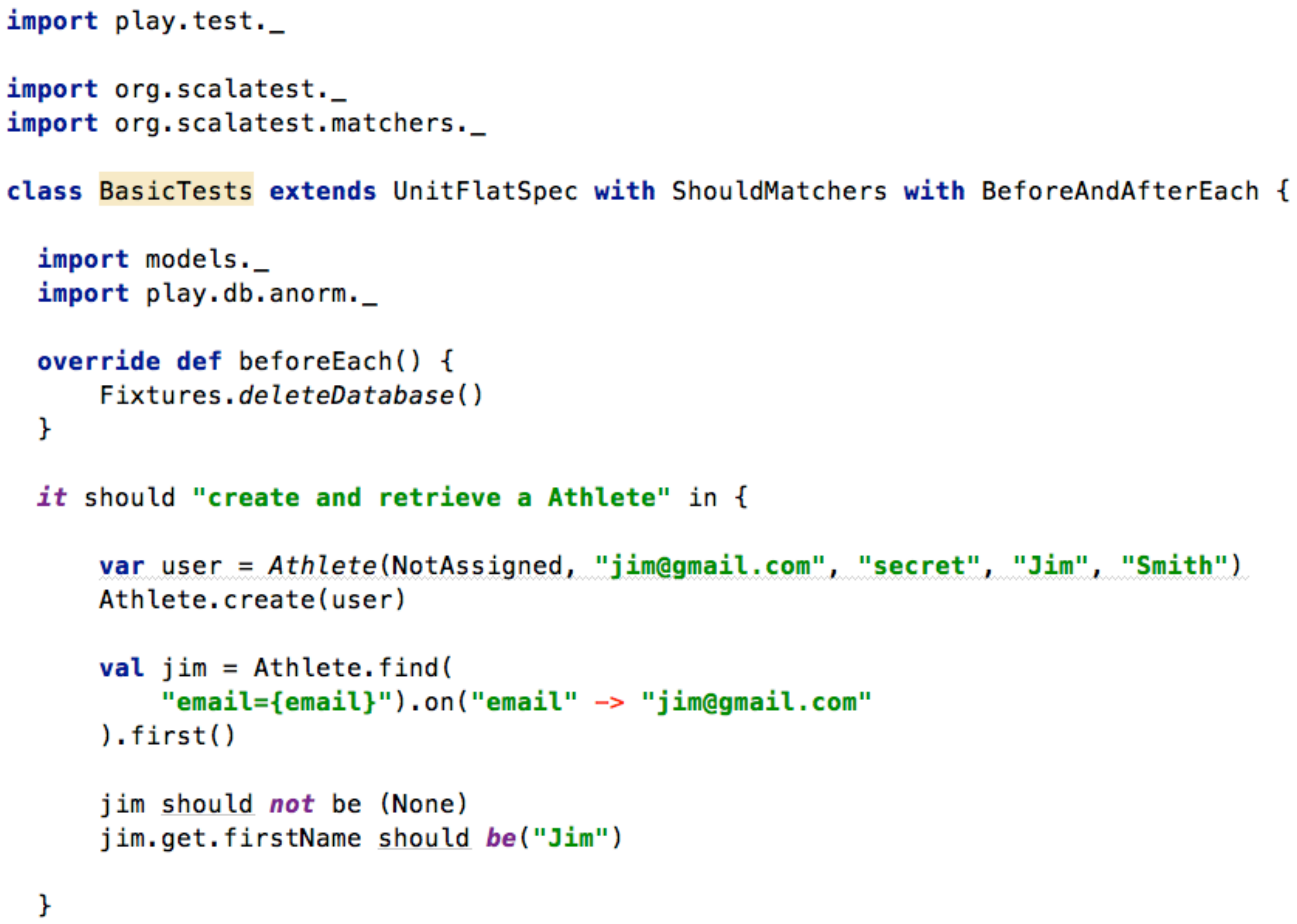
- I’m a big fan of ORMs like Hibernate and JPA
  - Learn a new JDBC abstraction? Really!?
- Anorm is *and will be* the default for Play Scala
- Chose PostgreSQL since that’s what Heroku uses

Data Model



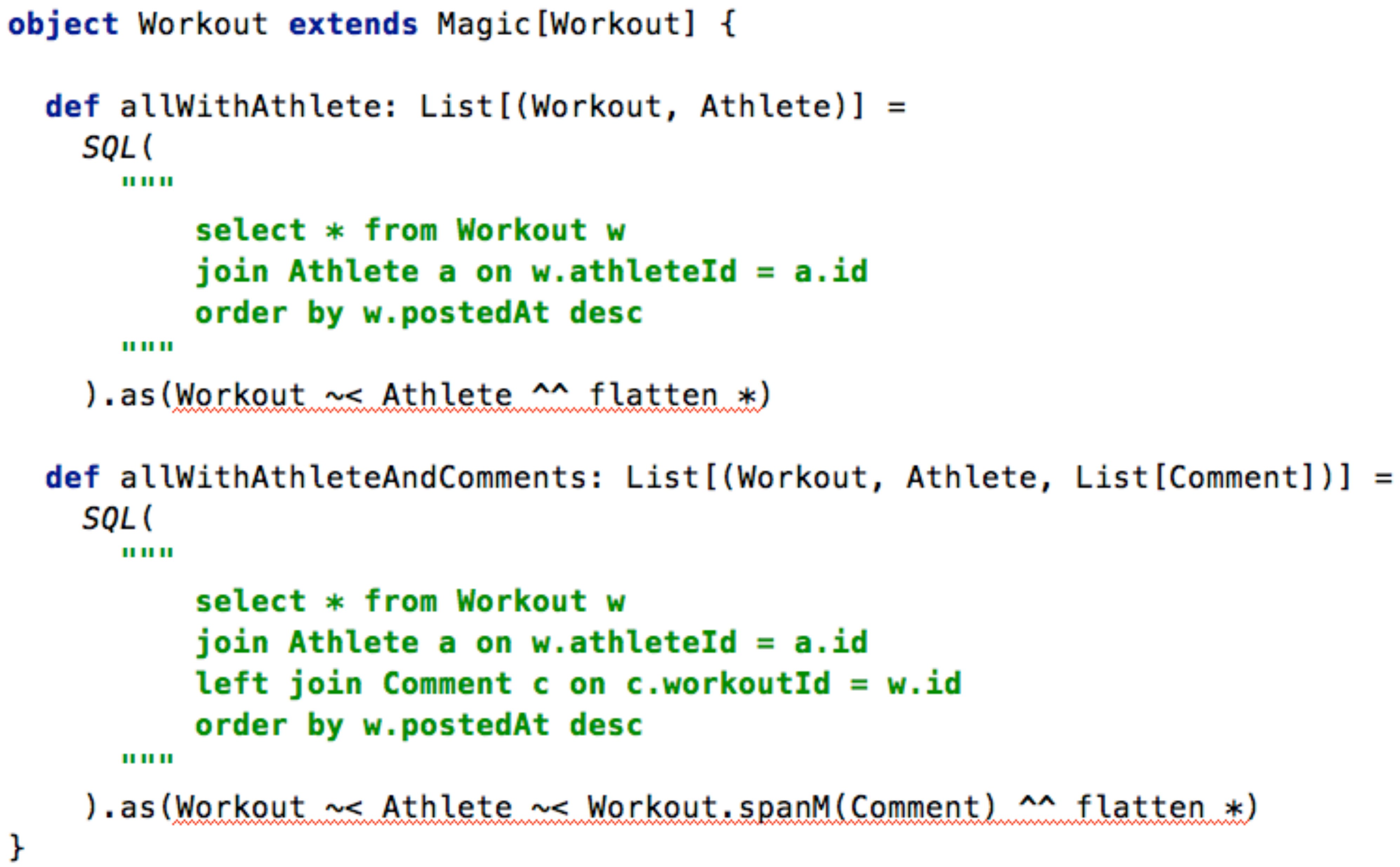
```scala
package models

import play.db.anorm._
import play.db.anorm.defaults._

case class Athlete(
  id: Pk[Long],
  email: String, password: String, firstName: String, lastName: String
  ) {
}

object Athlete extends Magic[Athlete] {
  def connect(email: String, password: String) = {
    Athlete.find("email = {email} and password = {password}")
      .on("email" -> email, "password" -> password)
      .first()
  }
}
```

ScalaTest



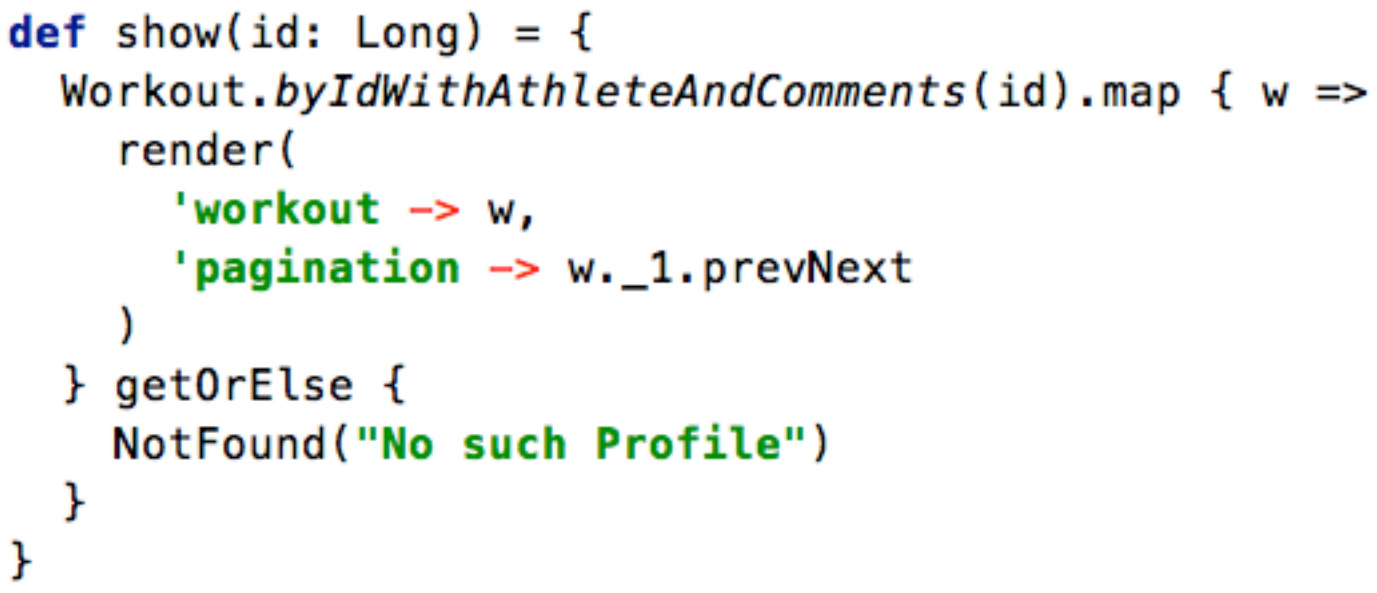
```
import play.test._

import org.scalatest._
import org.scalatest.matchers._

class BasicTests extends UnitFlatSpec with ShouldMatchers with BeforeAndAfterEach {

  import models._
  import play.db.anorm._

  override def beforeEach() {
      Fixtures.deleteDatabase()
  }

  it should "create and retrieve a Athlete" in {

      var user = Athlete(NotAssigned, "jim@gmail.com", "secret", "Jim", "Smith")
      Athlete.create(user)

      val jim = Athlete.find(
          "email={email}").on("email" -> "jim@gmail.com"
      ).first()

      jim should not be (None)
      jim.get.firstName should be("Jim")

  }
```

Anorm in Action

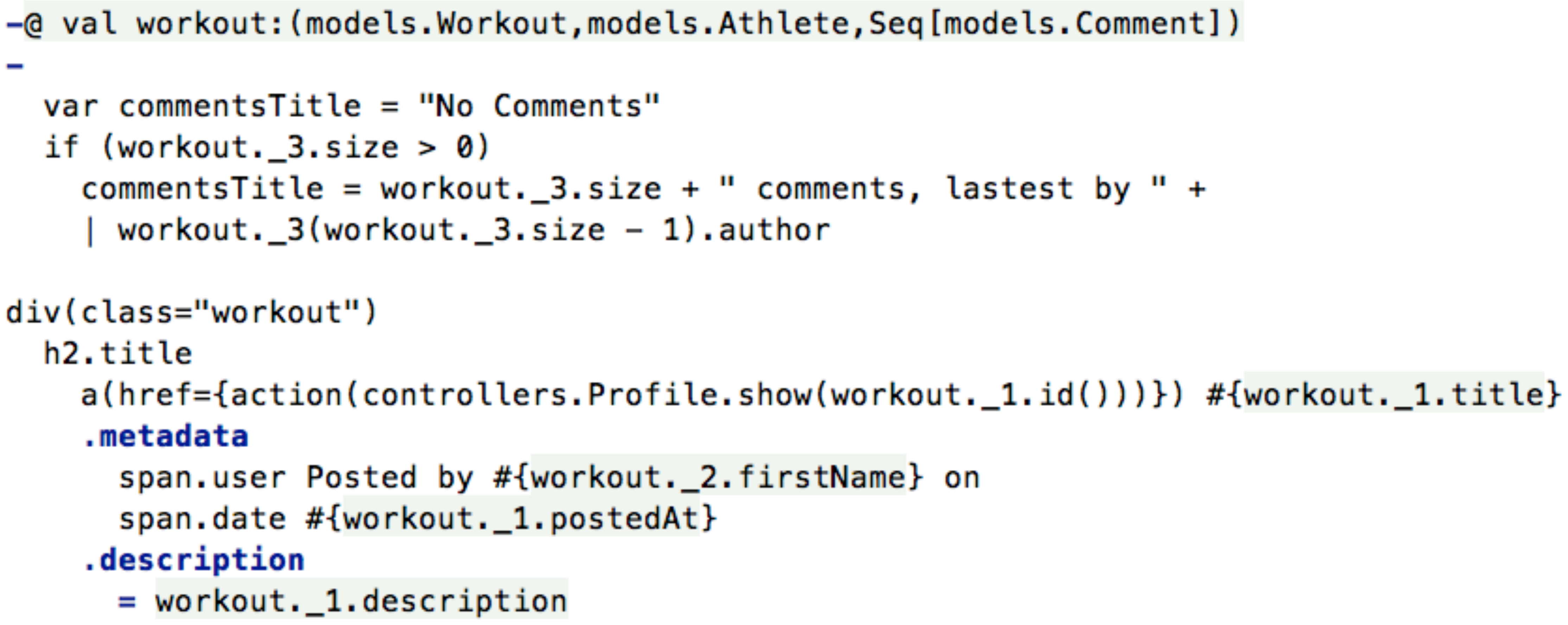


```scala
object Workout extends Magic[Workout] {

  def allWithAthlete: List[(Workout, Athlete)] =
    SQL(
      """
          select * from Workout w
          join Athlete a on w.athleteId = a.id
          order by w.postedAt desc
      """
    ).as(Workout ~< Athlete ^^ flatten *)

  def allWithAthleteAndComments: List[(Workout, Athlete, List[Comment])] =
    SQL(
      """
          select * from Workout w
          join Athlete a on w.athleteId = a.id
          left join Comment c on c.workoutId = w.id
          order by w.postedAt desc
      """
    ).as(Workout ~< Athlete ~< Workout.spanM(Comment) ^^ flatten *)
}
```

Controller and View

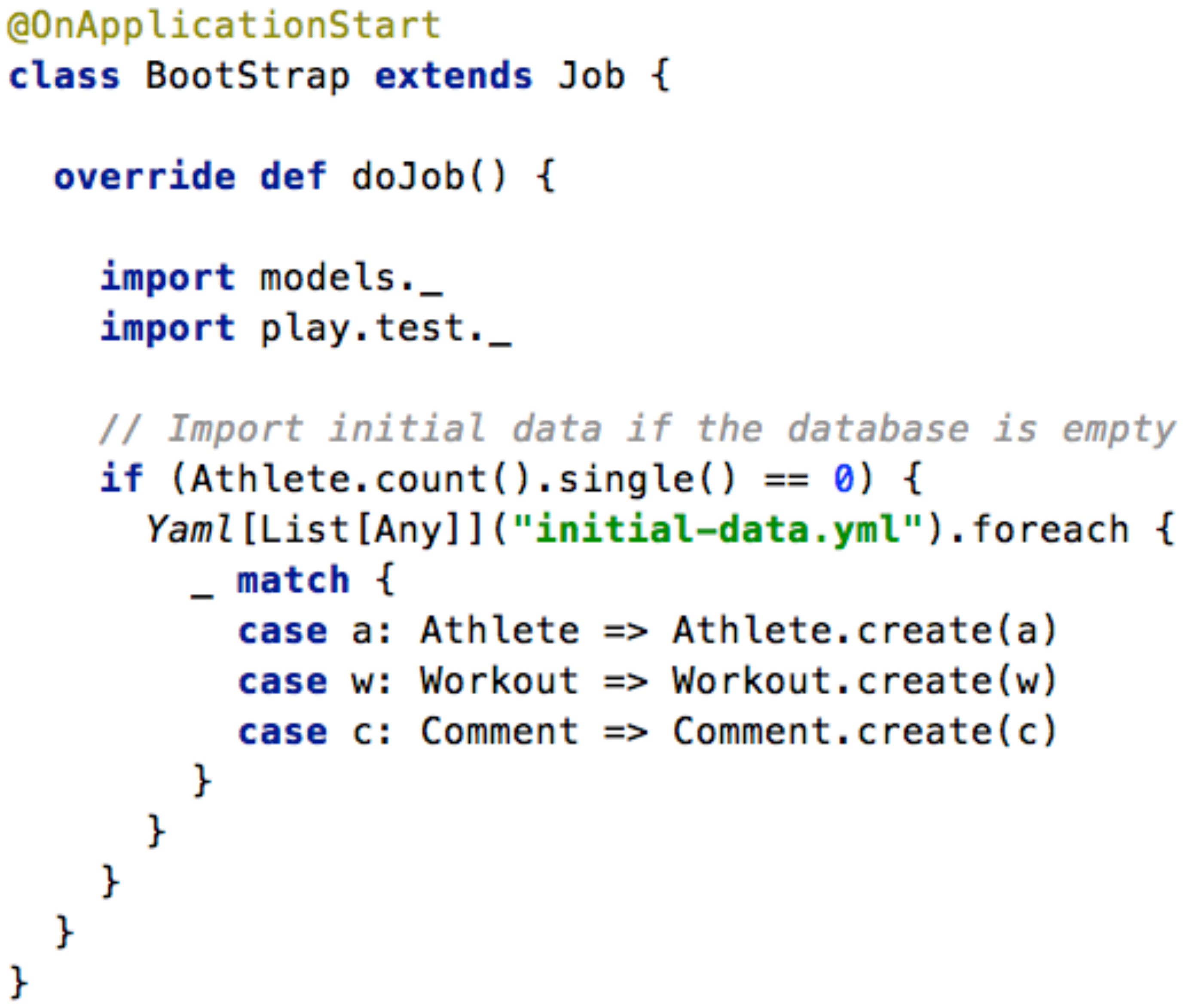


```
def show(id: Long) = {
  Workout.byIdWithAthleteAndComments(id).map { w =>
    render(
      'workout -> w,
      'pagination -> w._1.prevNext
    )
  } getOrElse {
    NotFound("No such Profile")
  }
}
```



```
-@ val workout:(models.Workout,models.Athlete,Seq[models.Comment])
-
  var commentsTitle = "No Comments"
  if (workout._3.size > 0)
    commentsTitle = workout._3.size + " comments, lastest by " +
    | workout._3(workout._3.size - 1).author

div(class="workout")
  h2.title
    a(href={action(controllers.Profile.show(workout._1.id()))}) #{workout._1.title}
    .metadata
      span.user Posted by #{workout._2.firstName} on
      span.date #{workout._1.postedAt}
    .description
      = workout._1.description
```

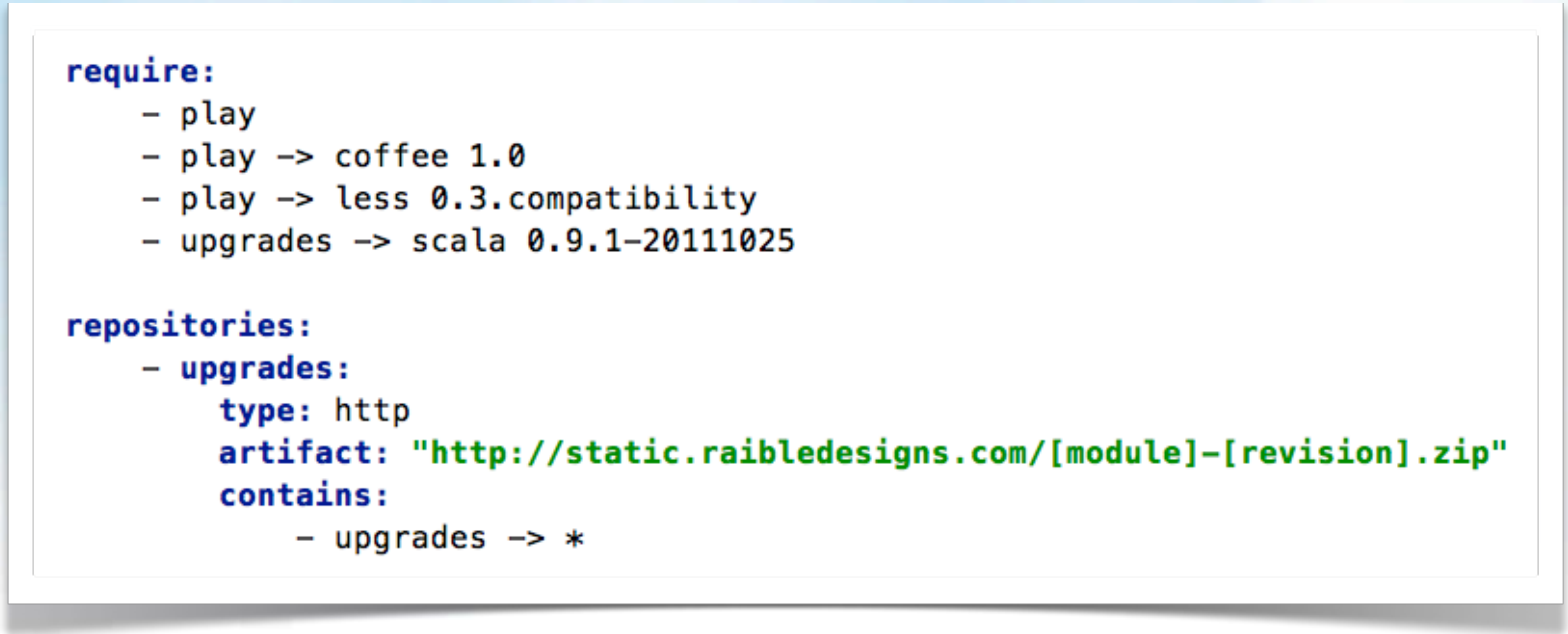
Anorm, Dates & PostgreSQL



```scala
@OnApplicationStart
class BootStrap extends Job {

  override def doJob() {

    import models._
    import play.test._

    // Import initial data if the database is empty
    if (Athlete.count().single() == 0) {
      Yaml[List[Any]]("initial-data.yml").foreach {
        _ match {
          case a: Athlete => Athlete.create(a)
          case w: Workout => Workout.create(w)
          case c: Comment => Comment.create(c)
        }
      }
    }
  }
}
```

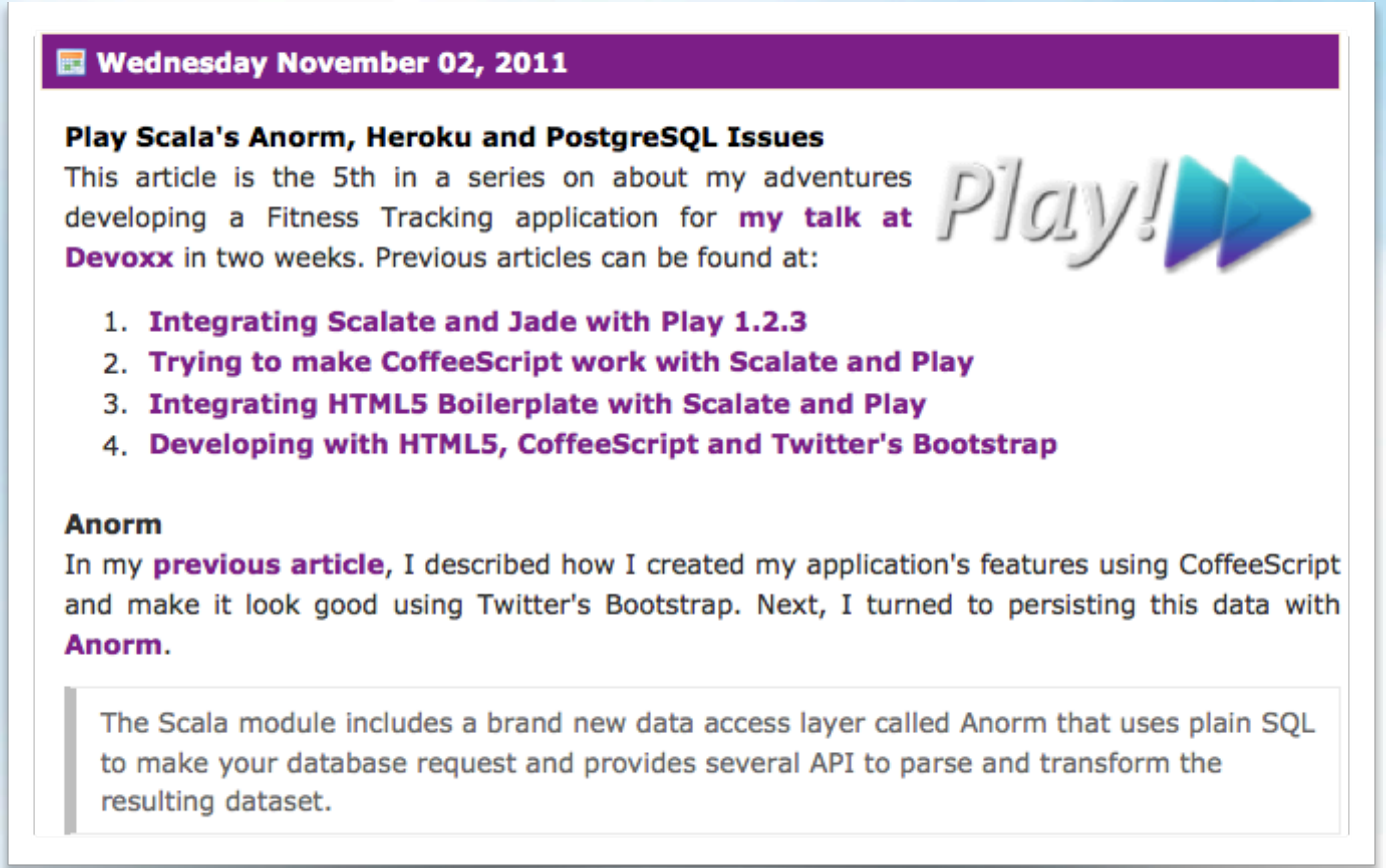
Anorm, Dates & PostgreSQL

- Discovered “support of Date for insertion” was added to Anorm in August 2011
- Cloned play-scala, built locally and uploaded
- Modified dependencies.yml to use new version



```
require:
    - play
    - play -> coffee 1.0
    - play -> less 0.3.compatibility
    - upgrades -> scala 0.9.1-20111025

repositories:
    - upgrades:
        type: http
        artifact: "http://static.raibledesigns.com/[module]-[revision].zip"
        contains:
            - upgrades -> *
```

Anorm and PostgreSQL



Wednesday November 02, 2011

Play Scala's Anorm, Heroku and PostgreSQL Issues

This article is the 5th in a series on about my adventures developing a Fitness Tracking application for **my talk at Devoxx** in two weeks. Previous articles can be found at:

1. **Integrating Scalate and Jade with Play 1.2.3**
2. **Trying to make CoffeeScript work with Scalate and Play**
3. **Integrating HTML5 Boilerplate with Scalate and Play**
4. **Developing with HTML5, CoffeeScript and Twitter's Bootstrap**

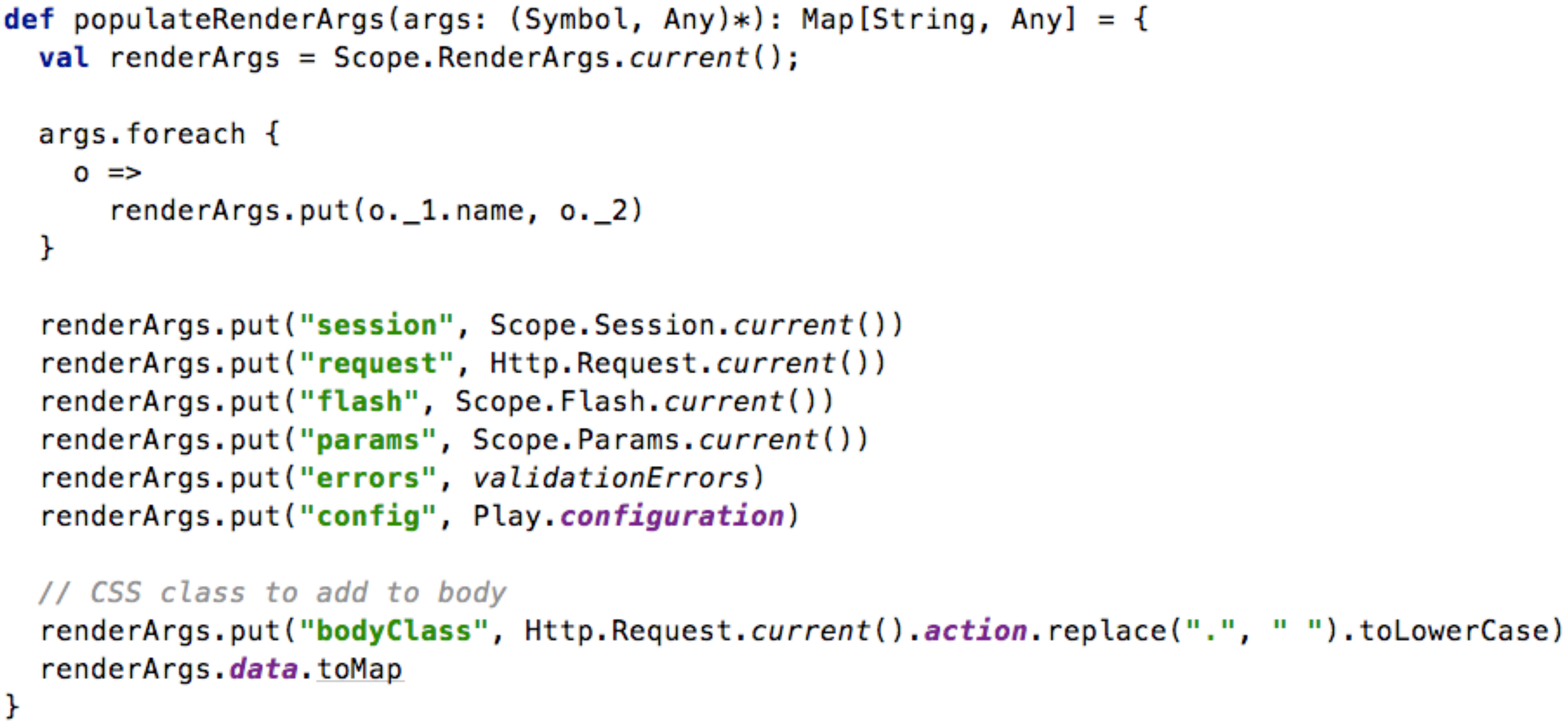
Anorm

In my **previous article**, I described how I created my application's features using CoffeeScript and make it look good using Twitter's Bootstrap. Next, I turned to persisting this data with **Anorm**.

> The Scala module includes a brand new data access layer called Anorm that uses plain SQL to make your database request and provides several API to parse and transform the resulting dataset.

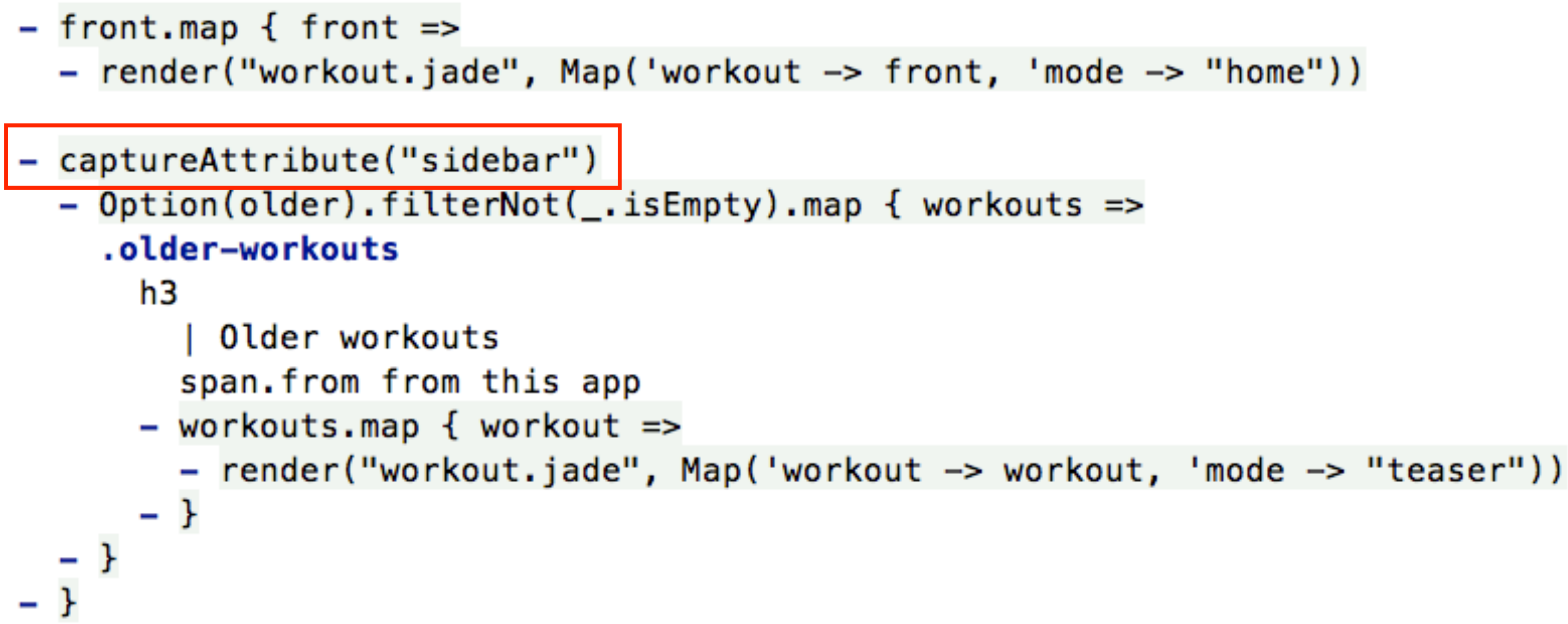
http://raibledesigns.com/rd/entry/play_scala_s_anorm_heroku

More Scalate Goodness



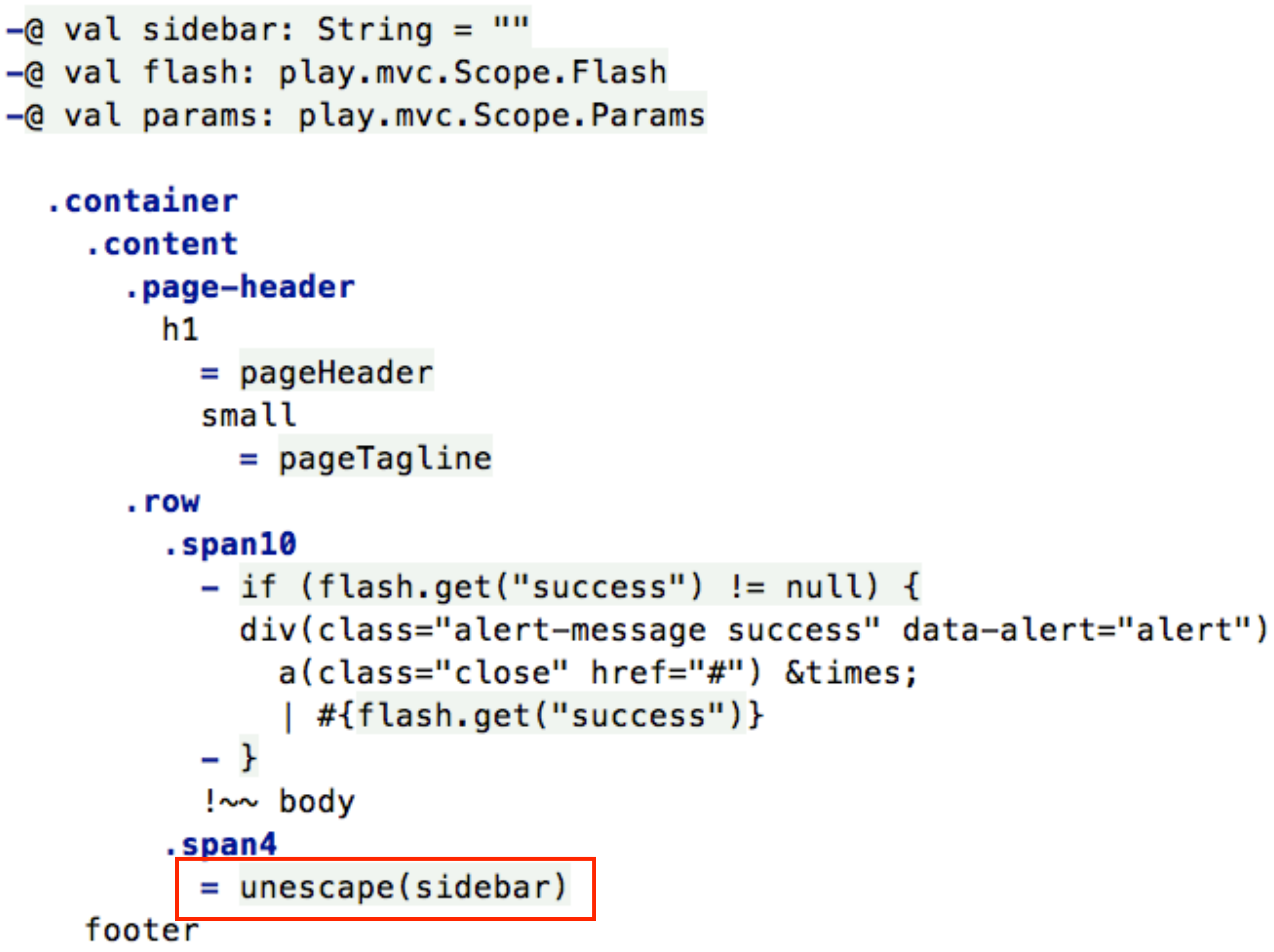
```
def populateRenderArgs(args: (Symbol, Any)*): Map[String, Any] = {
  val renderArgs = Scope.RenderArgs.current();

  args.foreach {
    o =>
      renderArgs.put(o._1.name, o._2)
  }

  renderArgs.put("session", Scope.Session.current())
  renderArgs.put("request", Http.Request.current())
  renderArgs.put("flash", Scope.Flash.current())
  renderArgs.put("params", Scope.Params.current())
  renderArgs.put("errors", validationErrors)
  renderArgs.put("config", Play.configuration)

  // CSS class to add to body
  renderArgs.put("bodyClass", Http.Request.current().action.replace(".", " ").toLowerCase)
  renderArgs.data.toMap
}
```

More Scalate Goodness



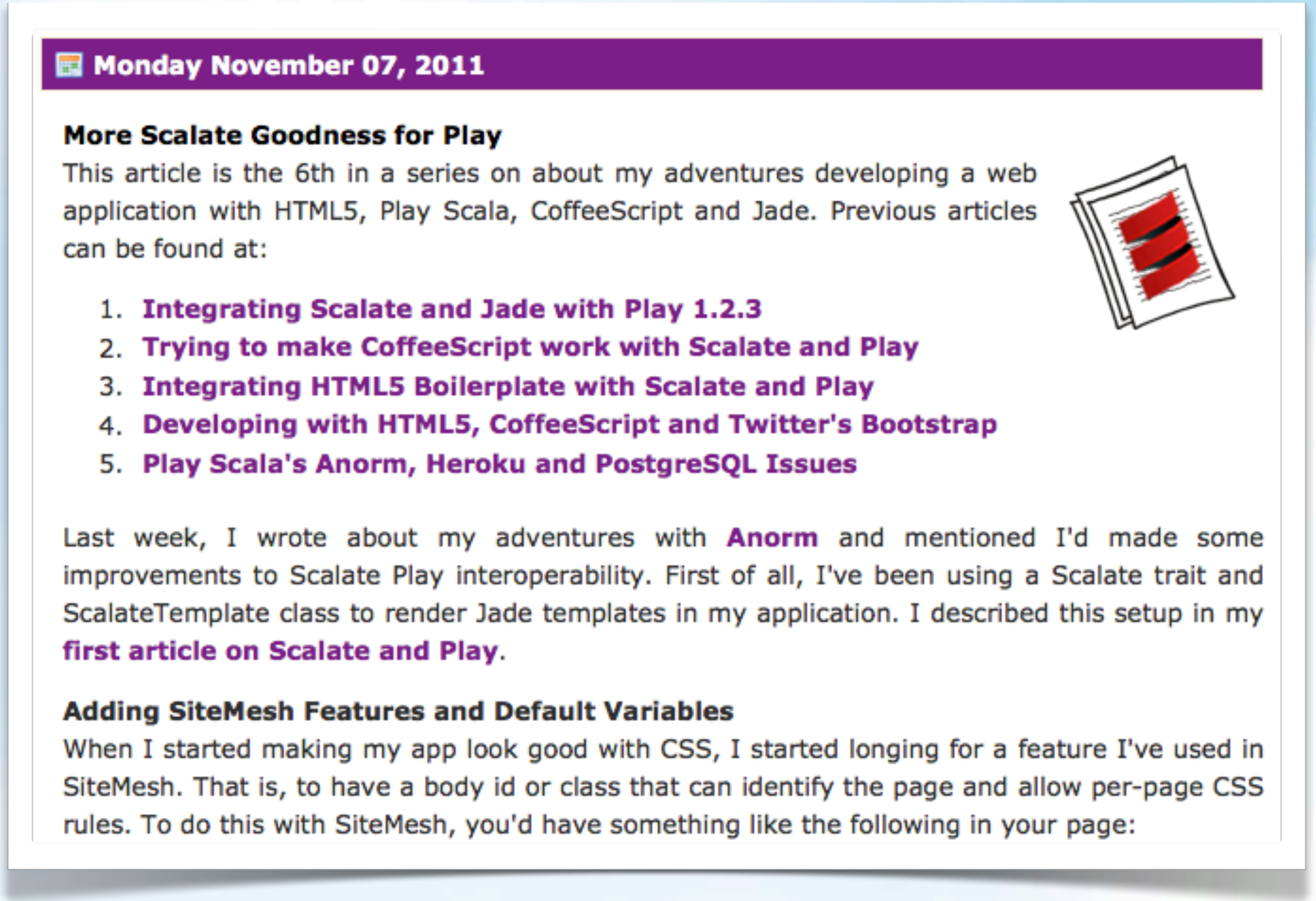
```
- front.map { front =>
  - render("workout.jade", Map('workout -> front, 'mode -> "home"))

- captureAttribute("sidebar")
  - Option(older).filterNot(_.isEmpty).map { workouts =>
    .older-workouts
      h3
        | Older workouts
        span.from from this app
      - workouts.map { workout =>
        - render("workout.jade", Map('workout -> workout, 'mode -> "teaser"))
      - }
  - }
- }
```

More Scalate Goodness



```
-@ val sidebar: String = ""
-@ val flash: play.mvc.Scope.Flash
-@ val params: play.mvc.Scope.Params

  .container
    .content
      .page-header
        h1
          = pageHeader
          small
            = pageTagline
      .row
        .span10
          - if (flash.get("success") != null) {
            div(class="alert-message success" data-alert="alert")
              a(class="close" href="#") &times;
              | #{flash.get("success")}
          - }
          !~~ body
        .span4
          = unescape(sidebar)
    footer
```

Scalate as a Play Module



Monday November 07, 2011

More Scalate Goodness for Play

This article is the 6th in a series on about my adventures developing a web application with HTML5, Play Scala, CoffeeScript and Jade. Previous articles can be found at:

1. Integrating Scalate and Jade with Play 1.2.3
2. Trying to make CoffeeScript work with Scalate and Play
3. Integrating HTML5 Boilerplate with Scalate and Play
4. Developing with HTML5, CoffeeScript and Twitter's Bootstrap
5. Play Scala's Anorm, Heroku and PostgreSQL Issues

Last week, I wrote about my adventures with **Anorm** and mentioned I'd made some improvements to Scalate Play interoperability. First of all, I've been using a Scalate trait and ScalateTemplate class to render Jade templates in my application. I described this setup in my **first article on Scalate and Play**.

Adding SiteMesh Features and Default Variables

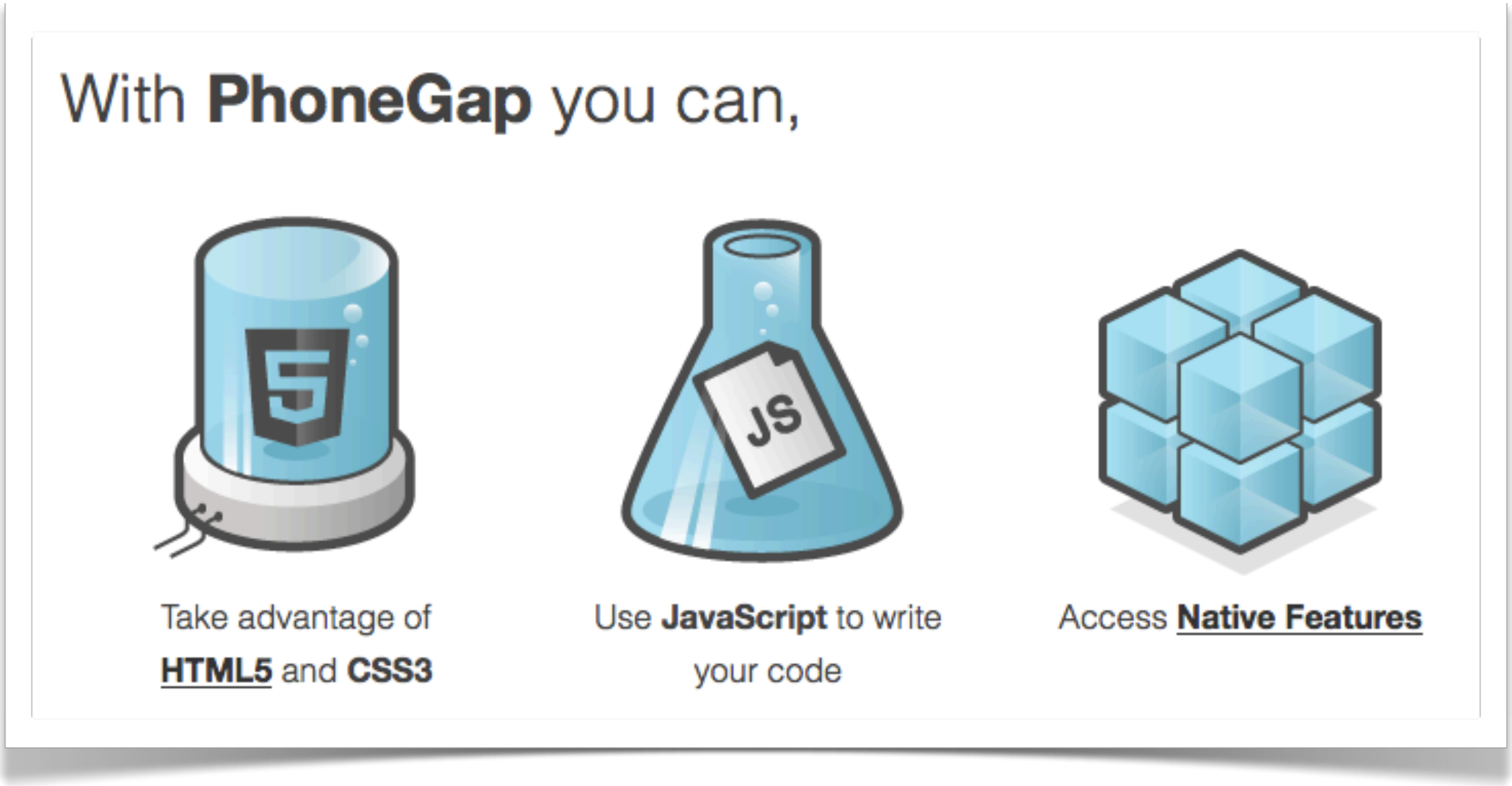
When I started making my app look good with CSS, I started longing for a feature I've used in SiteMesh. That is, to have a body id or class that can identify the page and allow per-page CSS rules. To do this with SiteMesh, you'd have something like the following in your page:

http://raibledesigns.com/rd/entry/more_scalate_goodness_for_play

App was still unusable

- I still hadn't solved the fundamental problem
- The app couldn't run in the background on a mobile phone

PhoneGap to the Rescue!



With **PhoneGap** you can,

Take advantage of **HTML5** and **CSS3**

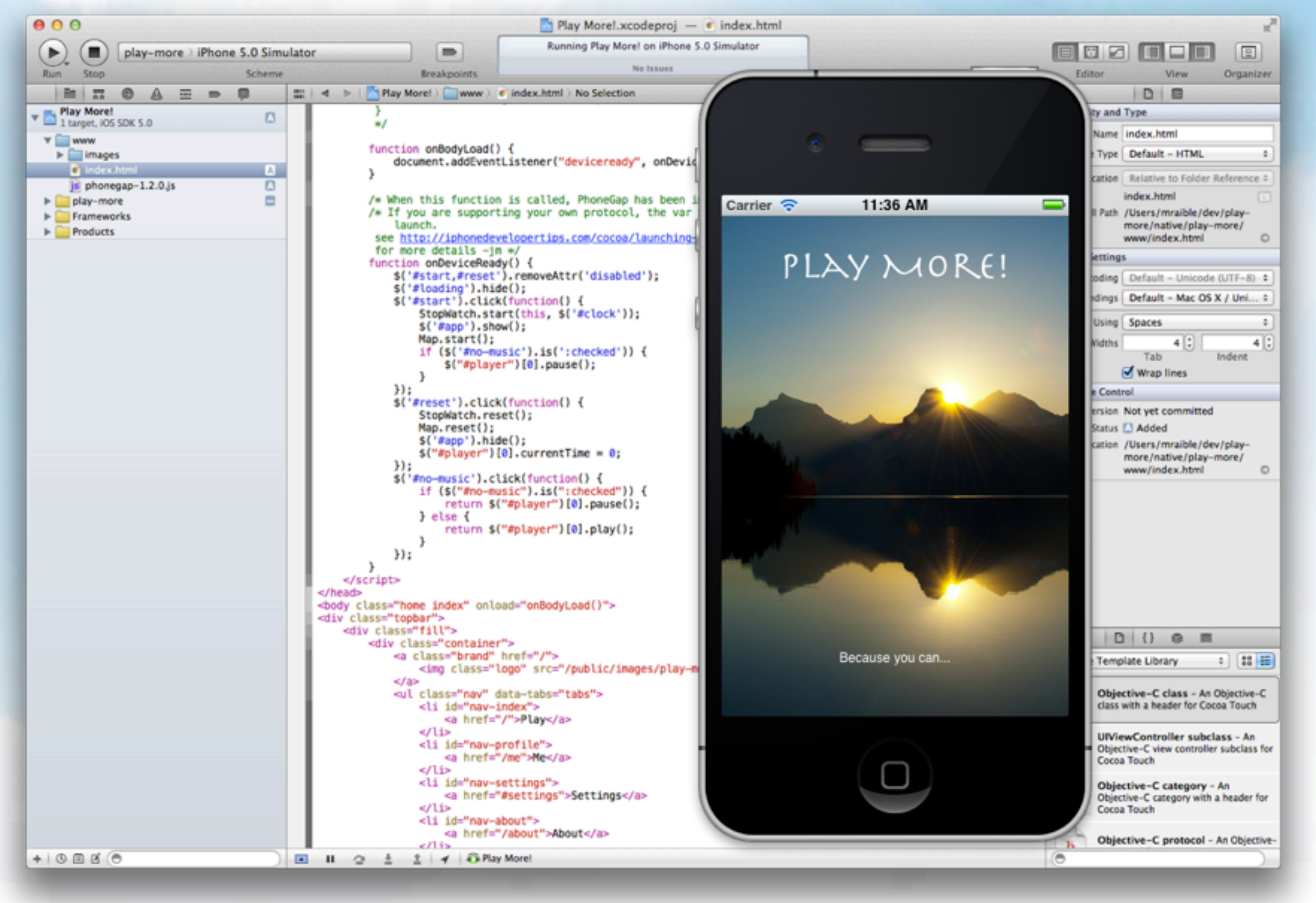
Use **JavaScript** to write your code

Access **Native Features**

Requirements

- Intel-based computer with Mac OS X Snow Leopard (10.6)
- Xcode
- PhoneGap
- Necessary for Installation:
  - An Apple iOS Device
  - iOS Developer Certification

Icons and Splash Screen



```
         }
         */

        function onBodyLoad() {
            document.addEventListener("deviceready", onDevic
        }

        /* When this function is called, PhoneGap has been i
        /* If you are supporting your own protocol, the var
            launch.
         see http://iphonedevelopertips.com/cocoa/launching-
         for more details -jm */
        function onDeviceReady() {
            $('#start,#reset').removeAttr('disabled');
            $('#loading').hide();
            $('#start').click(function() {
                StopWatch.start(this, $('#clock'));
                $('#app').show();
                Map.start();
                if ($('#no-music').is(':checked')) {
                    $("#player")[0].pause();
                }
            });
            $('#reset').click(function() {
                StopWatch.reset();
                Map.reset();
                $('#app').hide();
                $("#player")[0].currentTime = 0;
            });
            $('#no-music').click(function() {
                if ($("#no-music").is(":checked")) {
                    return $("#player")[0].pause();
                } else {
                    return $("#player")[0].play();
                }
            });
        }
    </script>
</head>
<body class="home index" onload="onBodyLoad()">
<div class="topbar">
    <div class="fill">
        <div class="container">
            <a class="brand" href="/">
                <img class="logo" src="/public/images/play-m
            </a>
            <ul class="nav" data-tabs="tabs">
                <li id="nav-index">
                    <a href="/">Play</a>
                </li>
                <li id="nav-profile">
                    <a href="/me">Me</a>
                </li>
                <li id="nav-settings">
                    <a href="#settings">Settings</a>
                </li>
                <li id="nav-about">
                    <a href="/about">About</a>
                </li>
```

ty and Type

Name: index.html

Type: Default – HTML

cation: Relative to Folder Reference

index.html

Path: /Users/mraible/dev/play-more/native/play-more/www/index.html

ettings

oding: Default – Unicode (UTF-8)

dings: Default – Mac OS X / Uni...

Using: Spaces

Widths: 4 (Tab) 4 (Indent)

☑ Wrap lines

Control

ersion: Not yet committed

Status: Added

cation: /Users/mraible/dev/play-more/native/play-more/www/index.html

Template Library

Objective-C class - An Objective-C class with a header for Cocoa Touch

UIViewController subclass - An Objective-C view controller subclass for Cocoa Touch

Objective-C category - An Objective-C category with a header for Cocoa Touch

Objective-C protocol - An Objective-

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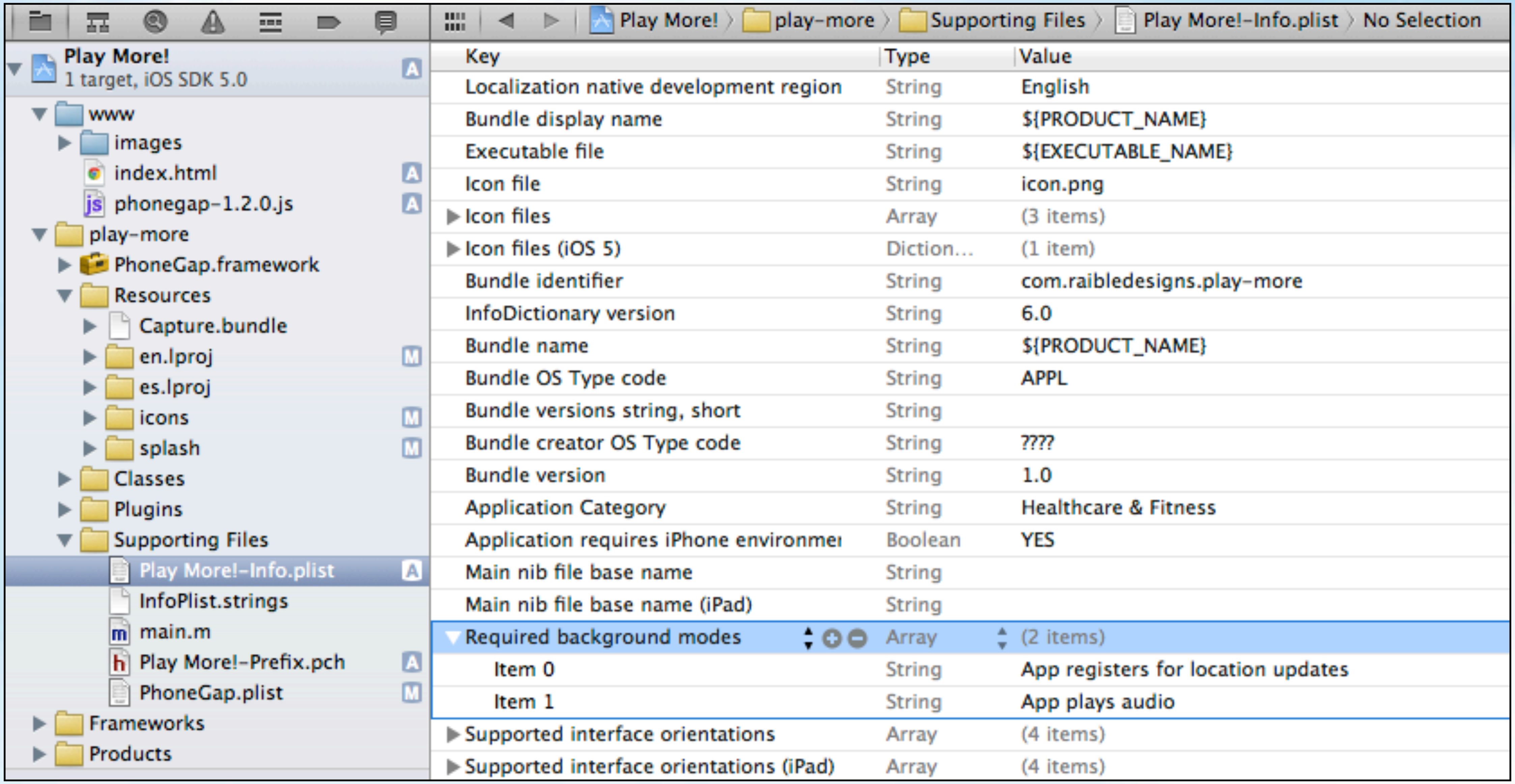
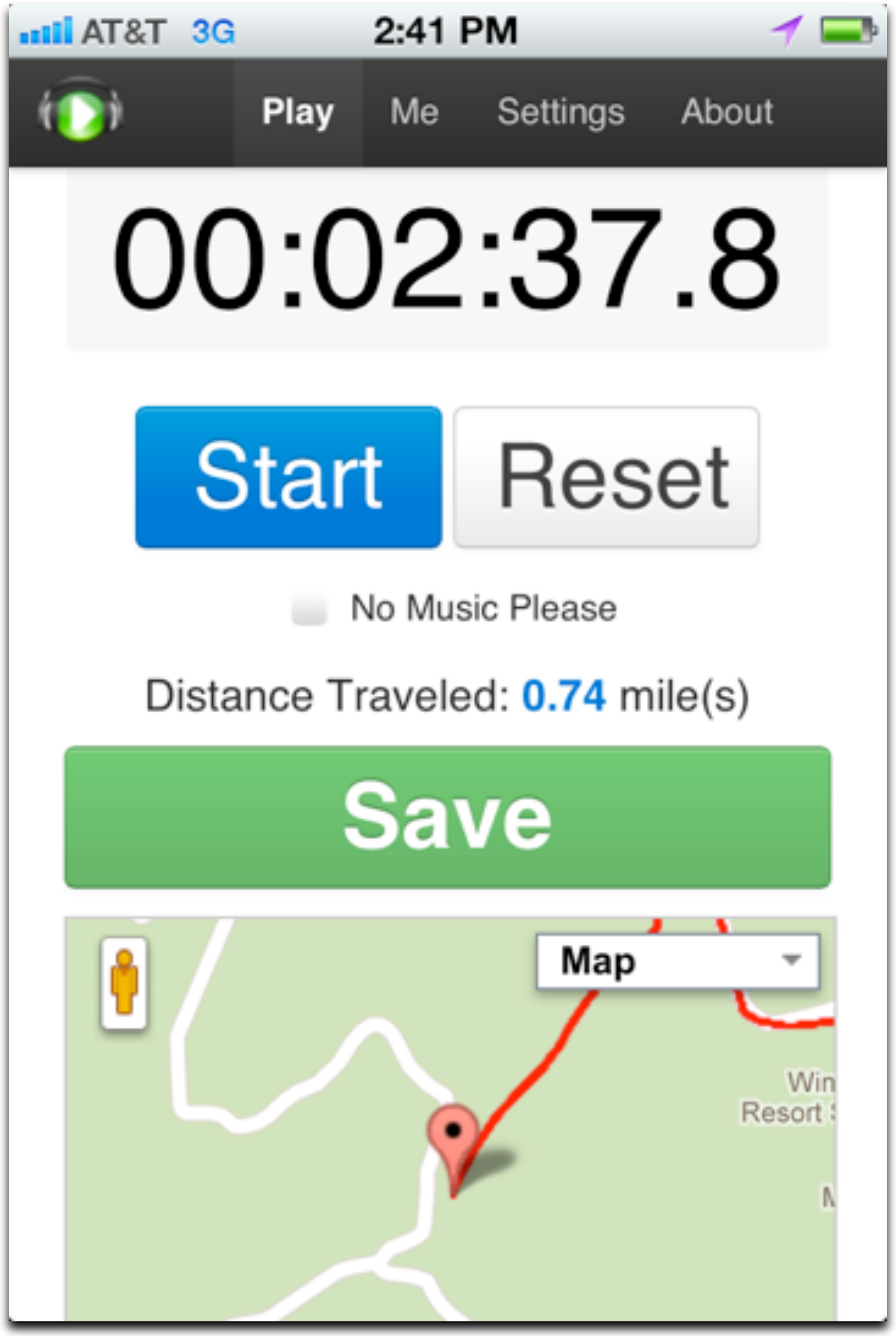
Background Modes



Key	Type	Value
Localization native development region	String	English
Bundle display name	String	${PRODUCT_NAME}
Executable file	String	${EXECUTABLE_NAME}
Icon file	String	icon.png
▶ Icon files	Array	(3 items)
▶ Icon files (iOS 5)	Diction...	(1 item)
Bundle identifier	String	com.raibledesigns.play-more
InfoDictionary version	String	6.0
Bundle name	String	${PRODUCT_NAME}
Bundle OS Type code	String	APPL
Bundle versions string, short	String	
Bundle creator OS Type code	String	????
Bundle version	String	1.0
Application Category	String	Healthcare & Fitness
Application requires iPhone environmei	Boolean	YES
Main nib file base name	String	
Main nib file base name (iPad)	String	
▼ Required background modes	Array	(2 items)
Item 0	String	App registers for location updates
Item 1	String	App plays audio
▶ Supported interface orientations	Array	(4 items)
▶ Supported interface orientations (iPad)	Array	(4 items)

Success!



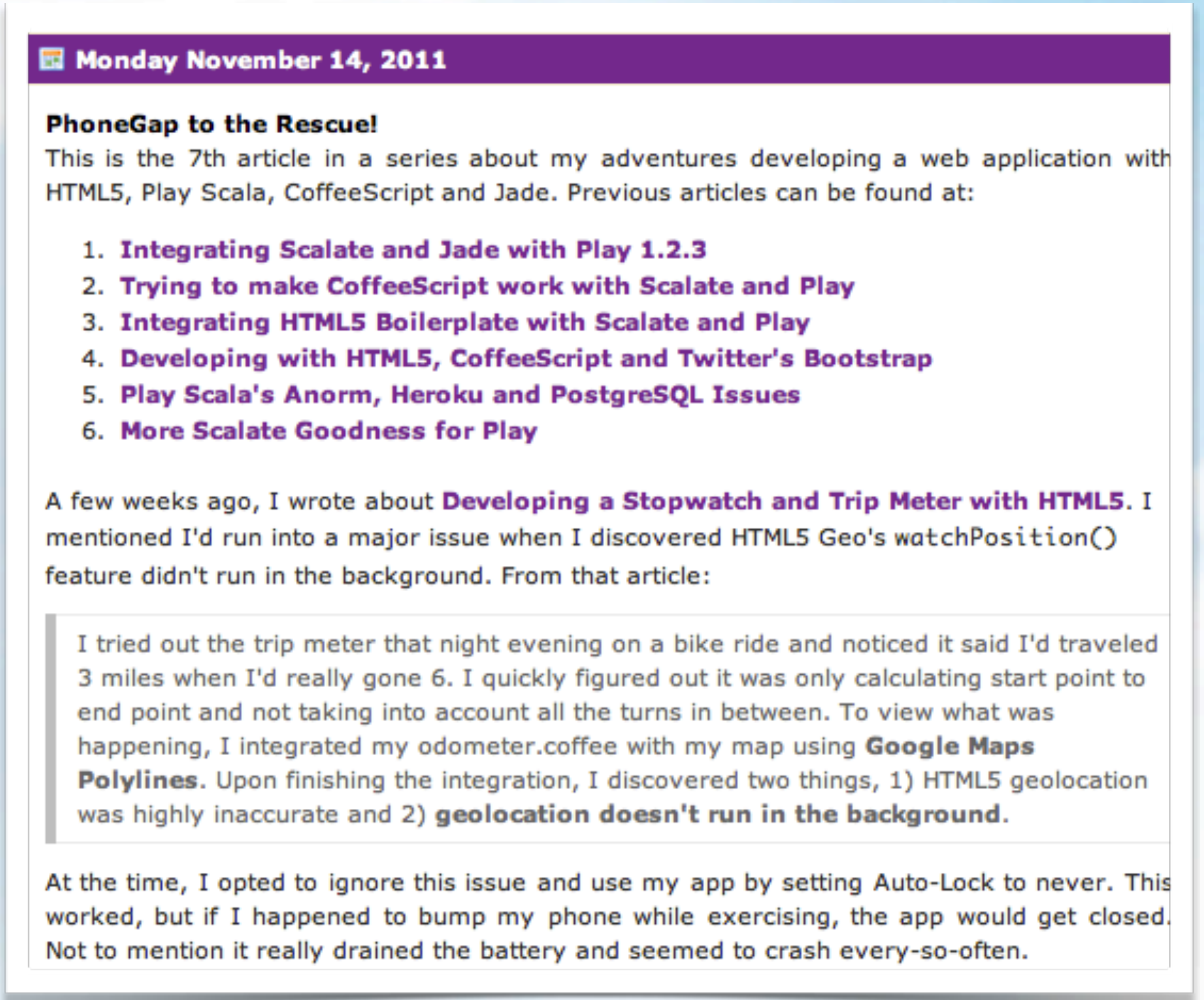
AT&T 3G 2:41 PM

00:02:37.8

□ No Music Please

Distance Traveled: 0.74 mile(s)

PhoneGap Writeup



Monday November 14, 2011

PhoneGap to the Rescue!

This is the 7th article in a series about my adventures developing a web application with HTML5, Play Scala, CoffeeScript and Jade. Previous articles can be found at:

1. **Integrating Scalate and Jade with Play 1.2.3**
2. **Trying to make CoffeeScript work with Scalate and Play**
3. **Integrating HTML5 Boilerplate with Scalate and Play**
4. **Developing with HTML5, CoffeeScript and Twitter's Bootstrap**
5. **Play Scala's Anorm, Heroku and PostgreSQL Issues**
6. **More Scalate Goodness for Play**

A few weeks ago, I wrote about **Developing a Stopwatch and Trip Meter with HTML5**. I mentioned I'd run into a major issue when I discovered HTML5 Geo's `watchPosition()` feature didn't run in the background. From that article:

> I tried out the trip meter that night evening on a bike ride and noticed it said I'd traveled 3 miles when I'd really gone 6. I quickly figured out it was only calculating start point to end point and not taking into account all the turns in between. To view what was happening, I integrated my odometer.coffee with my map using **Google Maps Polylines**. Upon finishing the integration, I discovered two things, 1) HTML5 geolocation was highly inaccurate and 2) **geolocation doesn't run in the background**.

At the time, I opted to ignore this issue and use my app by setting Auto-Lock to never. This worked, but if I happened to bump my phone while exercising, the app would get closed. Not to mention it really drained the battery and seemed to crash every-so-often.

http://raibledesigns.com/rd/entry/phonegap_to_the_rescue

Was it worth it?

- Development Hours: $$$
- play-more.com domain: $180
- GoPro Helmet Cam: $239
- iOS Certified Developer: $100
- Free Trip to Devoxx: ***Priceless***

Developing Play More

http://www.youtube.com/watch?v=bBqtPPfM2xQ

Tools

git
git
the fast version control system

IntelliJ IDEA
ULTIMATE
10.5
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JetBRAINS

heroku

HTML5 vs. Native

- If you need background services like geolocation or audio, native is necessary
- Can still write your apps in HTML5
  - Bridge the Gap with PhoneGap or Titanium
- If mobile is important, consider fully native with WebViews for common features - a.k.a. Hybrid

Questions?

Contact

- http://raibledesigns.com
- http://twitter.com/mraible

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Play More!

- Learn Something New
- Have Fun
- Get out there and *Play!*