Ruby Explorations X

Mark Keane...CSI...UCD

Rails Basics

Ruby on Rails I:

A: the design theory behind Rails framework

B: walk-thru' of simple Rails system

C: other Rails functionality...neat stuff

D: now for models in Hello

E: some residual things to know...

F: fixing the db problem in Hello

My New Puppy

this is my second puppy

her name is ...

Part A:

practical and theoretical background

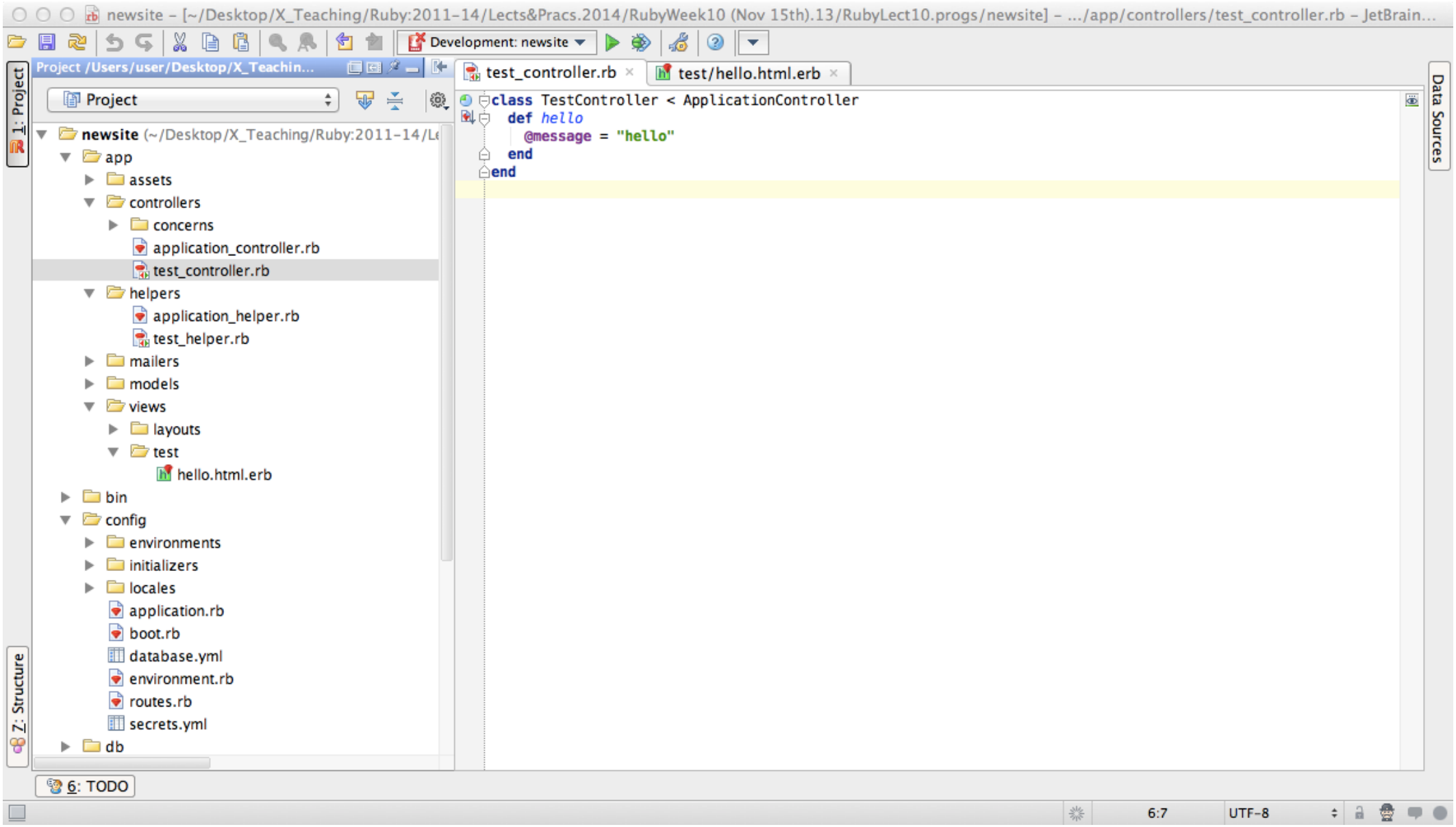
What is Rails...

software framework, a set of libraries to support rapid web-site development

when you type ***rails new sitename***, a folder is opened up with bags and bags of sub-folders and files

these sub-folders contain file templates for coding and ready-made methods, a web server (WEBrick) and a database (SQLite3); related by ***conventions***

the thing is a monster...ALSO...with Rails 4.1.6


newsite – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/newsite] – .../app/controllers/test_controller.rb – JetBrain...
Development: newsite
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app
assets
controllers
concerns
application_controller.rb
test_controller.rb
helpers
application_helper.rb
test_helper.rb
mailers
models
views
layouts
test
hello.html.erb
bin
config
environments
initializers
locales
application.rb
boot.rb
database.yml
environment.rb
routes.rb
secrets.yml
db
test_controller.rb
test/hello.html.erb
class TestController < ApplicationController
def hello
@message = "hello"
end
end
1: Project
Z: Structure
Data Sources
6: TODO
6:7
UTF-8

What is Rails...

originally, web-pages were static html but this was very inflexible and hard to maintain

then...they became more dynamic with databases behind them...then people started putting code in so that the page was created on the fly (e.g., personalised)

this improved flexibility and maintenance but introduced complexity and security issues

Rails is a response to these issues...

What is Rails...MVC

complexity is handled by dividing task into model (db setup), view (screens) and controller (code to do things)

in simple terms, what was a single html file with code, gets broken up into 3-4 files, which combine to create a file that is sent to browser to be rendered

its secure ‘cos website users can only see the views and user have no sight of code for views or models

the model/controller bit just separates db issues from code that modifies objects (sort of)

MVC framework

model-view-controller is a software architecture/ architectural pattern (used in Rails)

model is domain-specific rep of the data used by the application; manages data and informs of changes

view renders model into suitable form for interactions (ie, at interface); may be multiple views of same model

controller receives input and initiates response, making calls to model data (sort-of guts of app)

Rails...runs off...

Rails is backed by libraries, (some) we have seen:

ActionMailer: for mailing

ActiveRecord: for interface to db

Rake: for setting up, updating and clearing out db

Erb: for writing embedded ruby commands in docs

we will adopt a hide-the-db approach

Controller

Model

Views

MVC flow of control

user interacts with interface (mouse-click)

controller receives input event and converts it to suitable user action, understandable for model

controller notifies ***model*** of user action, poss. changing model's state (e.g., update shopping cart)

once **controller** does actions, based on **model** data, flow of control may pass back to **view** to render output (or move on to next page/action)

user interface may await further user input, cycle re-starts

Controller

Model

Views

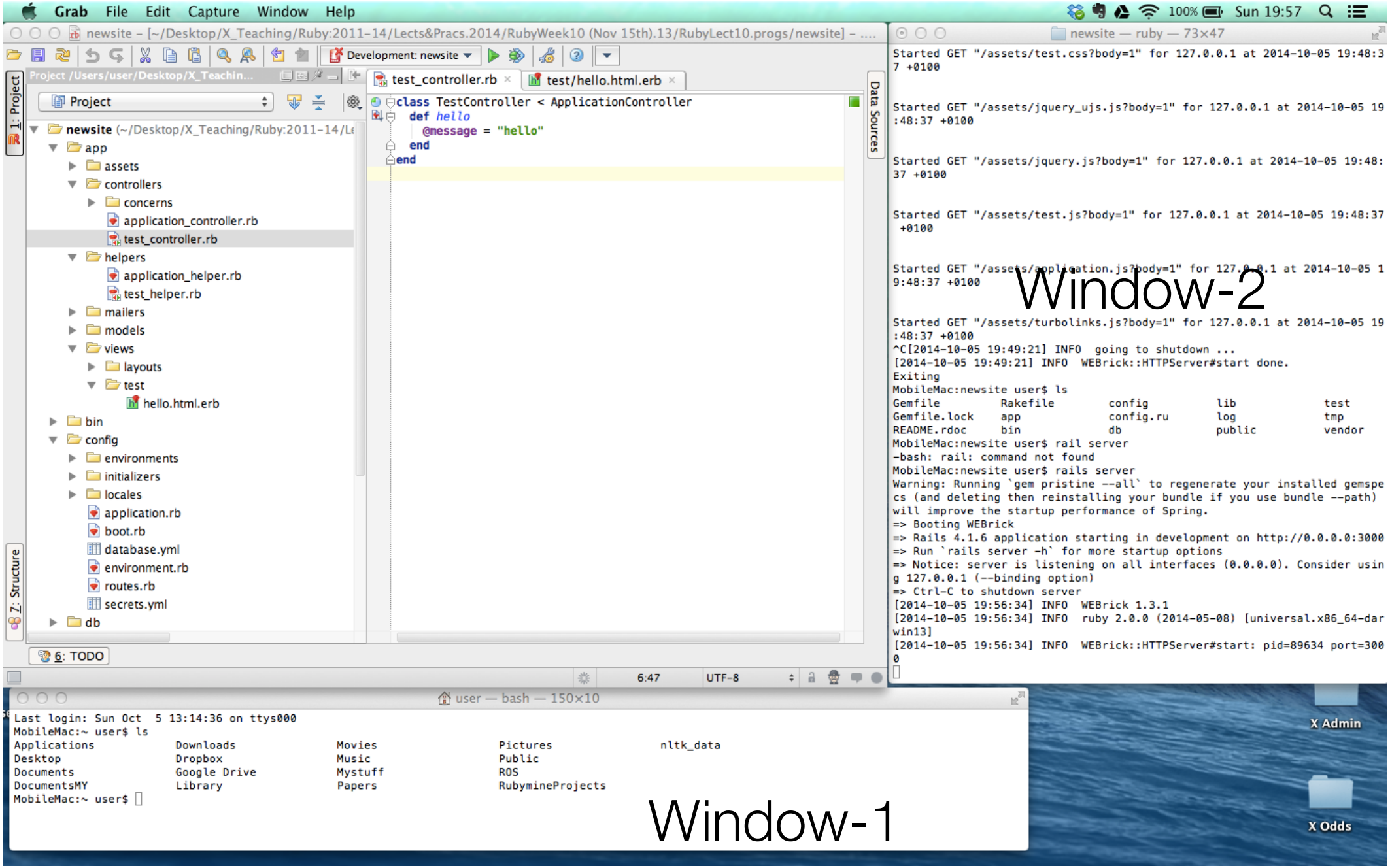
Practical Issues

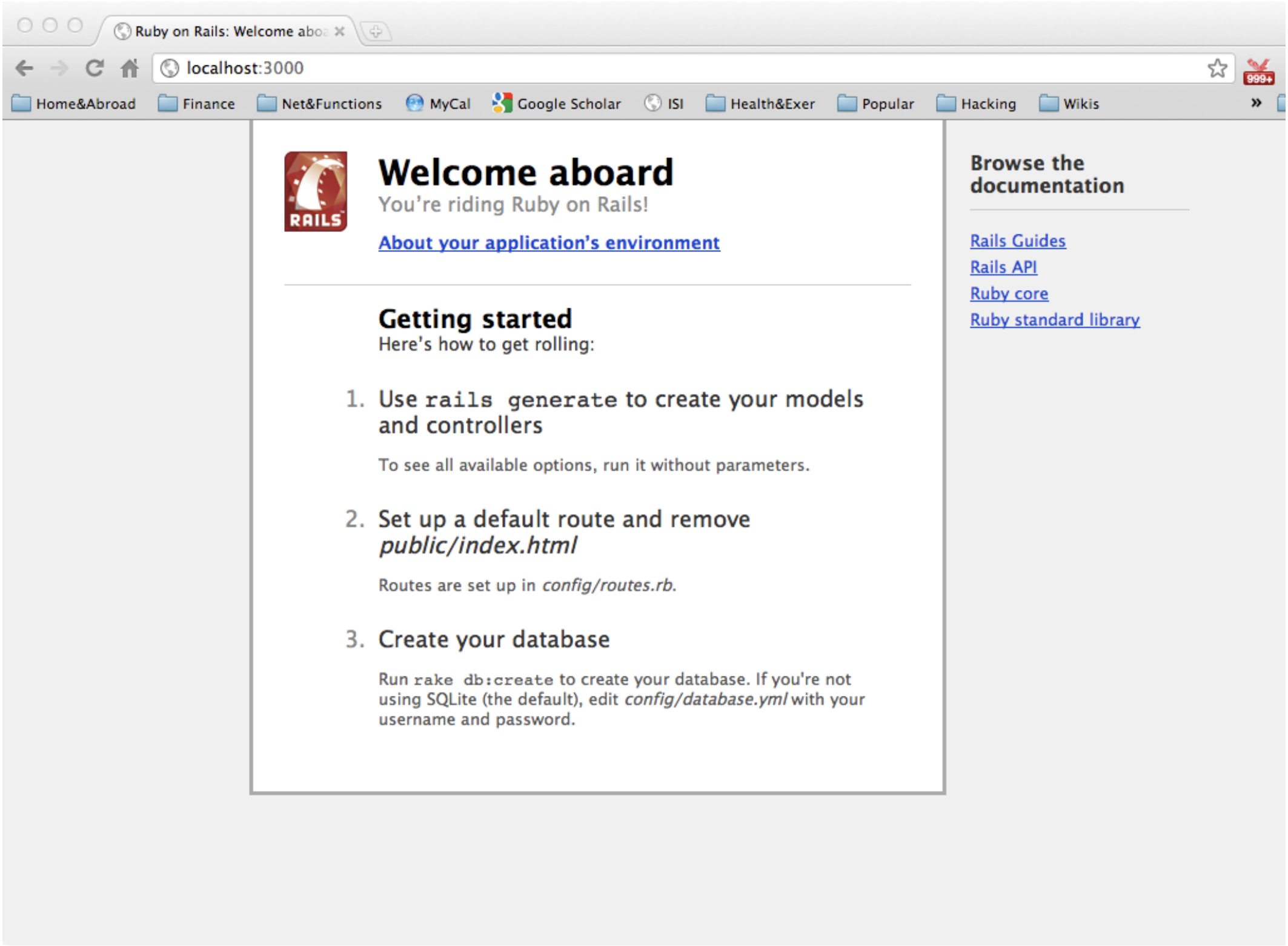
Or Xcode…if you know/prefer it

we will work with four windows: Rubymine, 2 command-line windows and a browser

- Rubymine helps us navigate folders and edits files
- TerminalWindow1 will run the server
- TerminalWindow2 will run external scripts (e.g. rake)
- Browser will look at web-site pages running

get used to moving between all four windows


Grab File Edit Capture Window Help
Sun 19:57
newsite – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/newsite] – ....
Development: newsite
Project /Users/user/Desktop/X_Teachin...
Project
newsite (~/Desktop/X_Teaching/Ruby:2011-14/Le
app
assets
controllers
concerns
application_controller.rb
test_controller.rb
helpers
application_helper.rb
test_helper.rb
mailers
models
views
layouts
test
hello.html.erb
bin
config
environments
initializers
locales
application.rb
boot.rb
database.yml
environment.rb
routes.rb
secrets.yml
db
test_controller.rb
test/hello.html.erb
class TestController < ApplicationController
def hello
@message = "hello"
end
end
1: Project
Z: Structure
Data Sources
6: TODO
6:47
UTF-8
newsite — ruby — 73×47
Started GET "/assets/test.css?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
Started GET "/assets/jquery_ujs.js?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
Started GET "/assets/jquery.js?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
Started GET "/assets/test.js?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
Started GET "/assets/application.js?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
Window-2
Started GET "/assets/turbolinks.js?body=1" for 127.0.0.1 at 2014-10-05 19:48:37 +0100
^C[2014-10-05 19:49:21] INFO going to shutdown ...
[2014-10-05 19:49:21] INFO WEBrick::HTTPServer#start done.
Exiting
MobileMac:newsite user$ ls
Gemfile Rakefile config lib test
Gemfile.lock app config.ru log tmp
README.rdoc bin db public vendor
MobileMac:newsite user$ rail server
-bash: rail: command not found
MobileMac:newsite user$ rails server
Warning: Running `gem pristine --all` to regenerate your installed gemspecs (and deleting then reinstalling your bundle if you use bundle --path) will improve the startup performance of Spring.
=> Booting WEBrick
=> Rails 4.1.6 application starting in development on http://0.0.0.0:3000
=> Run `rails server -h` for more startup options
=> Notice: server is listening on all interfaces (0.0.0.0). Consider using 127.0.0.1 (--binding option)
=> Ctrl-C to shutdown server
[2014-10-05 19:56:34] INFO WEBrick 1.3.1
[2014-10-05 19:56:34] INFO ruby 2.0.0 (2014-05-08) [universal.x86_64-darwin13]
[2014-10-05 19:56:34] INFO WEBrick::HTTPServer#start: pid=89634 port=3000
user — bash — 150×10
Last login: Sun Oct 5 13:14:36 on ttys000
MobileMac:~ user$ ls
Applications Downloads Movies Pictures nltk_data
Desktop Dropbox Music Public
Documents Google Drive Mystuff ROS
DocumentsMY Library Papers RubymineProjects
MobileMac:~ user$
Window-1
X Admin
X Odds


Ruby on Rails: Welcome abo
localhost:3000
Home&Abroad
Finance
Net&Functions
MyCal
Google Scholar
ISI
Health&Exer
Popular
Hacking
Wikis
Welcome aboard
You're riding Ruby on Rails!
About your application's environment
Getting started
Here's how to get rolling:
1. Use rails generate to create your models and controllers
To see all available options, run it without parameters.
2. Set up a default route and remove public/index.html
Routes are set up in config/routes.rb.
3. Create your database
Run rake db:create to create your database. If you're not using SQLite (the default), edit config/database.yml with your username and password.
Browse the documentation
Rails Guides
Rails API
Ruby core
Ruby standard library

Part B(i):

simplest possible 7-step recipe to use Rails...

Controller

Model

Views

Controller

Model

$ rake db:migrate

Views

$ rails server

Before Cookbook Run

Please re-adjust your trousers...

Make sure your gems are in place...run any or all of dese

$ gem install rails (make sure **rake** is there)

$ gem update --system

$ gems install a_gem (if **a_gem** is missing)

$ gem install bundle

$ bundle install

$ bundle update **a_particular_gem** (to get latest v)

Cookbook Run

first time may pause at “run bundle”
if impatient use this... -- skip-bundle
Mac issues on privileges...

$ rails new newsite

$ cd newsite

$ rails generate controller test hello

look at /newsite/app/controllers/
test_controller.rb
add **@message = “hello”** to hello method

look at newsite/app/views/test/hello.html.erb
add ** <%= @message %> ** to file

$ rails server

load page in browser:
http://localhost:3000/test/hello

Cookbook Run:Terminal Win1

```
 markkean% rails new newsite
      create  ...a whole bunch of crap....
markkean% cd newsite
markkean% ls
README          config          lib          script          vendor
Rakefile    db          log          test
markkean% rails generate controller test hello
     create  app/controllers/test_controller.rb
      route  get "test/hello"
     invoke  erb
     create    app/views/test
     create    app/views/test/hello.html.erb
     invoke  test_unit
     create    test/functional/test_controller_test.rb
.....
 markkean% rails server
=> Booting WEBrick
=> Rails 3.1.0 application starting in development on http://0.0.0.0:3000
=> Call with -d to detach
=> Ctrl-C to shutdown server
[2011-10-11 18:56:20] INFO  WEBrick 1.3.1
[2011-10-11 18:56:20] INFO  ruby 1.9.2 (2011-07-09) [x86_64-darwin11]
[2011-10-11 18:56:20] INFO  WEBrick::HTTPServer#start: pid=1581
port=3000
Started GET "/test/hello" for 127.0.0.1 at 2011-10-11 19:09:48 +0100
 Processing by TestController#hello as HTML
Rendered test/hello.html.erb within layouts/application (25.4ms)
Compiled application.css  (28ms)  (pid 1581)
```

Cookbook Run

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$ cd newsite

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add **@message = “hello”** to hello method

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Cookbook Run

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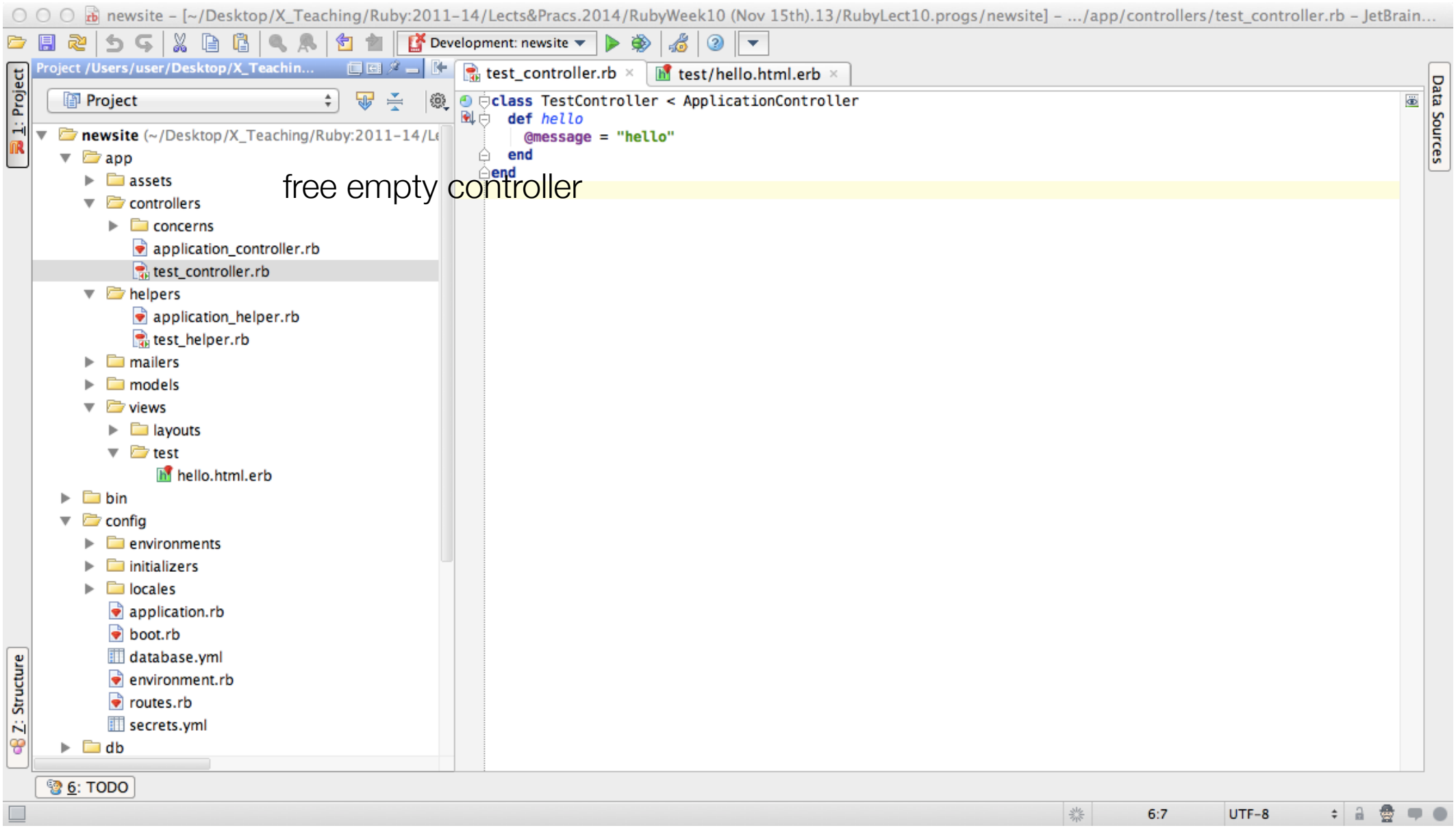
$ rails server

load page in browser:

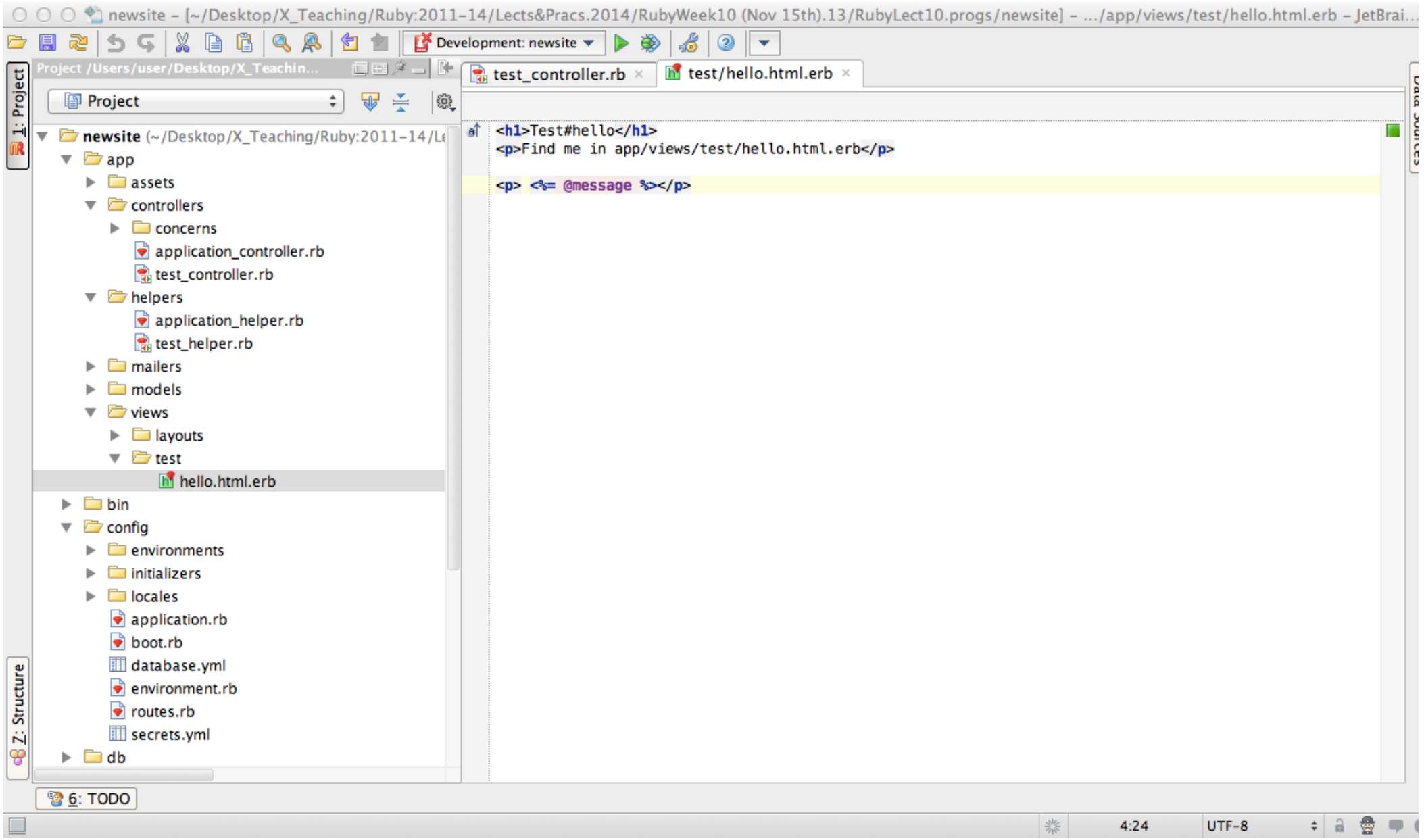
$ rake db:create
is done first time
you use db

$ rake db:migrate
is also done when
you have defined
model

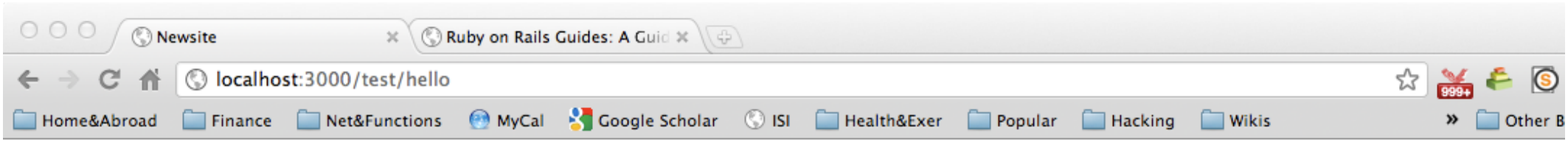
Cookbook Run: Rubymine I



Cookbook Run:Xcode II



Cookbook Run: Browser



Test#hello

Find me in app/views/test/hello.html.erb

hello

Controller

localhost/test/hello

where is the ?

render
hello.html.erb
with @message

Model

Views

Caveats

generally, each controller-method maps to a view file

we have not defined a layout (general frame of page)

we have not defined models

we have not looked at stylesheets

we have not looked at routing

but...we will

Part B2(i):

Walk-through of (less) simple Rails: The screens

A Banking Site

takes you through mortgage application

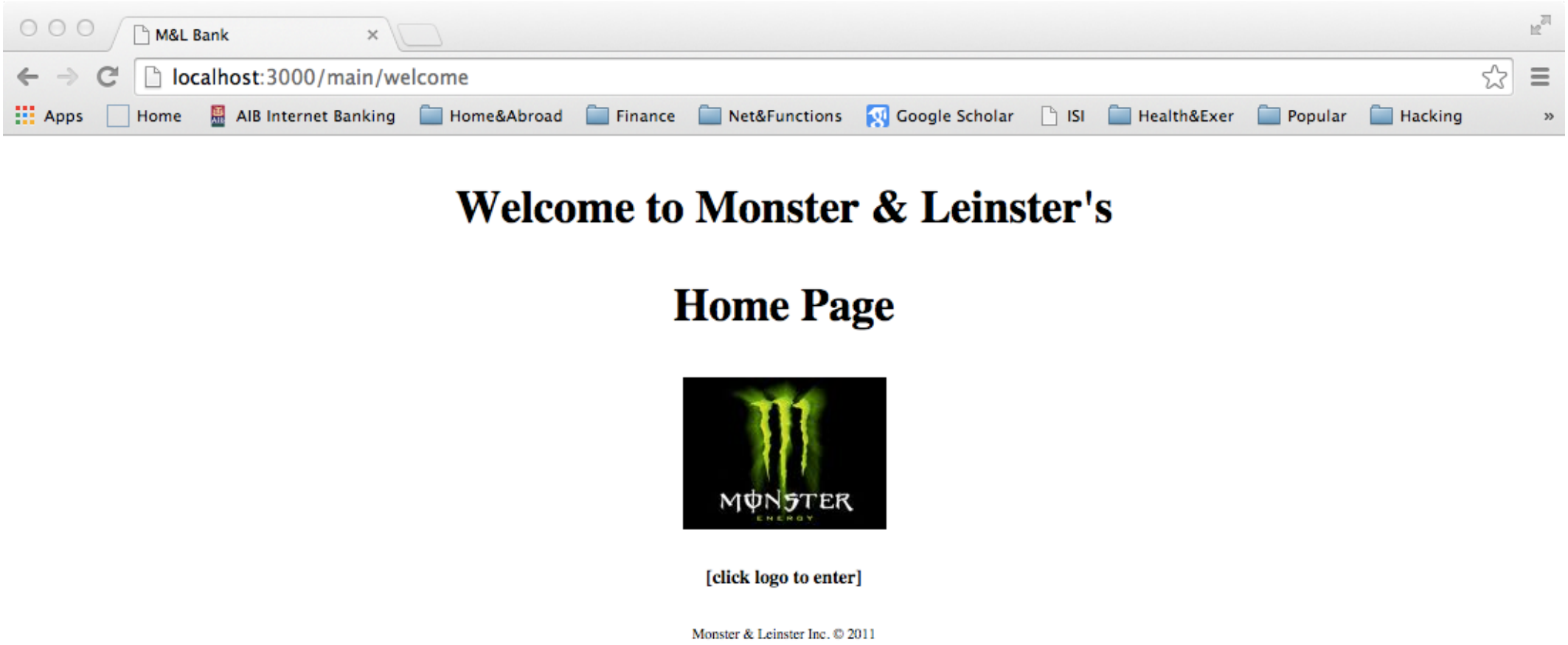
uses forms to take inputs

re-presents that information

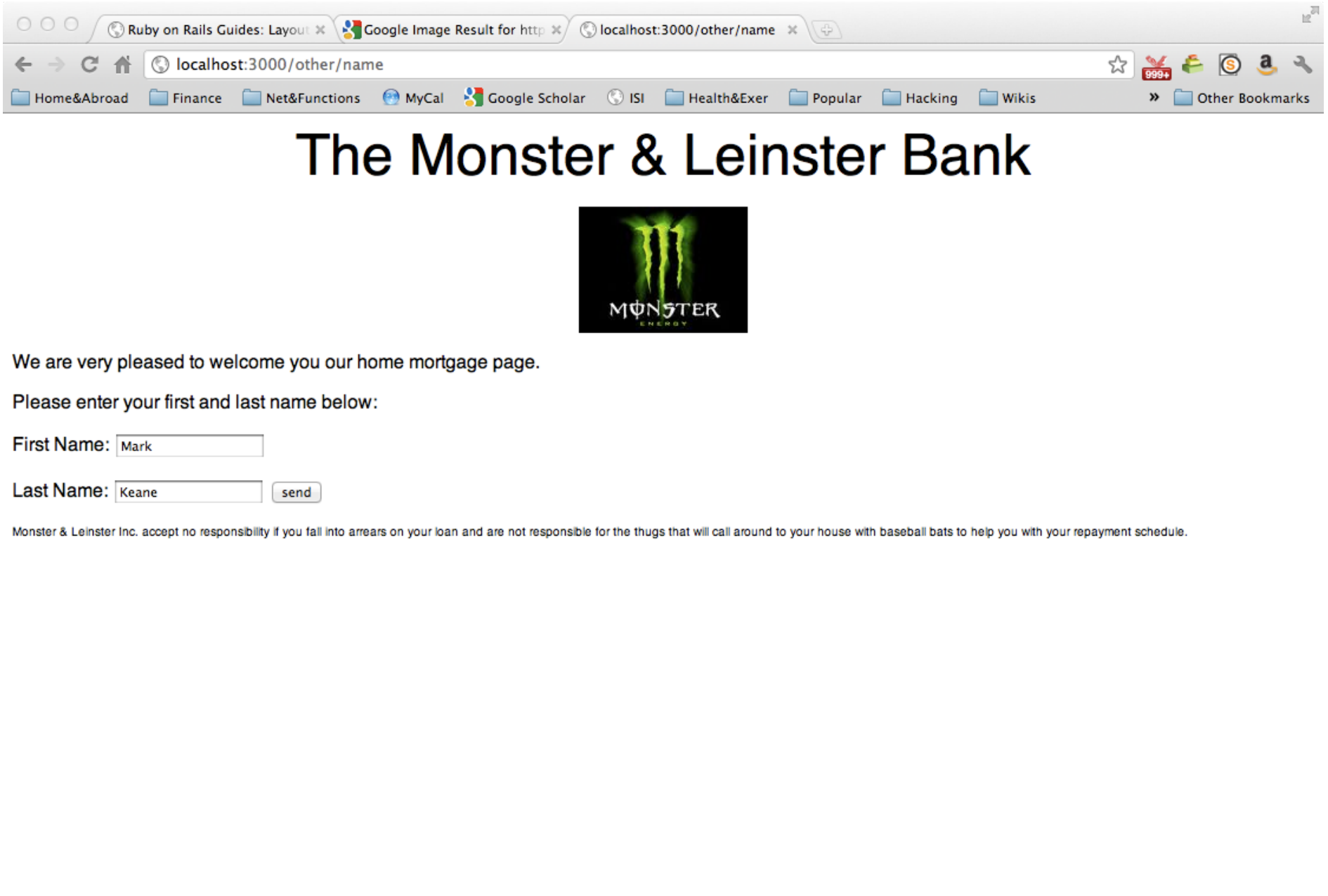
does some minimal computation behind scenes

uses a db to store the interaction; that persists over different sessions with user

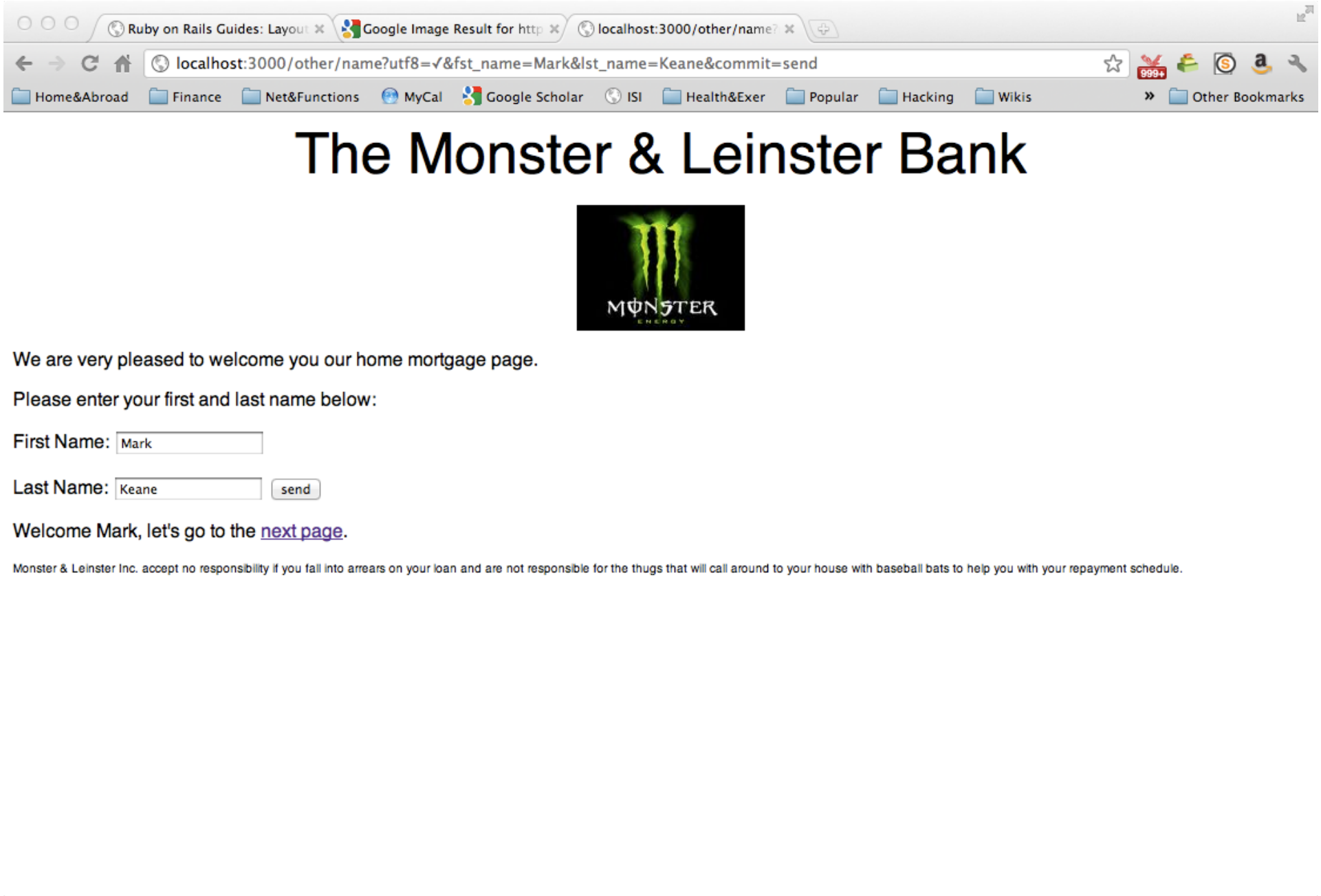
The Site: Screen I (start)



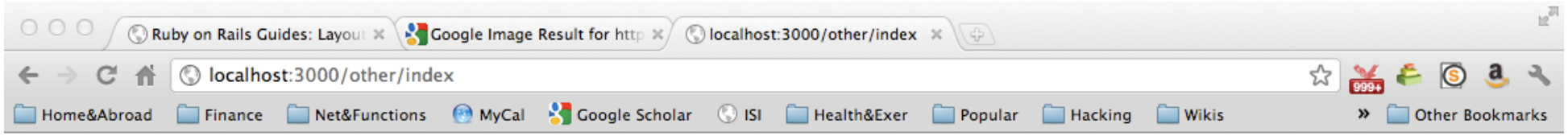
The Site: Screen IIa



The Site: Screen IIb



The Site: Screen III



The Monster & Leinster Bank

Your Mortgage Details

So, Mark, let us get some more of your details:

First Name: Mark

Last Name: Keane

Address: 15 Flitwick Close

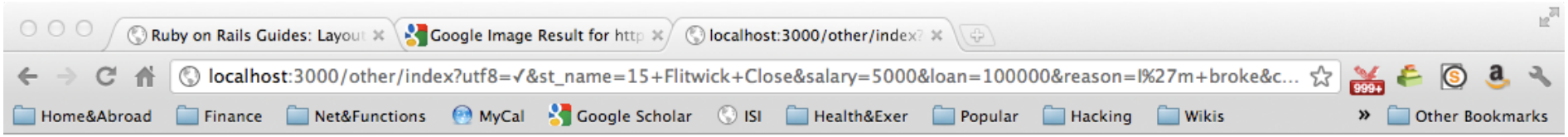
Salary: 5000

Loan Amount: 100000

Loan Reason: I'm broke send

Monster & Leinster Inc. accept no responsibility if you fall into arrears on your loan and are not responsible for the thugs that will call around to your house with baseball bats to help you with your repayment schedule.

The Site: Screen IV



The Monster & Leinster Bank

Your Mortgage Details

So, we have your details as:

First Name: Mark

Last Name: Keane

Address: 15 Flitwick Close

Salary:5000

Loan: 100000

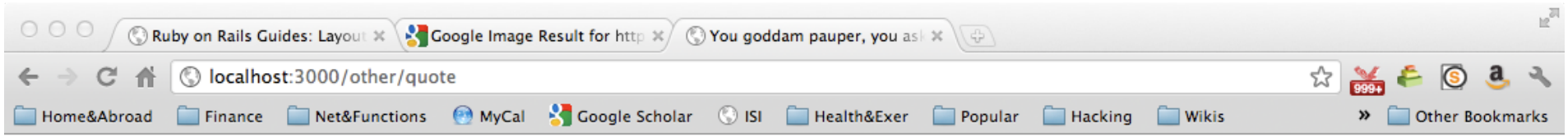
Reason: I'm broke

Your ID: 27

Do you want to Ask For Quote or Go Back .

Monster & Leinster Inc. accept no responsibility if you fall into arrears on your loan and are not responsible for the thugs that will call around to your house with baseball bats to help you with your repayment schedule.

The Site: Screen V



The Monster & Leinster Bank

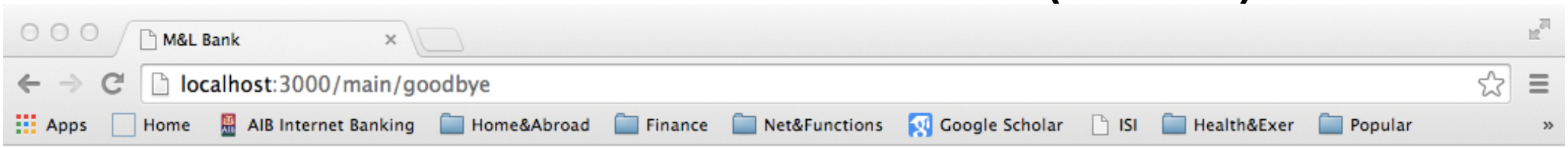
Your Quote

You goddam pauper, you asked us for a loan that is: more than three times your salary. Please go back and re-enter your correct salary.

Would you like to Finish or Change Details

Monster & Leinster Inc. accept no responsibility if you fall into arrears on your loan and are not responsible for the thugs that will call around to your house with baseball bats to help you with your repayment schedule.

The Site: Screen VI (end)



Goodbye to Monster & Leinster's

End Page

[click logo to re-enter site]

- , , , 1
- mark, keane , , 2
- mark , keane , 2000, 3122 3
- mark , keane , , 4
- mark , keane , 12, 2000000 5
- , , , 6
- Mark, Keane , 5000, 100000 7
- , , , 8
- , , , 9
- Mark, Keane , 5000, 100000 10

Part B2(ii):

Walk-through of simple Rails: The Setup

Steps

$ rails new banko

$ cd banko

$ rails generate controller main welcome goodbye

$ rails generate controller other name index show change quote

$ rails generate model Entry

lets...edit a whole bunch of files...

$ rails server

load page in browser:
http://localhost:3000/main/welcome/

$ rake db:create
is done first time you use db

$ rake db:migrate
is also done when you have defined model

Steps

$ rails new bank set up dir

$ cd bank go to dir

$ rails generate controller main welcome goodbye create controller **main** with method **welcome**

$ rails generate controller other name index show change quote create controller **other** with method **name**

$ rails generate model Entry create model called **entry**

lets...edit a whole bunch of files...

$ rails server start server; you must be in the hello directory

load page in browser:
http://localhost:3000/main/welcome/ call first page

Controller

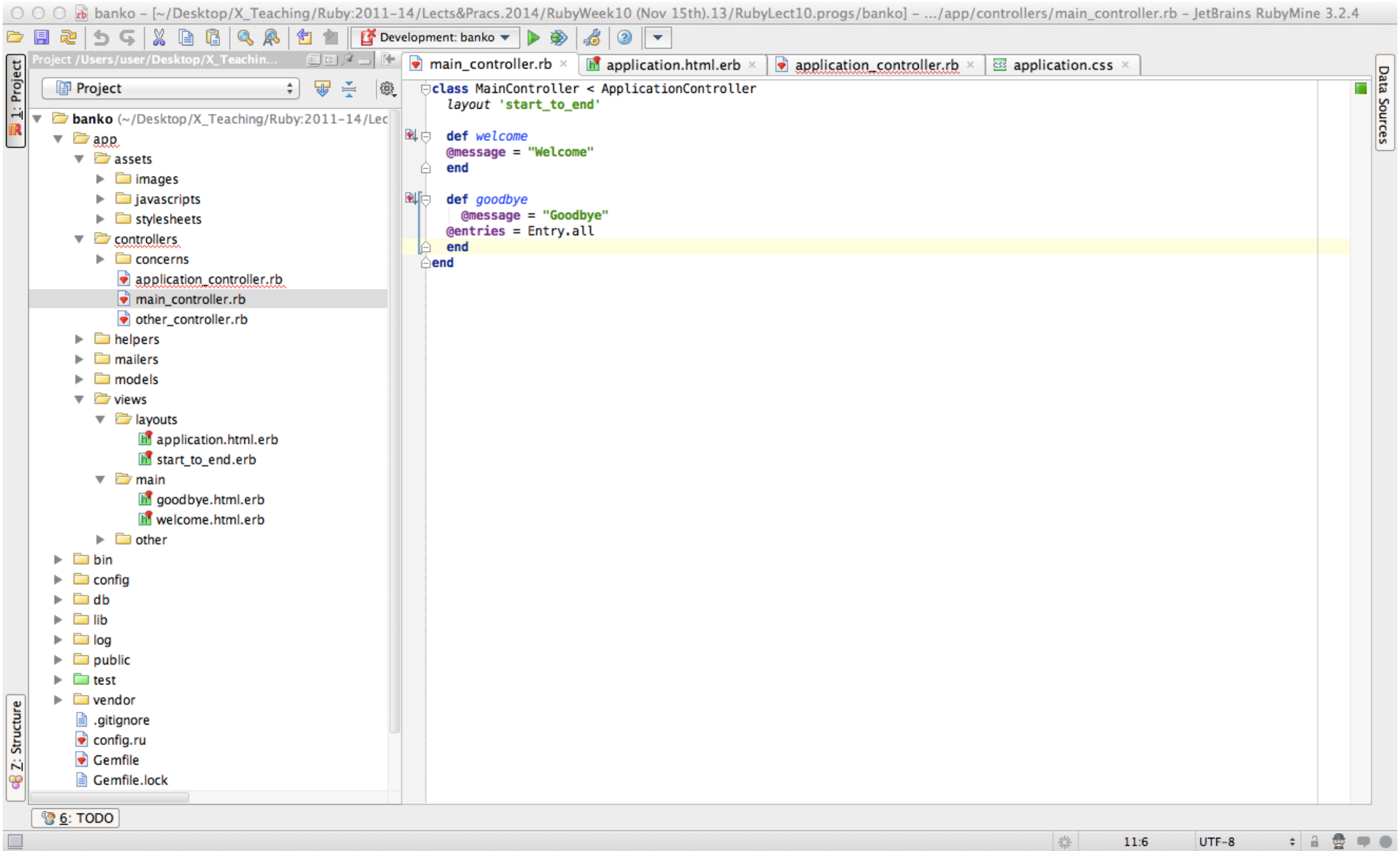
Model

$ rake db:migrate

Views

$ rails server

What you get...


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../app/controllers/main_controller.rb – JetBrains RubyMine 3.2.4
Development: banko
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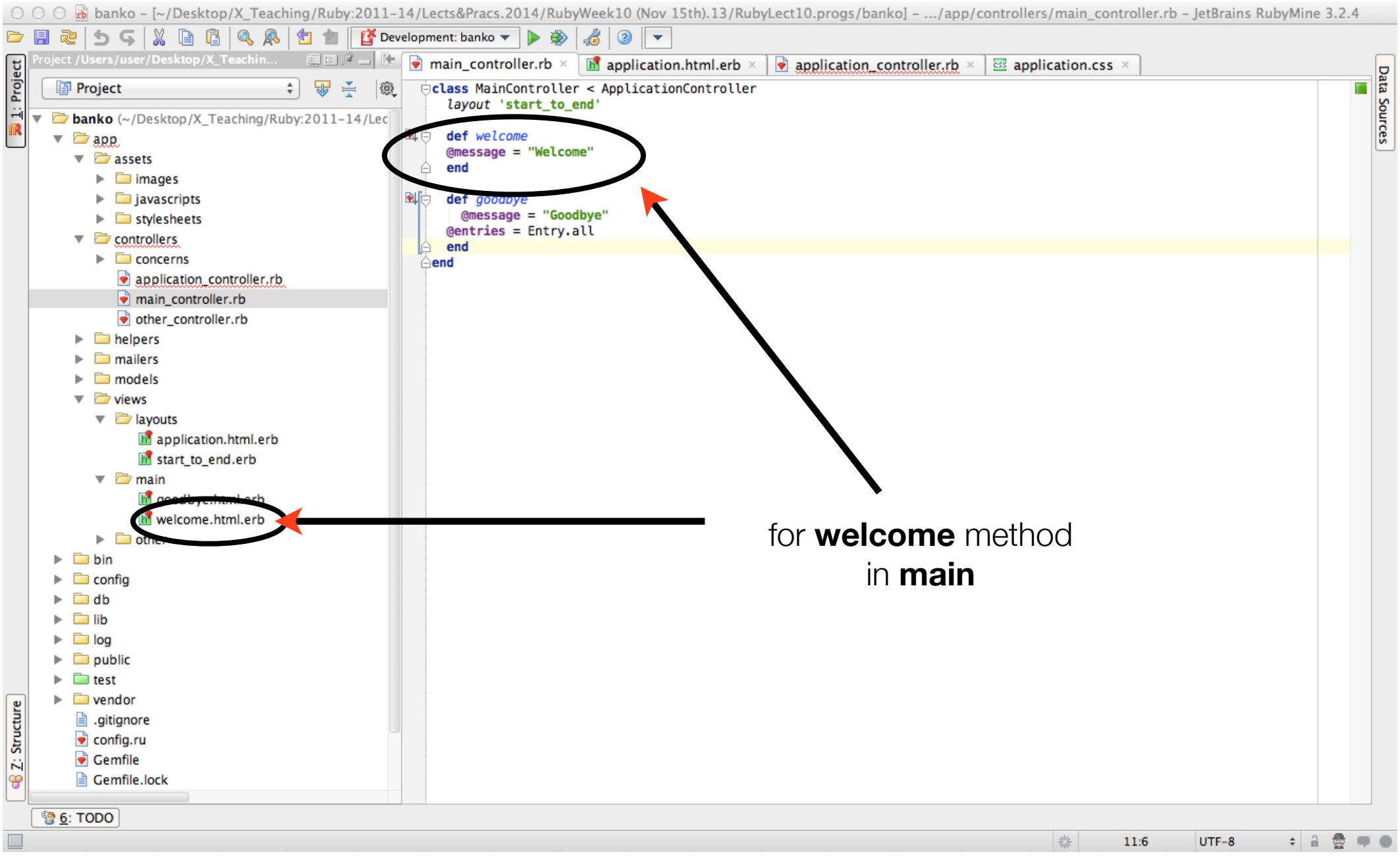
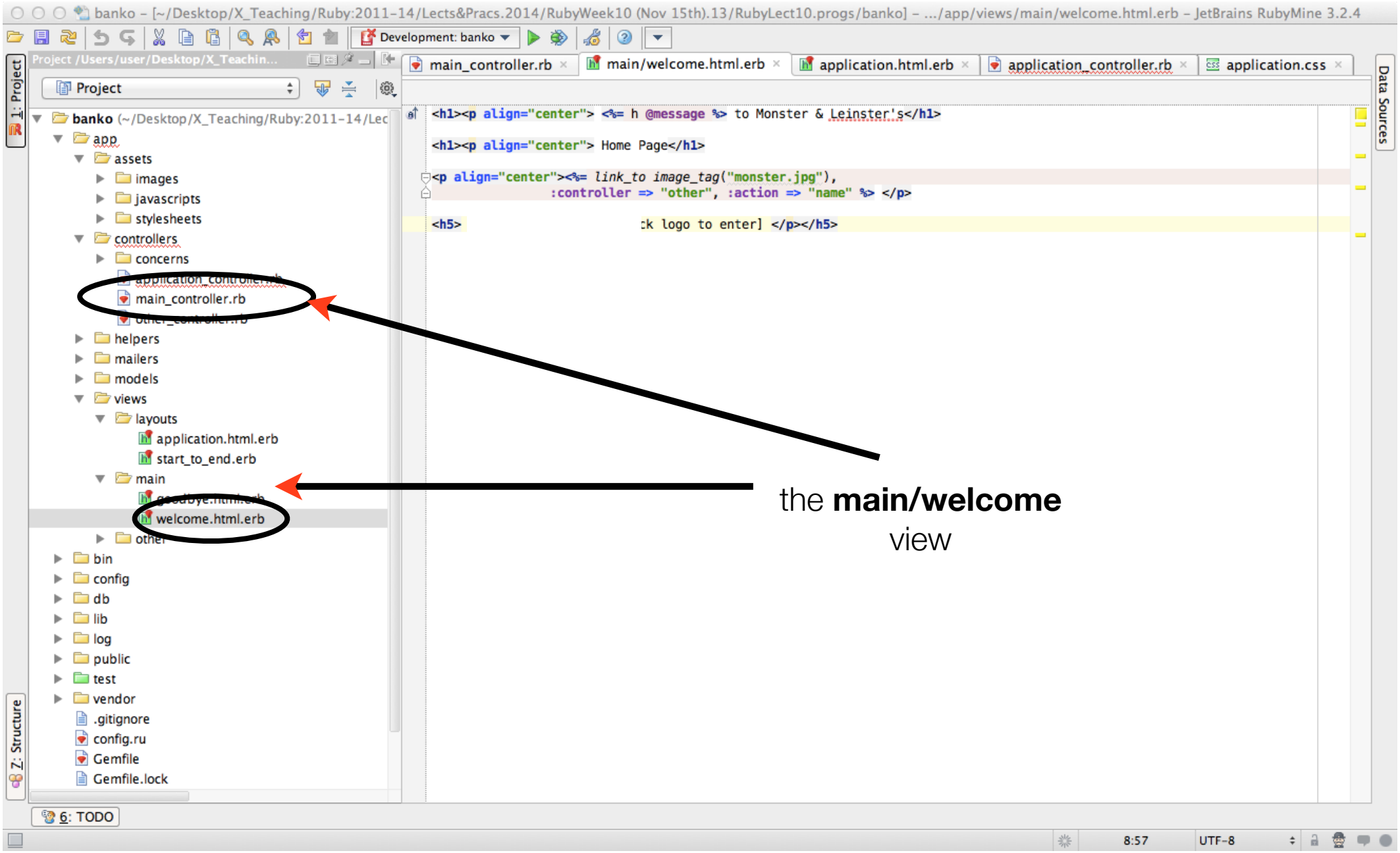
Project
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lec
app
assets
images
javascripts
stylesheets
controllers
concerns
application_controller.rb
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
application.html.erb
start_to_end.erb
main
goodbye.html.erb
welcome.html.erb
other
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
main_controller.rb
application.html.erb
application_controller.rb
application.css
class MainController < ApplicationController
layout 'start_to_end'
def welcome
@message = "Welcome"
end
def goodbye
@message = "Goodbye"
@entries = Entry.all
end
end
1: Project
7: Structure
Data Sources
6: TODO
11:6
UTF-8

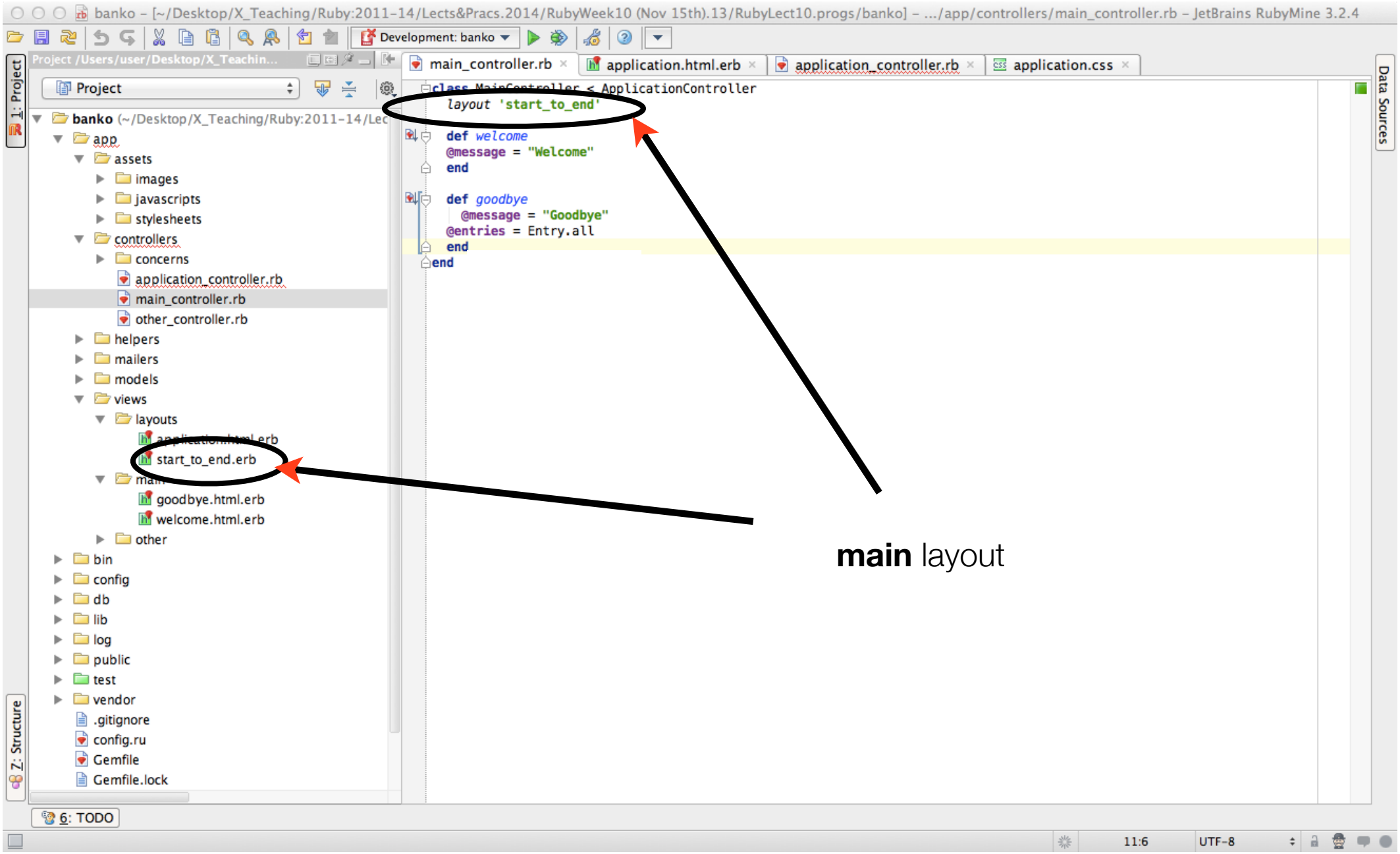
What you get...


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../app/controllers/main_controller.rb – JetBrains RubyMine 3.2.4
Development: banko
main_controller.rb
application.html.erb
application_controller.rb
application.css
class MainController < ApplicationController
layout 'start_to_end'
def welcome
@message = "Welcome"
end
def goodbye
@message = "Goodbye"
@entries = Entry.all
end
end
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lec
app
assets
images
javascripts
stylesheets
controllers
concerns
application_controller.rb
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
application.html.erb
start_to_end.erb
main
welcome.html.erb
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
for welcome method
in main
6: TODO
11:6
UTF-8

What you get...


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../app/views/main/welcome.html.erb – JetBrains RubyMine 3.2.4
Development: banko
main_controller.rb
main/welcome.html.erb
application.html.erb
application_controller.rb
application.css
<h1> <%= h @message %> to Monster & Leinster's</h1>
<h1> Home Page</h1>
<%= link_to image_tag("monster.jpg"),
:controller => "other", :action => "name" %>
<h5> ck logo to enter] </h5>
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lec
app
assets
images
javascripts
stylesheets
controllers
concerns
main_controller.rb
helpers
mailers
models
views
layouts
application.html.erb
start_to_end.erb
main
welcome.html.erb
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
the main/welcome view
6: TODO
8:57
UTF-8

What you get...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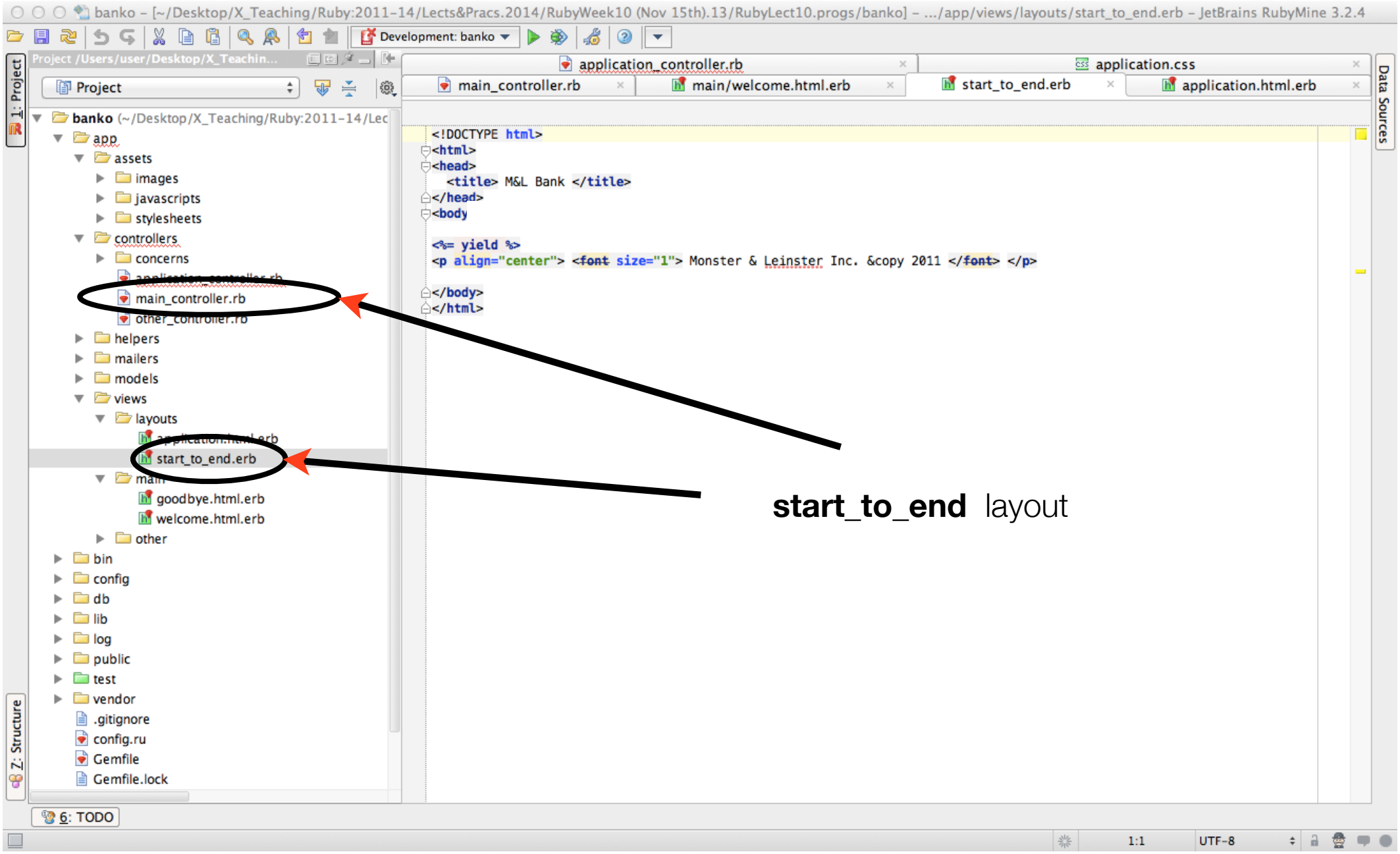
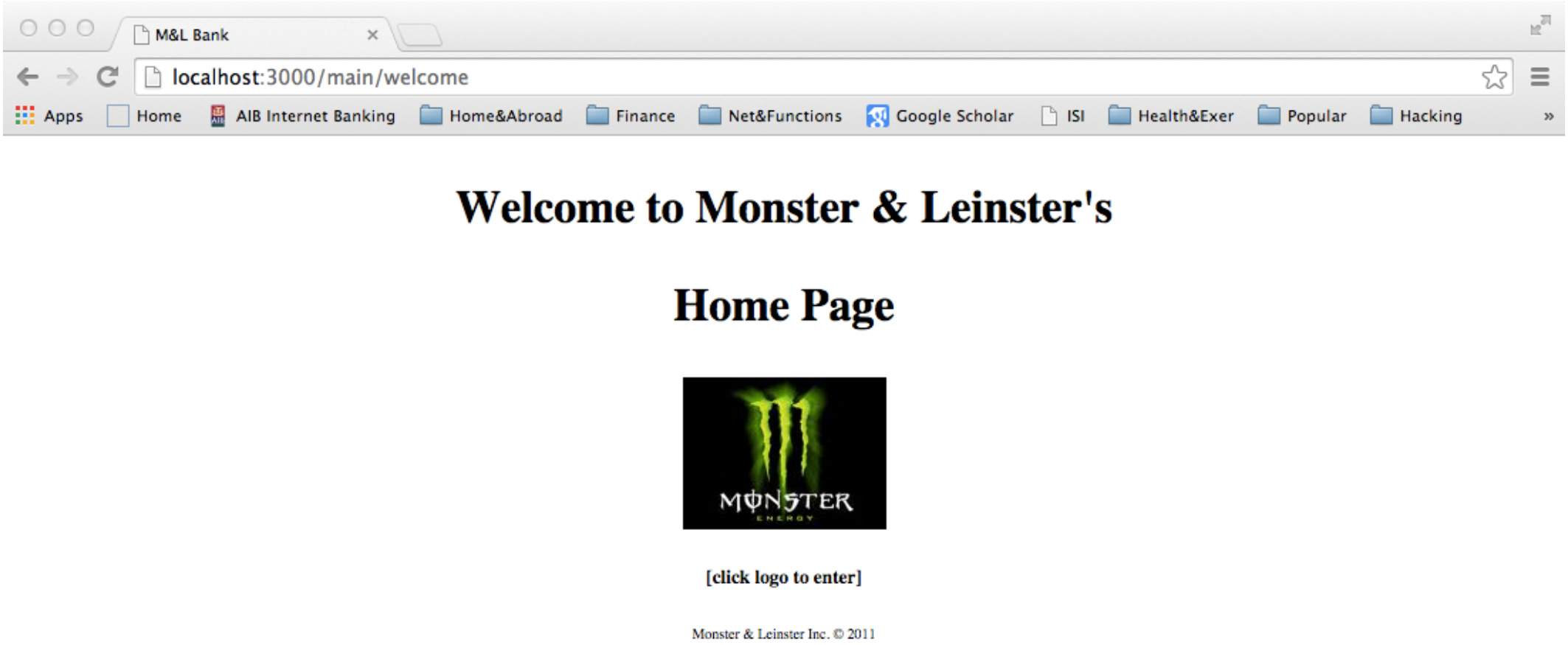
application.css
Project
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lec
app
assets
images
javascripts
stylesheets
controllers
concerns
application_controller.rb
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
start_to_end.erb
goodbye.html.erb
welcome.html.erb
other
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
class MainController < ApplicationController
layout 'start_to_end'
def welcome
@message = "Welcome"
end
def goodbye
@message = "Goodbye"
@entries = Entry.all
end
end
1: Project
Data Sources
Z: Structure
6: TODO
11:6
UTF-8
main layout

What you get...


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../app/views/layouts/start_to_end.erb – JetBrains RubyMine 3.2.4
Development: banko
Project /Users/user/Desktop/X_Teachin...
Project
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lec
app
assets
images
javascripts
stylesheets
controllers
concerns
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
start_to_end.erb
goodbye.html.erb
welcome.html.erb
other
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
application_controller.rb
application.css
main_controller.rb
main/welcome.html.erb
start_to_end.erb
application.html.erb
<!DOCTYPE html>
<html>
<head>
<title> M&L Bank </title>
</head>
<body
<%= yield %>
  Monster & Leinster Inc. &copy 2011
</body>
</html>
start_to_end layout
1: Project
Data Sources
7: Structure
6: TODO
1:1
UTF-8

The Site: Screen I



REM

in simple terms, what was a single html file with code, gets broken up into 3-4 files, which combine to create a file that is sent to browser to be rendered

main/welcome.html.erb | start_to_end.erb | main_co

```
<!DOCTYPE html>
<html>
<head>
  <title> M&L Bank </title>
</head>
<body>

<%= yield %>
<p align="center"> <font size="1"> Monster & Leinster Inc. &copy 2011 </font> </p>

</body>
</html>
```

start_to_end layout

main/welcome.html.erb | main_controller.rb

```
<h1><p align="center"> <%= h @message %> to Monster & Leinster's</h1>

<h1><p align="center"> Home Page</h1>

<p align="center"><%= link_to image_tag("monster.jpg"),
                  :controller => "other", :action => "name" %> </p>

<h5> <p align="center"> [click logo to enter] </p></h5>
```

welcome content

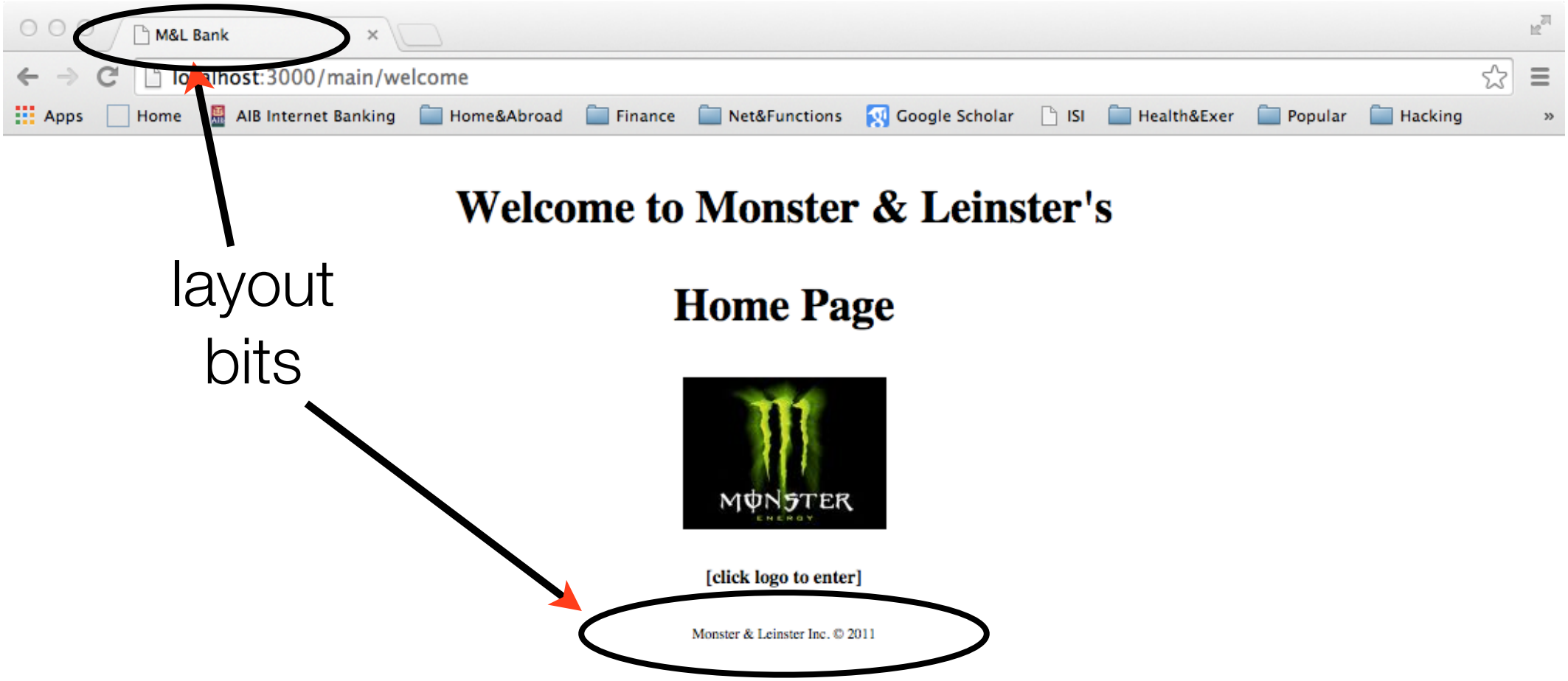
main_controller.rb | main/w

```
class MainController < ApplicationController
  layout 'start_to_end'

  def welcome
  @message = "Welcome"
  end

  def goodbye
  @message = "Goodbye"
  @entries = Entry.all
```

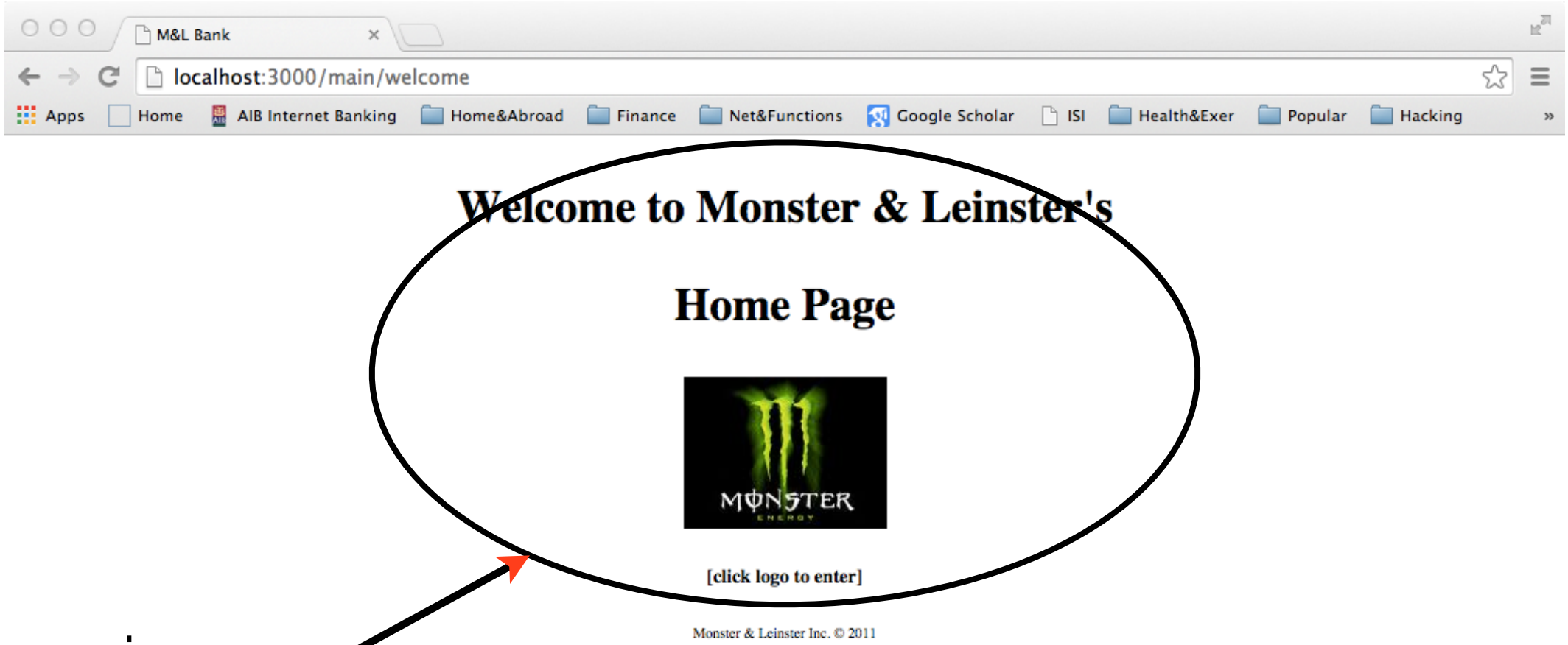
welcome method

...if you understand this you know how controllers work with views

The Site: Screen I

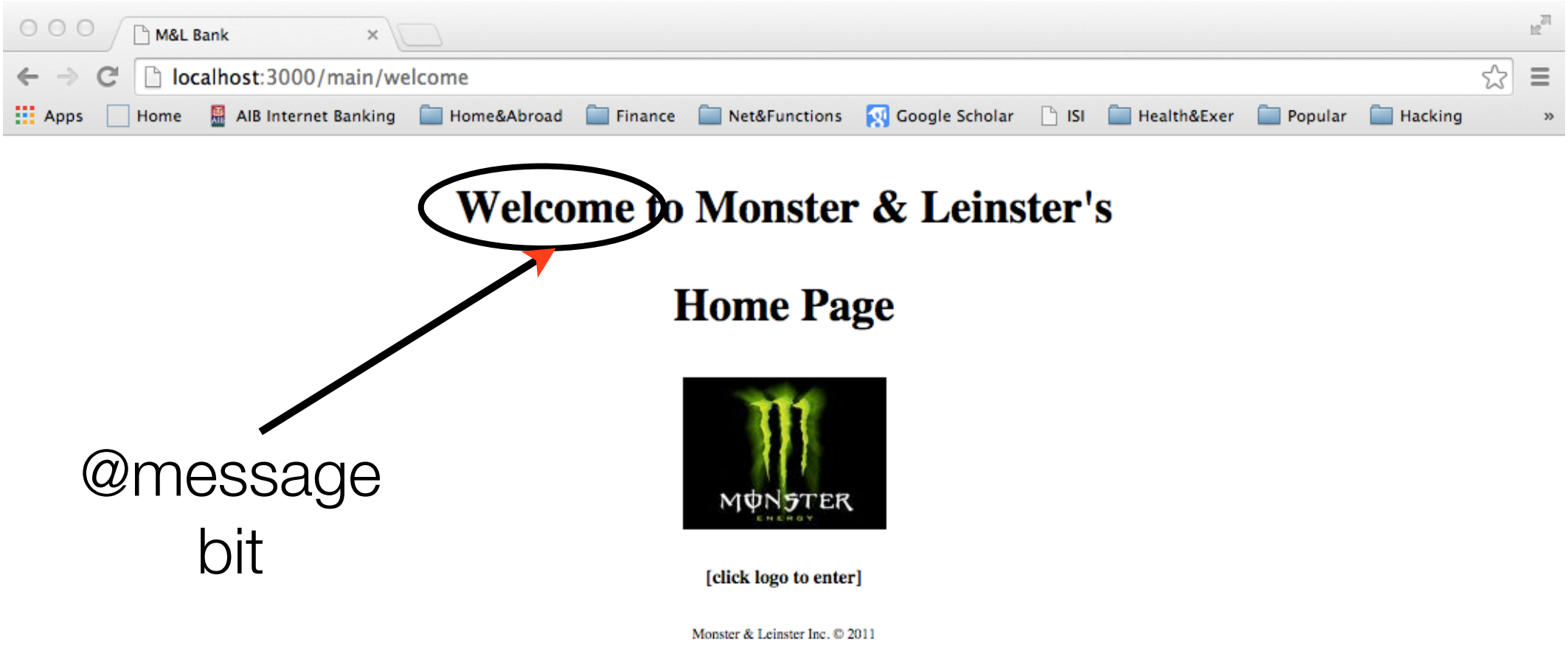


The Site: Screen Begin



view bits

The Site: Screen Begin



Part B2(iii):

Walk-through: Screen II-IV ~ Application Layout

Application Controller

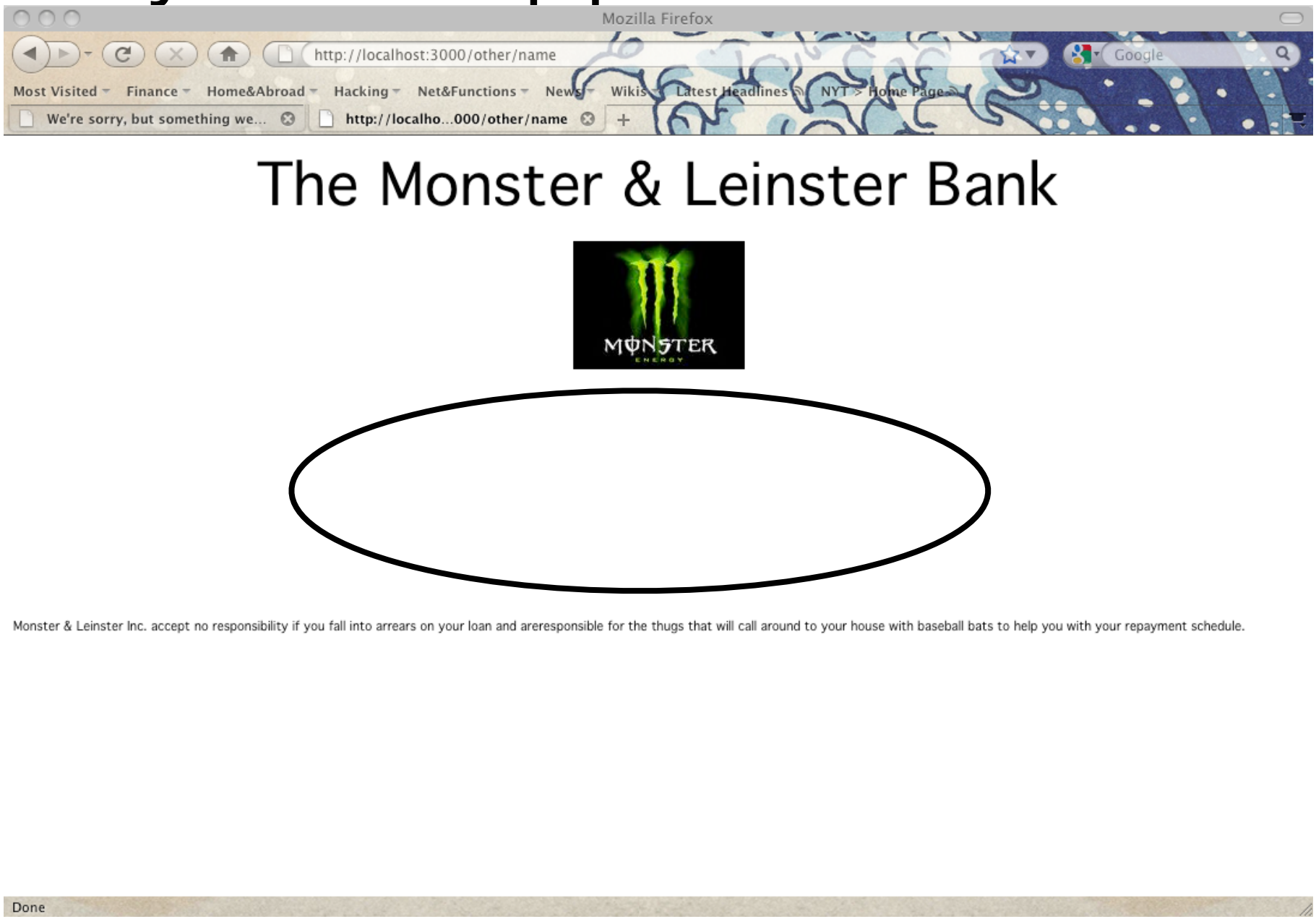
localhost/any/action

render
application.html.erb
with application
speadsheet

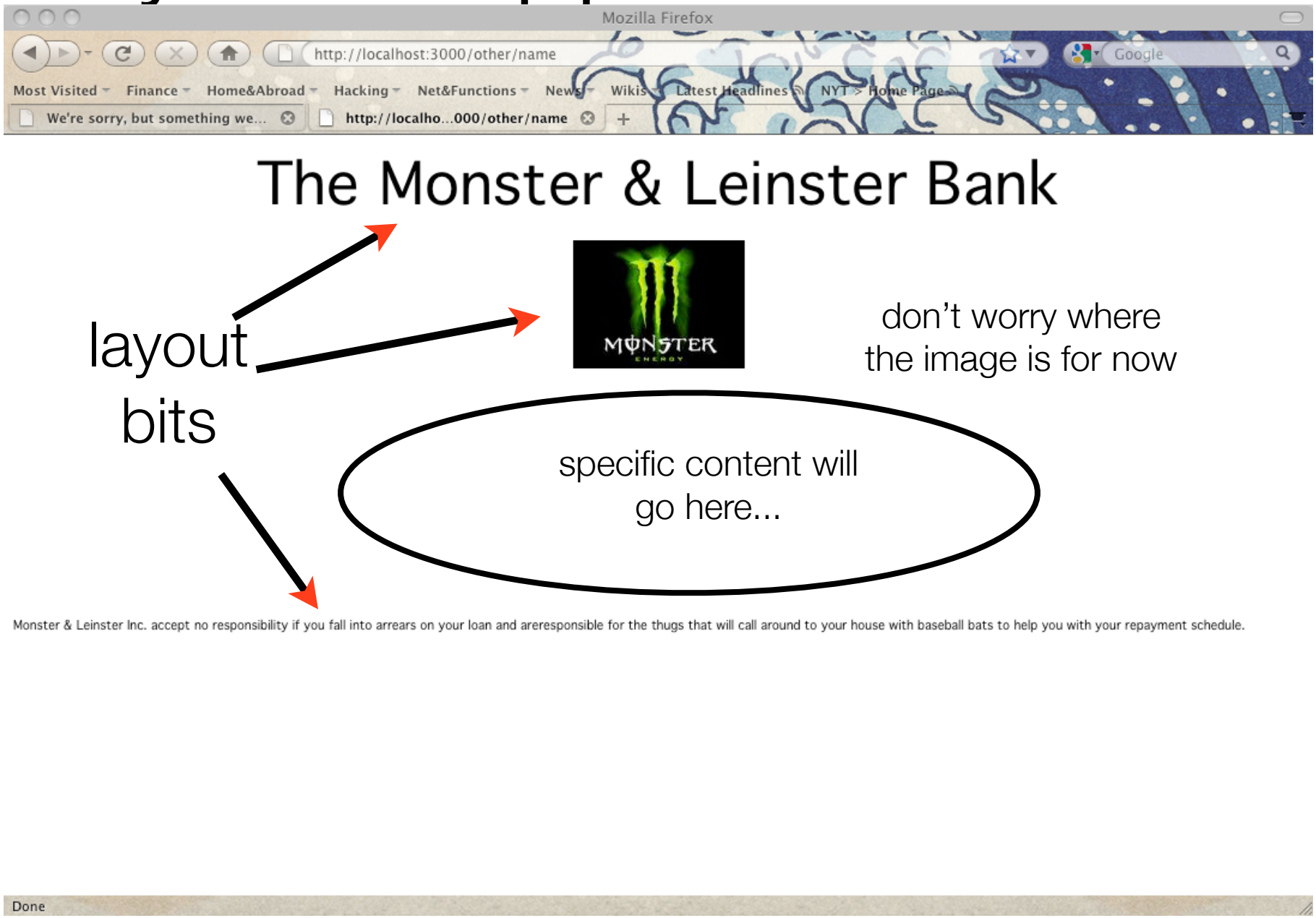
Model

Views

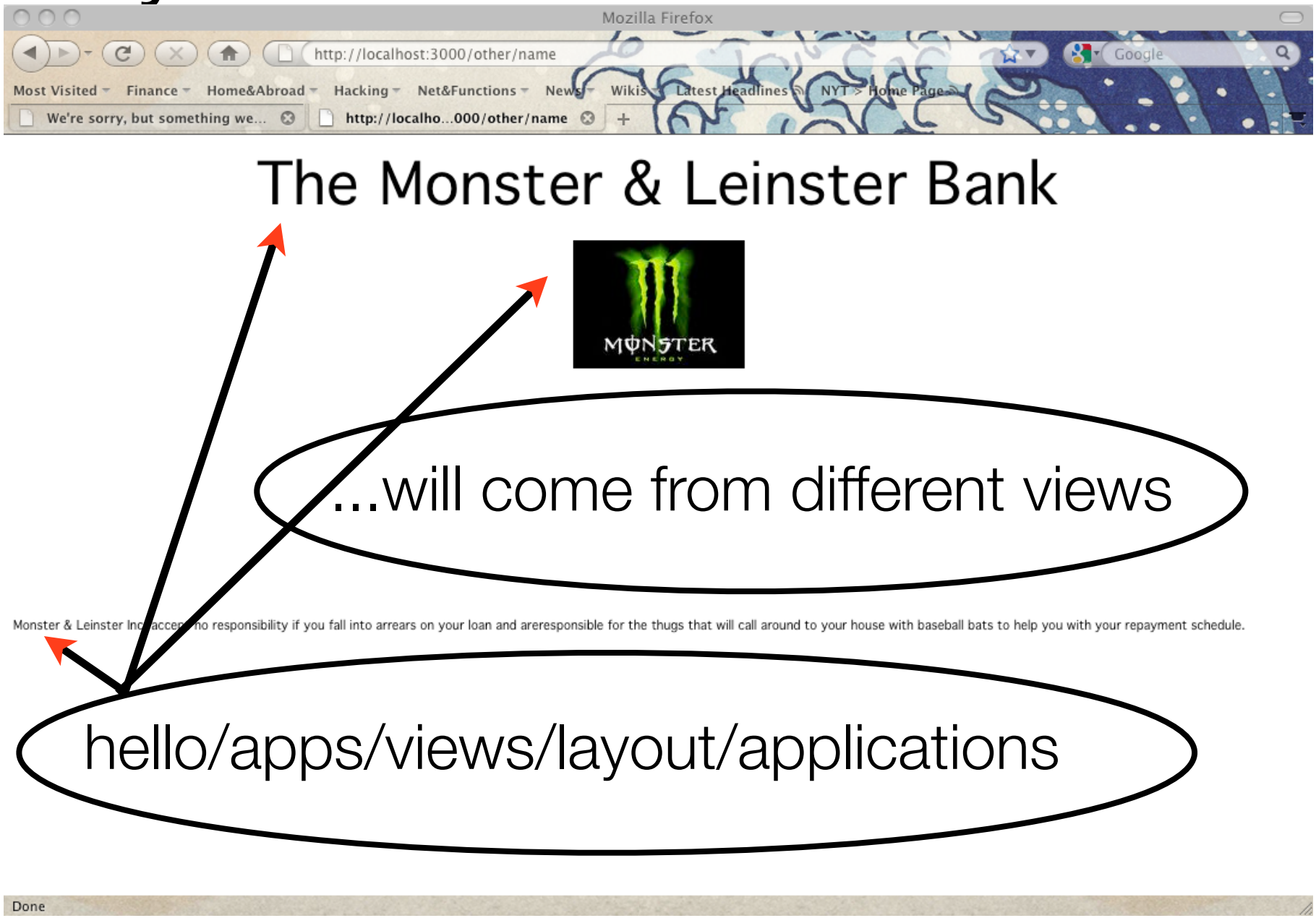
Layouts: Application



Layouts: Application



Layouts: Frame



Set Up Layout

for layout we edit:

app/controllers/ application_controller.rb
app/views/layout/application.html.erb
app/assets/stylesheets/application.css

for specific content, we edit:

app/controllers/other#name
app/views/other/name.html.erb
...

Set Up Layout

for frame we edit:

app/controllers/ application_controller.rb — which we can leave

app/views/layout/application.html.erb

app/assets/stylesheets/application.css — where we add the layout

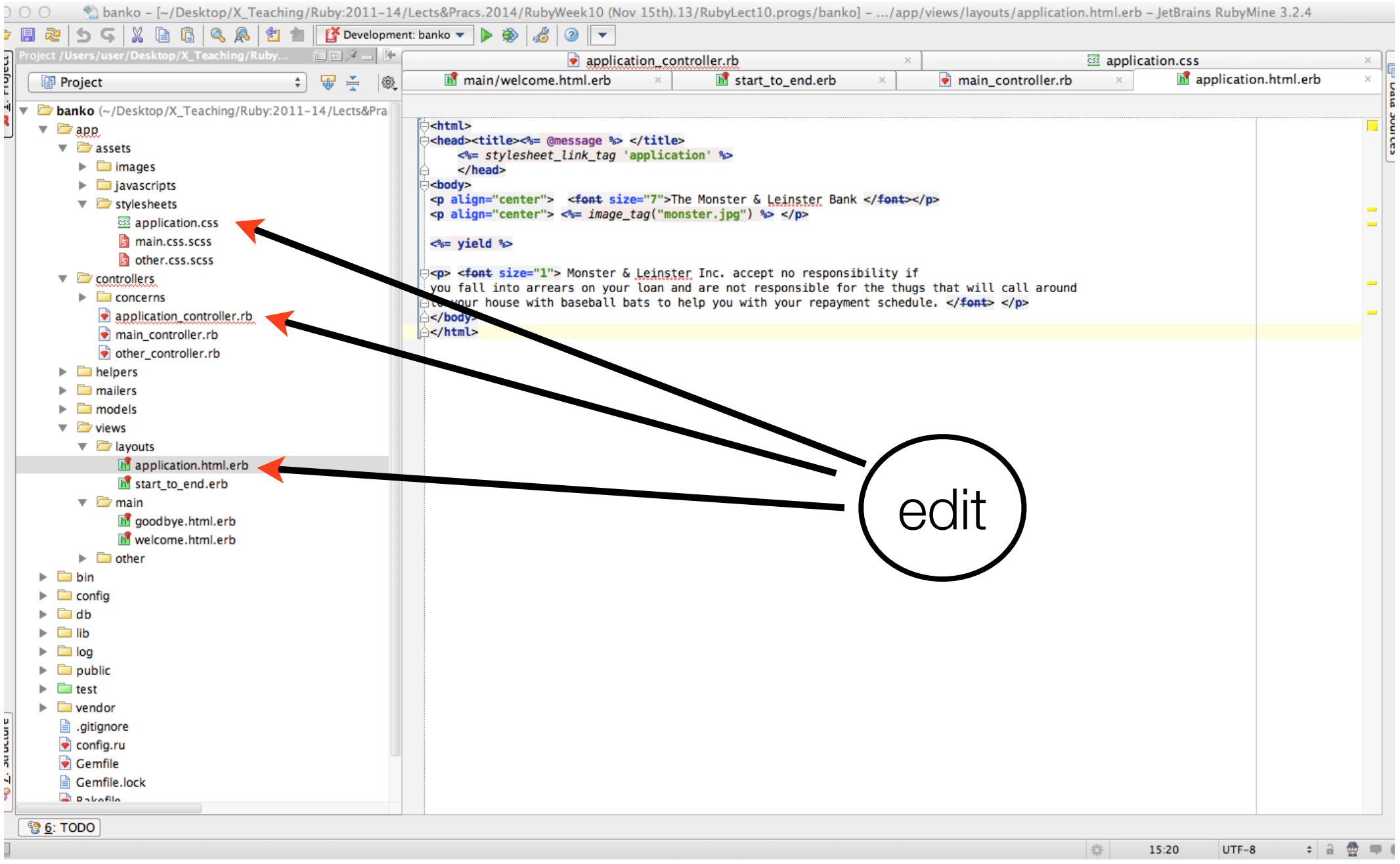
for specific content, we edit: — where we define style

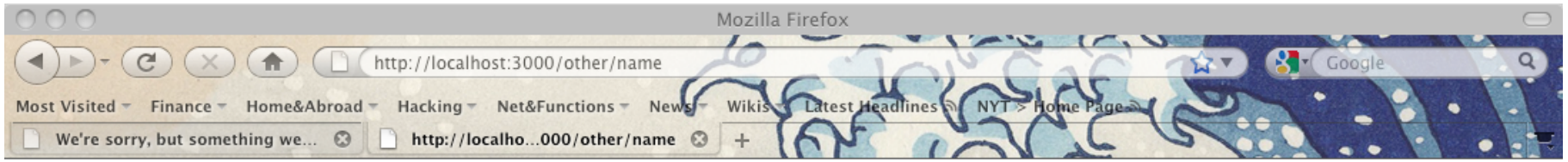
app/controllers/other#name

app/views/other/name.html.erb

…. — just to show something

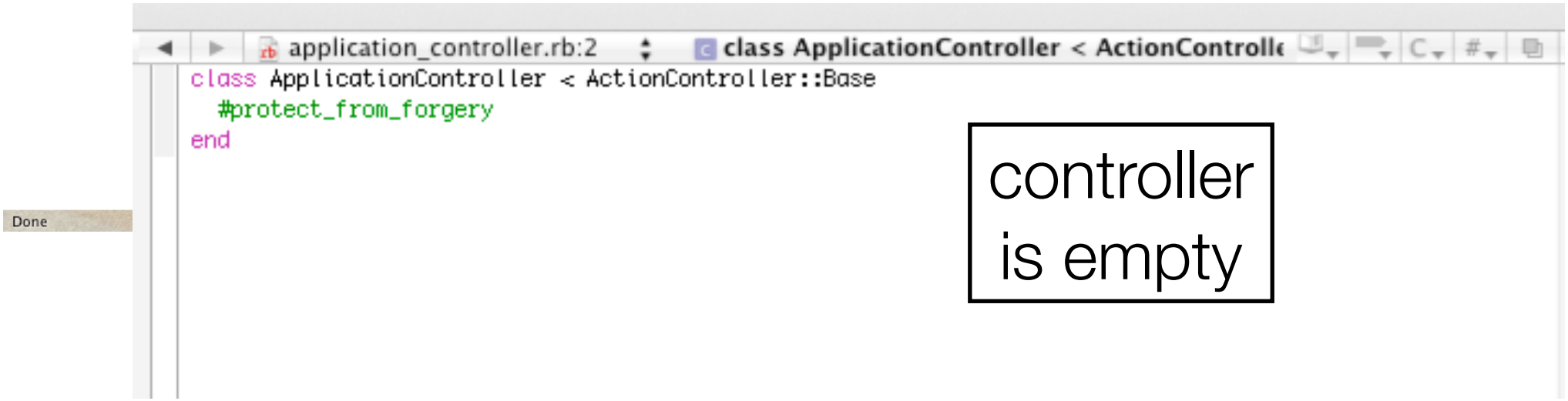
Steps to Set Up Layout



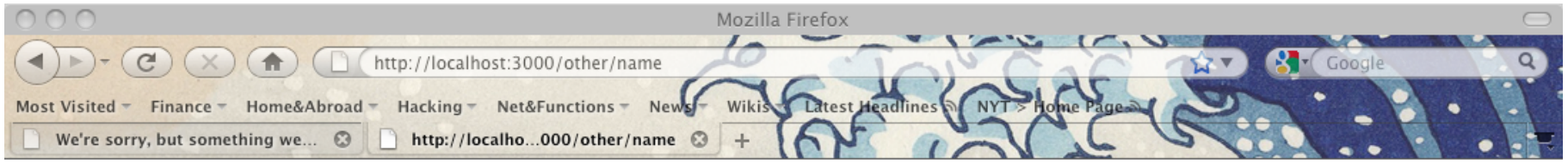


The Monster & Leinster Bank

Monster & Leinster Inc. accept no responsibility if you fall into arrears on your loan and areresponsible for the thugs that will call around to your house with baseball bats to help you with your repayment schedule.



controller is empty



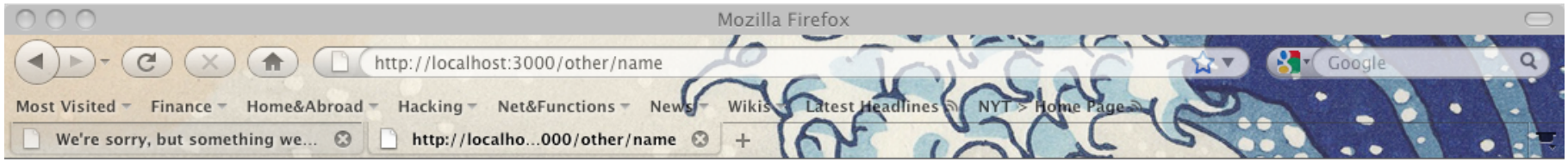
The Monster & Leinster Bank

application.html.erb:17

```
<html>
<head><title><%= @message %> </title>
    <%= stylesheet_link_tag 'application' %>
    </head>
<body>
<p align="center">  <font size="7">The Monster & Leinster Bank </font></p>
<p align="center"> <%= image_tag("monster.jpg") %> </p>

<%= yield %>


<p> <font size="1"> Monster & Leinster Inc. accept no responsibility if
you fall into arrears on your loan and are not responsible for the thugs that will call around
to your house with baseball bats to help you with your repayment schedule. </font> </p>
</body>
</html>
```

layout has this

Done



The Monster & Leinster Bank

Monster & Leinster Inc.

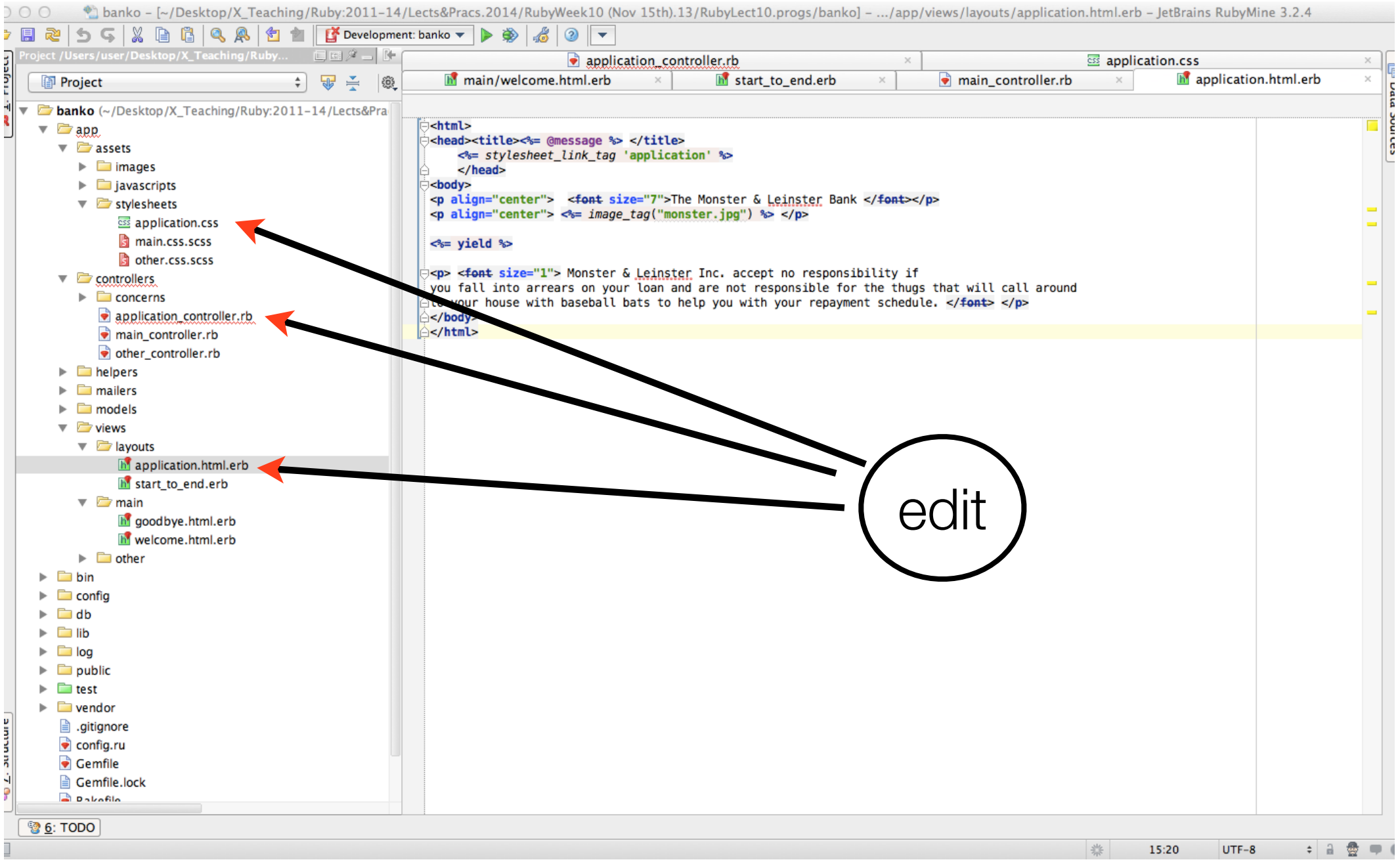
Done

application.css:16 h1

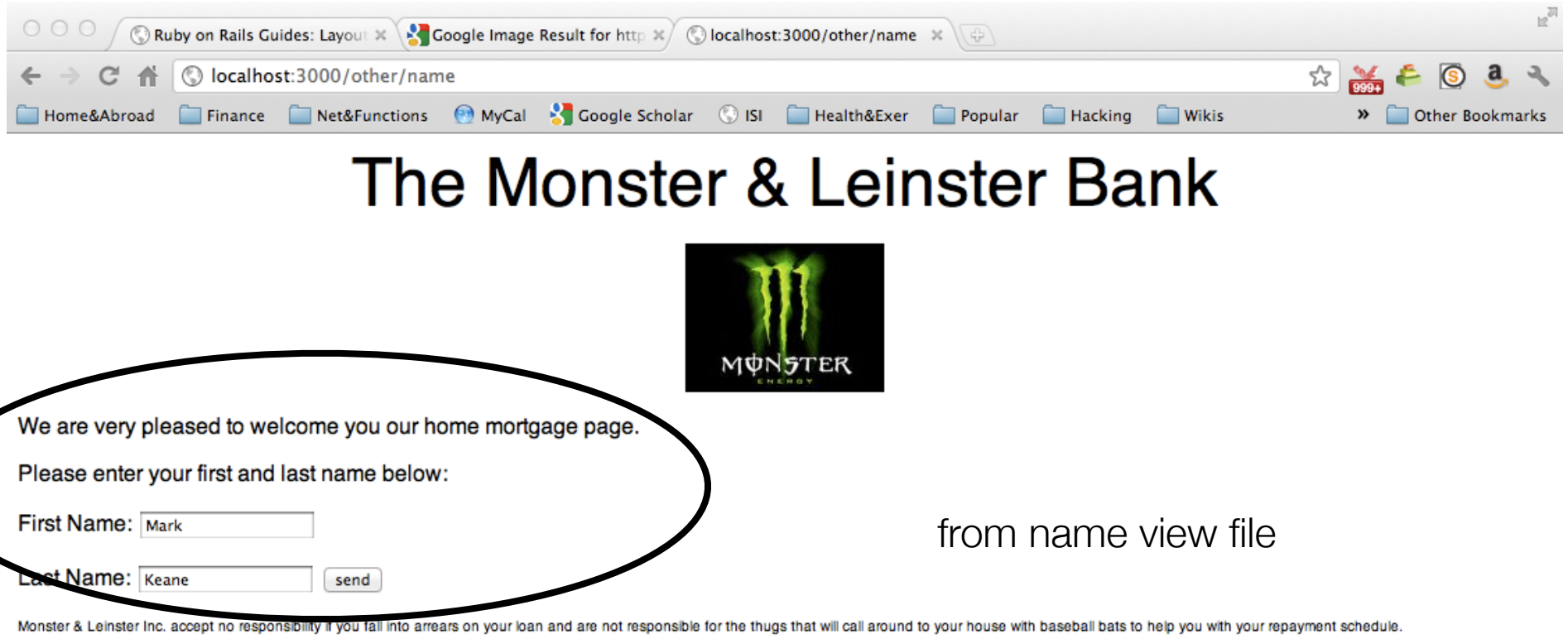
```
/*
 * This is a manifest file that'll automatically include all the stylesheets available in this
 * and any sub-directories. You're free to add application-wide styles to this file and they'l
 * the top of the compiled file, but it's generally better to create a new file per style scop
 *= require_self
 *= require_tree .
*/

body {font-family:sans-serif;
    }

h1 {font-family:times;
    font-size: 24pt;
    font-weight: bold;
    color:#F00 ;
    }
```

stylesheet has this

Steps to Set Up Layout

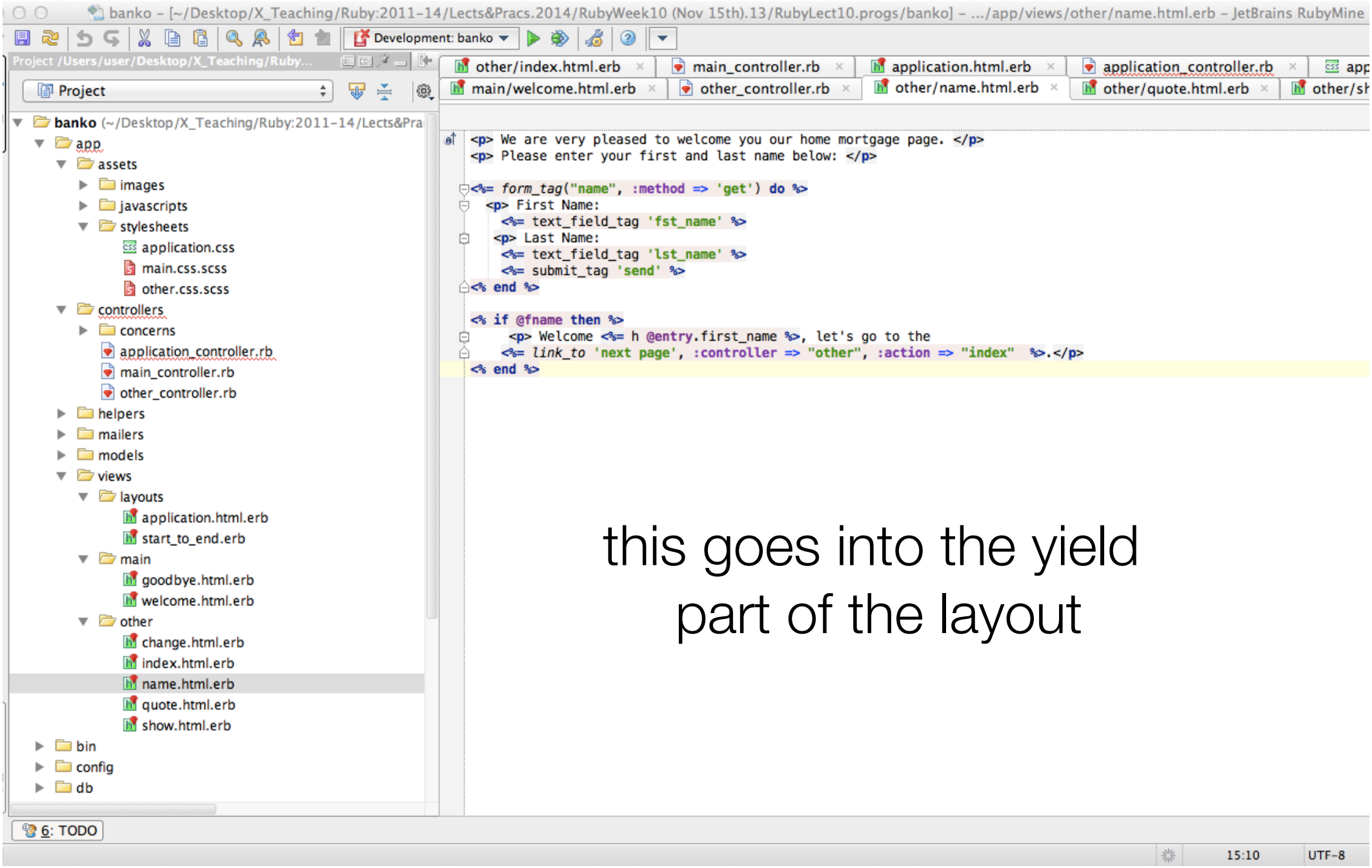


Specific Content



from name view file

Steps to Set Up Layout

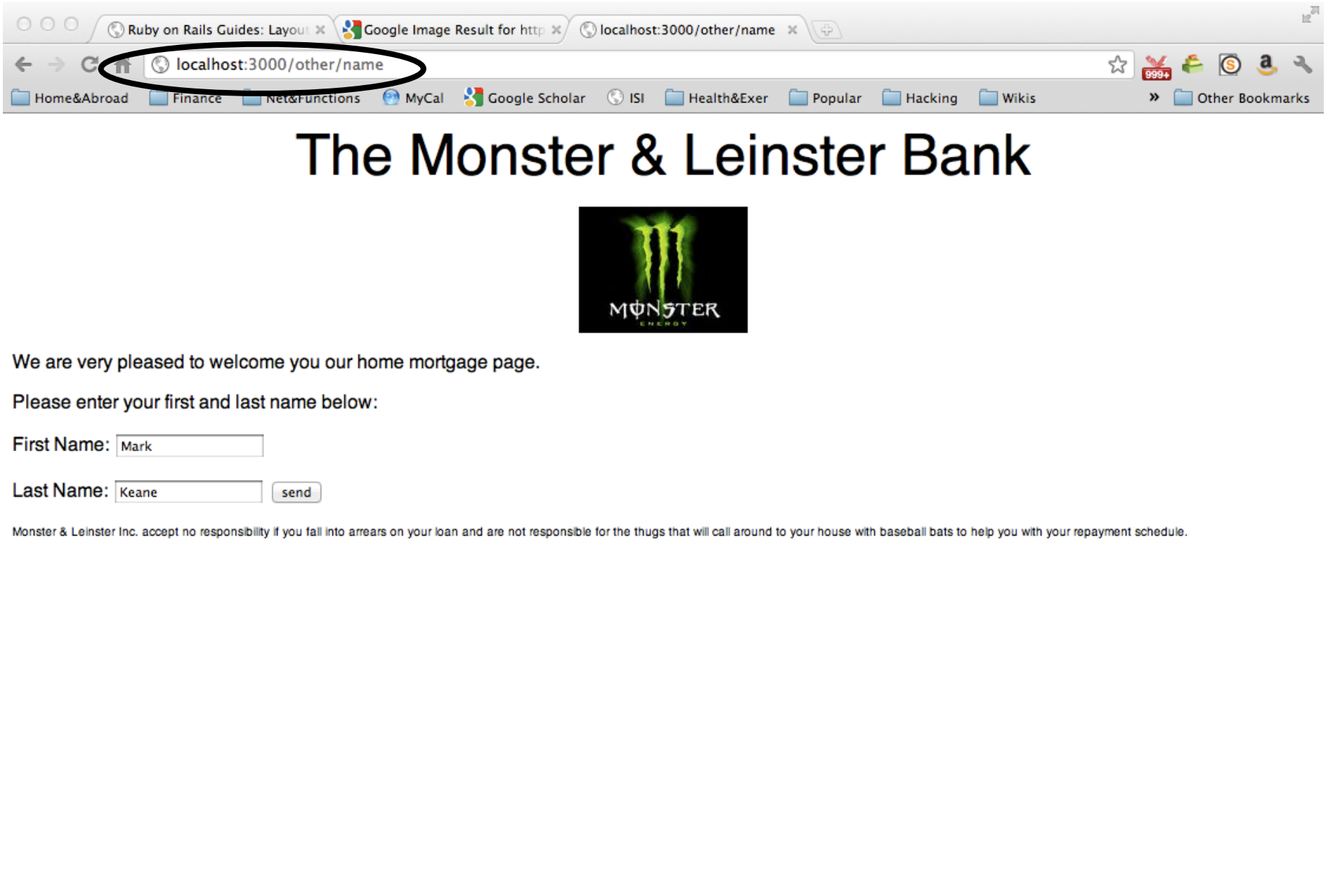


this goes into the yield part of the layout

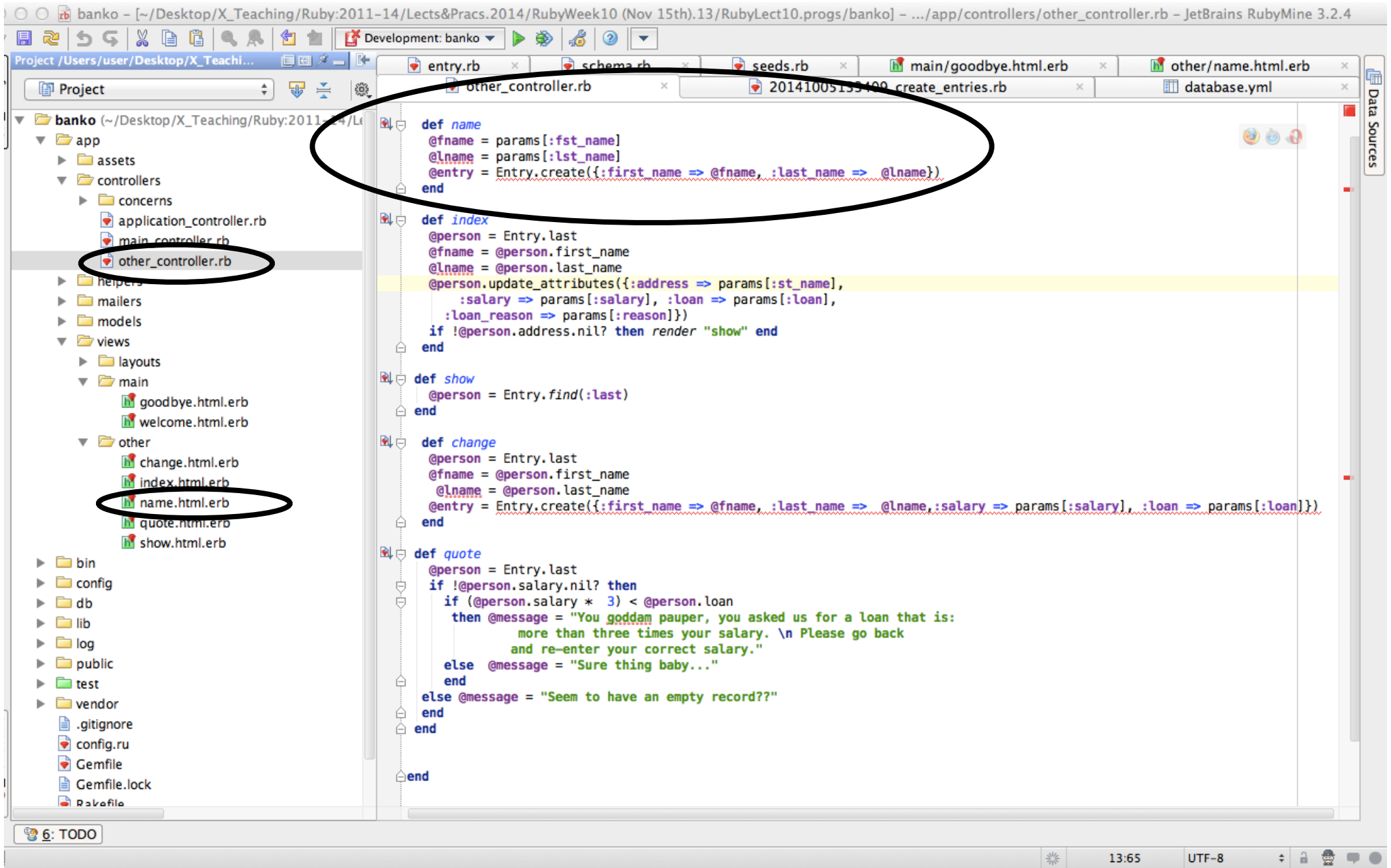
Part B3:

Looking at what is behind Screen II

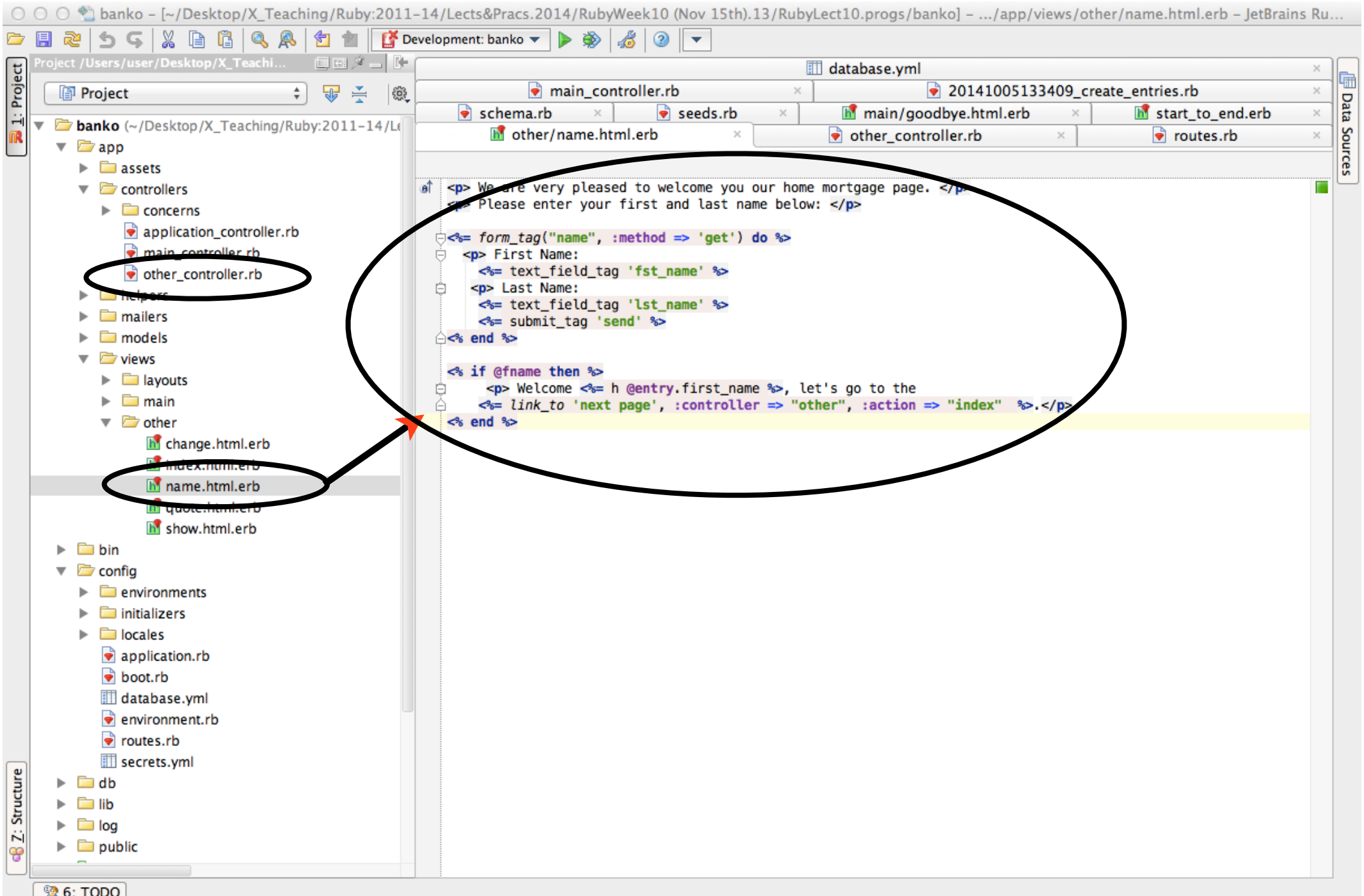
The Site: Screen IIa



Other Controller...



Other Controller...



REM

in simple terms, what was a single html file with code, gets broken up into 3 files, which combine to create a file that is sent to browser to be rendered

application.html.erb:17

```
<html>
<head><title><%= @message %> </title>
    <%= stylesheet_link_tag 'application' %>
    </head>
<body>
<p align="center">  <font size="7">The Monster & Leinster Bank </font></p>
<p align="center"> <%= image_tag("monster.jpg") %> </p>

<%= yield %>


<p> <font size="1"> Monster & Leinster Inc. accept no responsibility if
you fall into arrears on your loan and are not responsible for the thugs that will call around
to your house with baseball bats to help you with your repayment schedule. </font> </p>
</body>
</html>
```

application layout

other_controller.rb:1 class OtherControl

```
class OtherController < ApplicationController

  def name
     @fname = params[:fst_name]
     @lname = params[:lst_name]
     @entry = Entry.create({:first_name => @fname, :l
  end
```

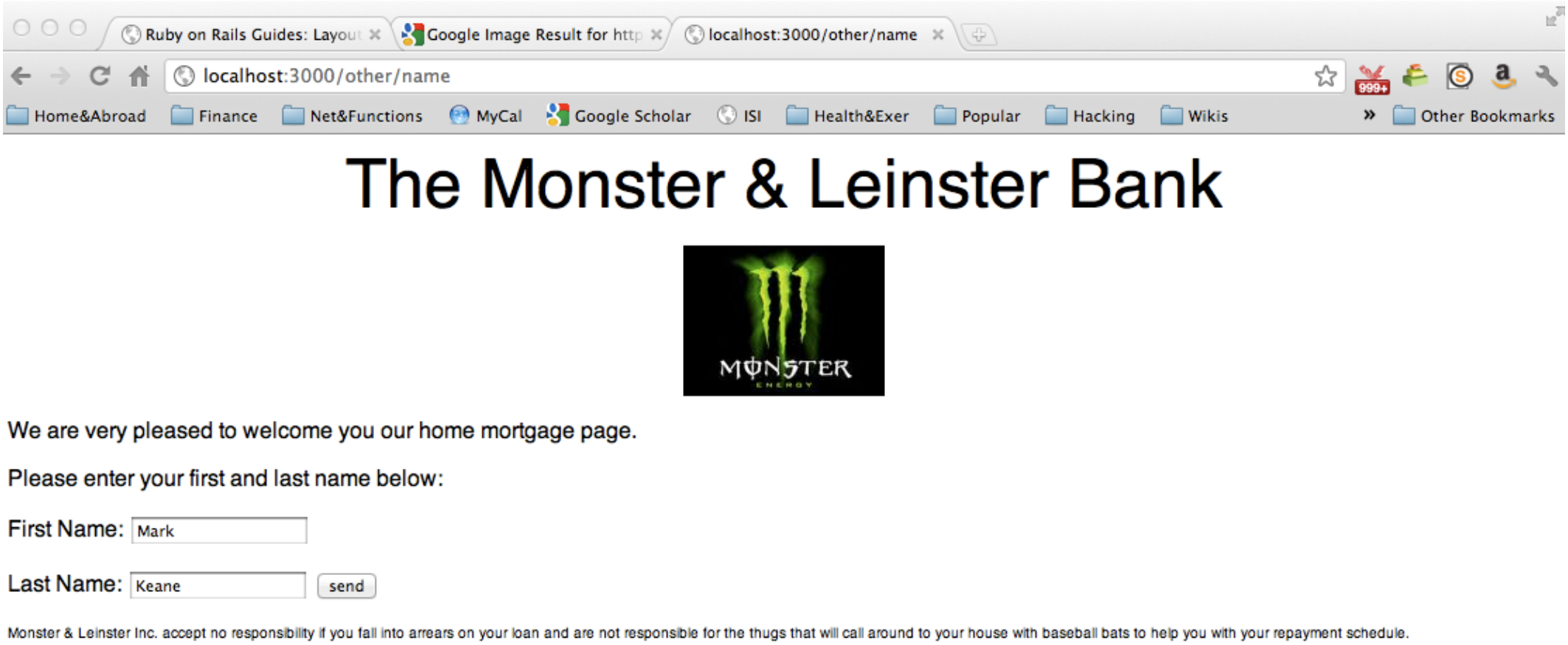
name method

name.html.erb:8

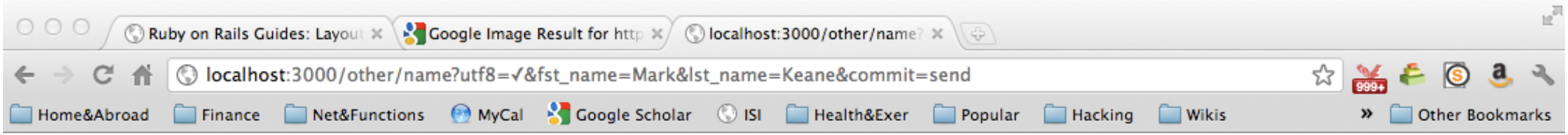
```
<p> We are very pleased to welcome you to our home mortgage page. </p>
<p> Please enter your first and last name below: </p>

<%= form_tag("name", :method => 'get') do %>
  <p> First Name:
    <%= text_field_tag 'fst_name' %>
   <p> Last Name:
    <%= text_field_tag 'lst_name' %>
    <%= submit_tag 'send' %>
<% end %>

<% if @fname then %>
     <p> Welcome <%= h @entry.first_name %>, let's go to the
    <%= link_to 'next page', :controller => "other", :action => "index"  %>.</p>
<% end %>
```

name content

The Site: Screen IIa



The Site: Screen IIb



The Monster & Leinster Bank

We are very pleased to welcome you our home mortgage page.

Please enter your first and last name below:

First Name: Mark

Last Name: Keane send

Welcome Mark, let's go to the next page.

Monster & Leinster Inc. accept no responsibility if you fall into arrears on your loan and are not responsib

name.html.erb:8

```
<p> We are very pleased to welcome you our home mortgage page. </p>
<p> Please enter your first and last name below: </p>

<%= form_tag("name", :method => 'get') do %>
  <p> First Name:
    <%= text_field_tag 'fst_name' %>
   <p> Last Name:
    <%= text_field_tag 'lst_name' %>
    <%= submit_tag 'send' %>
<% end %>

<% if @fname then %>
     <p> Welcome <%= h @entry.first_name %>, let's go to the
    <%= link_to 'next page', :controller => "other", :action => "index"  %>.</p>
<% end %>
```

Pause...Paws...Pose...

Ok, so, you need to digest all of this

we have covered how you set up the initial files

how you edit those files, how controllers, layouts and views combine to produce the final page

...the one remaining big thing is to talk about models

but...before we do that we'll back up into layouts...

REM:

MVC framework

model-view-controller is a software architecture/ architectural pattern used in Rails

model is domain-specified rep of the data used by the application; manages data and informs of changes

view renders model into suitable form for interactions (at interface); may have multiple views of same model

controller receives input and initiates responds making calls to model data (operational guts of the app)

Controller

Model

$ rake db:migrate

Views

$ rails server

Part C:

A note Rails on functionality...in the foregoing...

Neat Stuff Ia

Controllers are just Ruby:

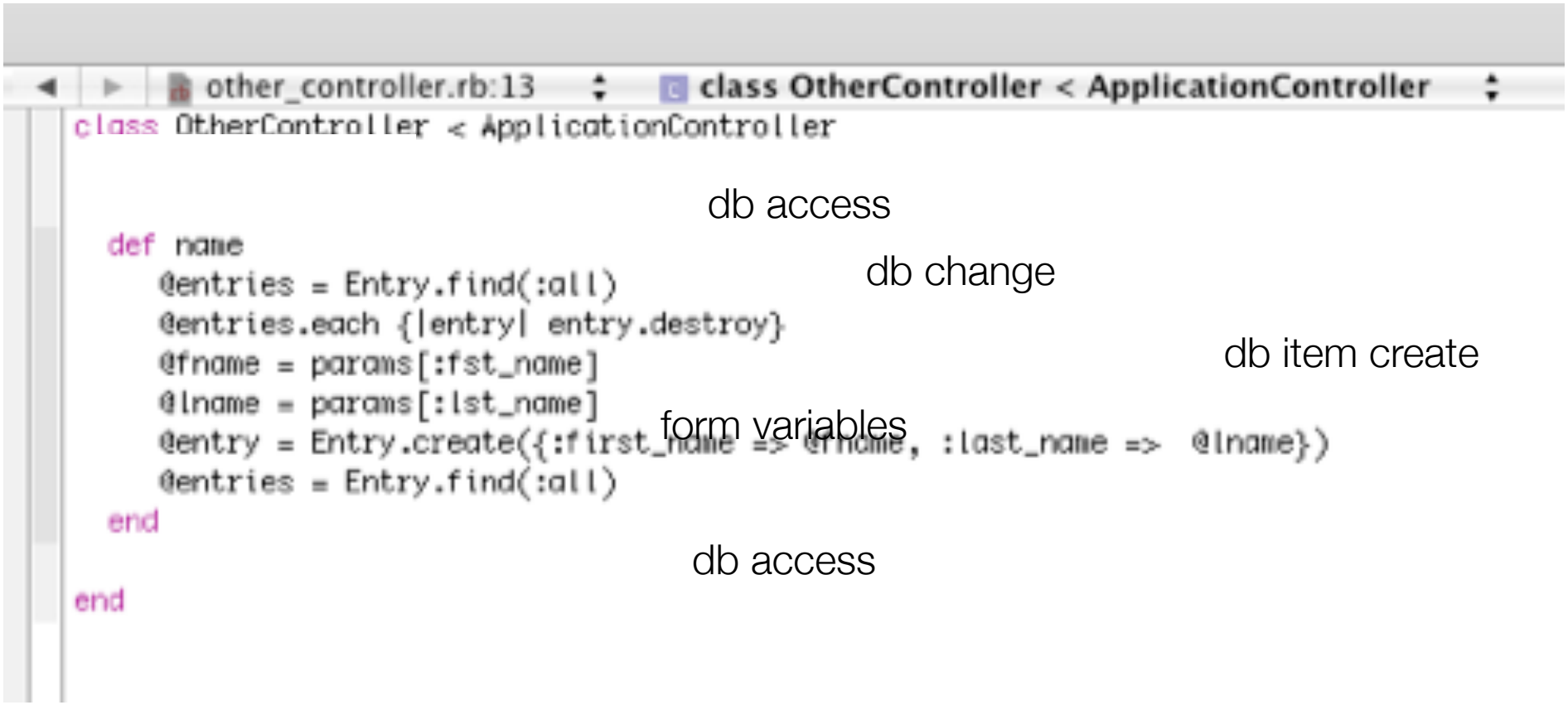
layout is a new primitive

nb inheritance from libraries

other_controller.rb:13 class OtherController < ApplicationController

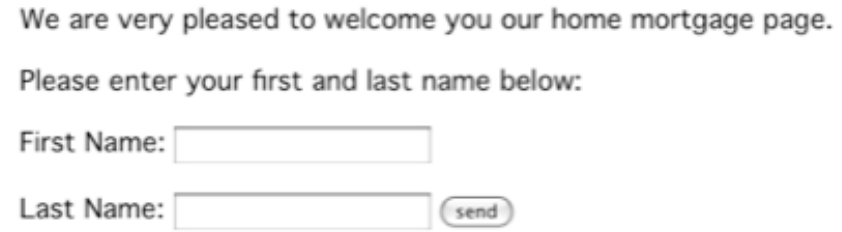
```
class OtherController < ApplicationController


  def name
     @fname = params[:fst_name]
     @lname = params[:lst_name]
     @entry = Entry.create({:first_name => @fname, :last_name =>  @lname})
  end


end
```

Neat Stuff lb



oval refers to access to tags in the form used; need to look in views

Embedded Ruby



name.html.erb:8

```
<p> We are very pleased to welcome you our home mortgage page. </p>
<p> Please enter your first and last name below: </p>

<%= form_tag("name", :method => 'get') do %>
  <p> First Name:
    <%= text_field_tag 'fst_name' %>
   <p> Last Name:
    <%= text_field_tag 'lst_name' %>
    <%= submit_tag 'send' %>
<% end %>

<% if @fname then %>
     <p> Welcome <%= h @entry.first_name %>, let's go to the
    <%= link_to 'next page', :controller => "other", :action => "index"  %>.</p>
<% end %>
```

sets up form

ERb is inside **<%** or **<%=** and **%>**

ERb stuff

ERb arbitarily embdedded within html

Part D:

But, Mark, what about de models...

Recall Banko...

we just discussed controllers, views and layouts

but, we said nothing about models

yet, we did issue a command originally...

and, performed some edits...

Controller

Model

$ rake db:migrate

Views

$ rails server

Steps

REM:

set up dir

$ rails new banko

go to dir

$ cd bank

$ rails generate controller main welcome

$ rails generate controller other name

$ rails generate model Entry first_name:string ...

lets...edit a whole bunch of files...

$ rake db:migrate

set up tables

$ rake db:rollback

rollback to early migration of db

$ rake db:migrate:reset

clears out all records

create model called **entry with field:type**

Countries: Define tables **REM:**

```
ActiveRecord::Schema.define do
    create_table :countries do |table|
        table.column :name, :string
        table.column :continent, :string
        table.column :size, :integer
    end

    create_table :regions do |table|
        table.column :country_id, :integer
        table.column :region_size, :integer
        table.column :name, :string
    end
end
...
```

neatdb.rb

two tables

region references the country it is part of

Countries: Create associations **REM:**

```
class Country < ActiveRecord::Base
    has_many :regions
end

class Region < ActiveRecord::Base
    belongs_to :country
end
...
```

neatdb.rb

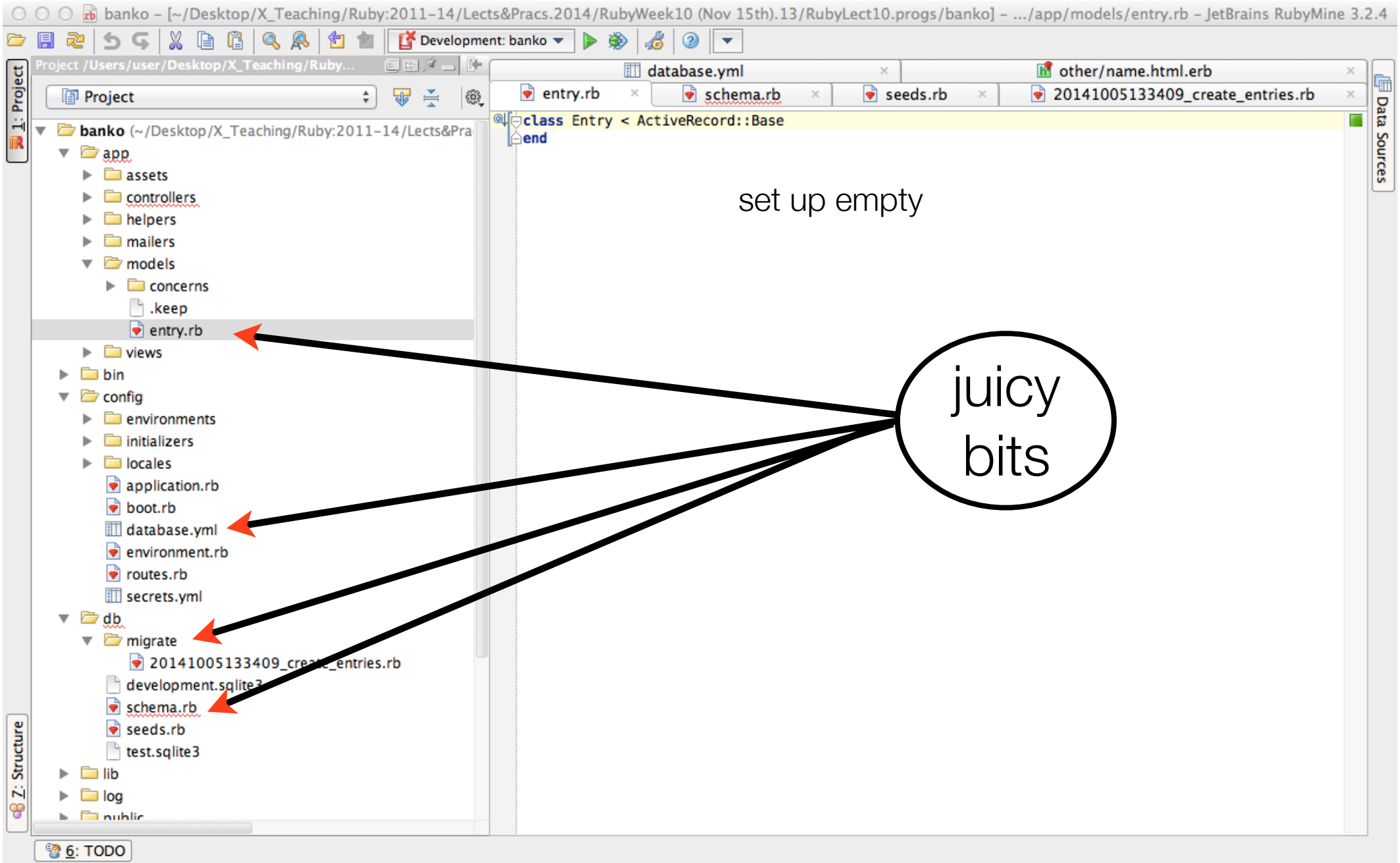
Country and **Region** are subclasses of ActiveRecord

describes relationships between models (tables)

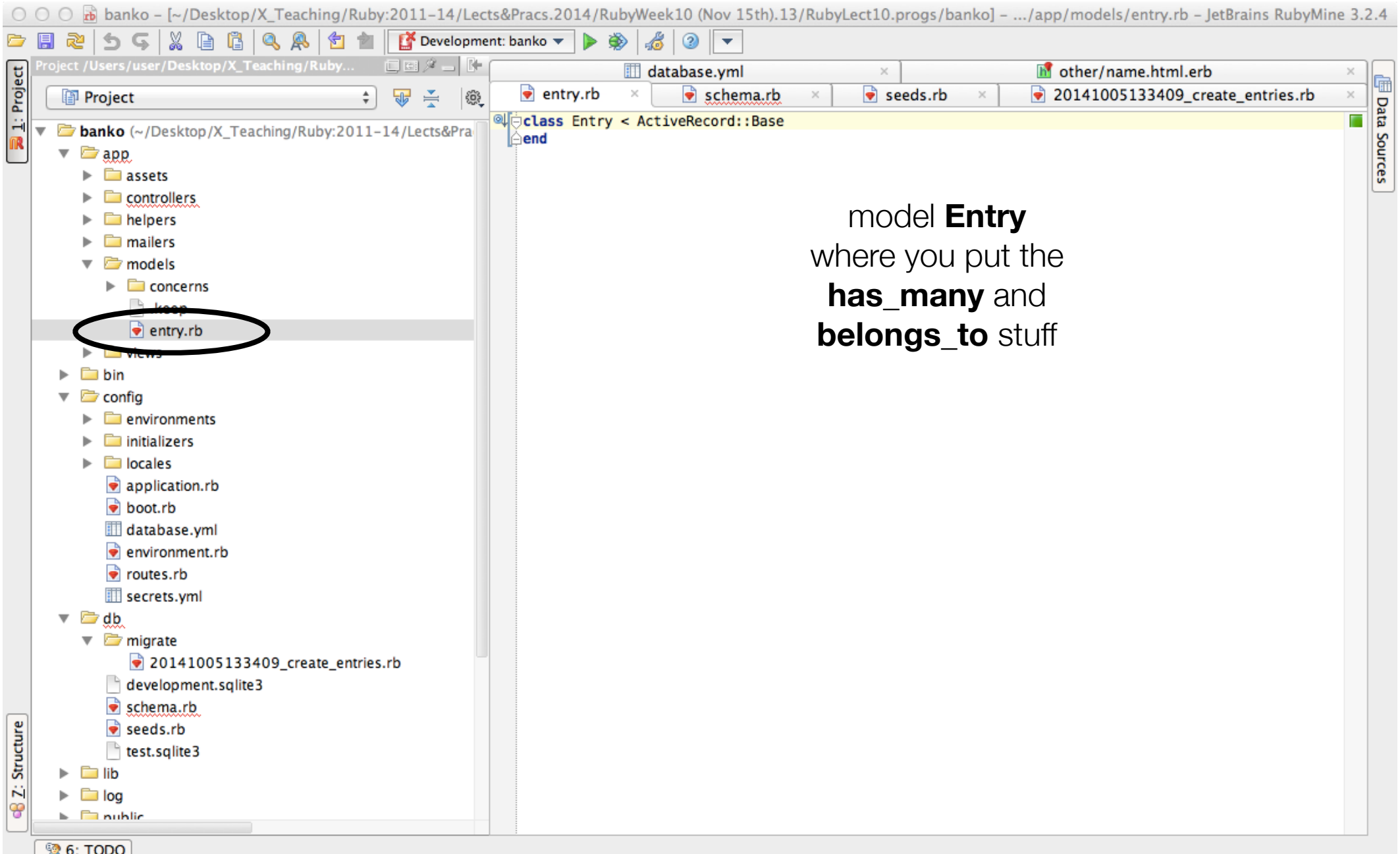
here, **has_many** and **belongs_to** define a 1:n

http://en.wikibooks.org/wiki/Ruby_on_Rails/ActiveRecord/Associations

generate model Entry...does

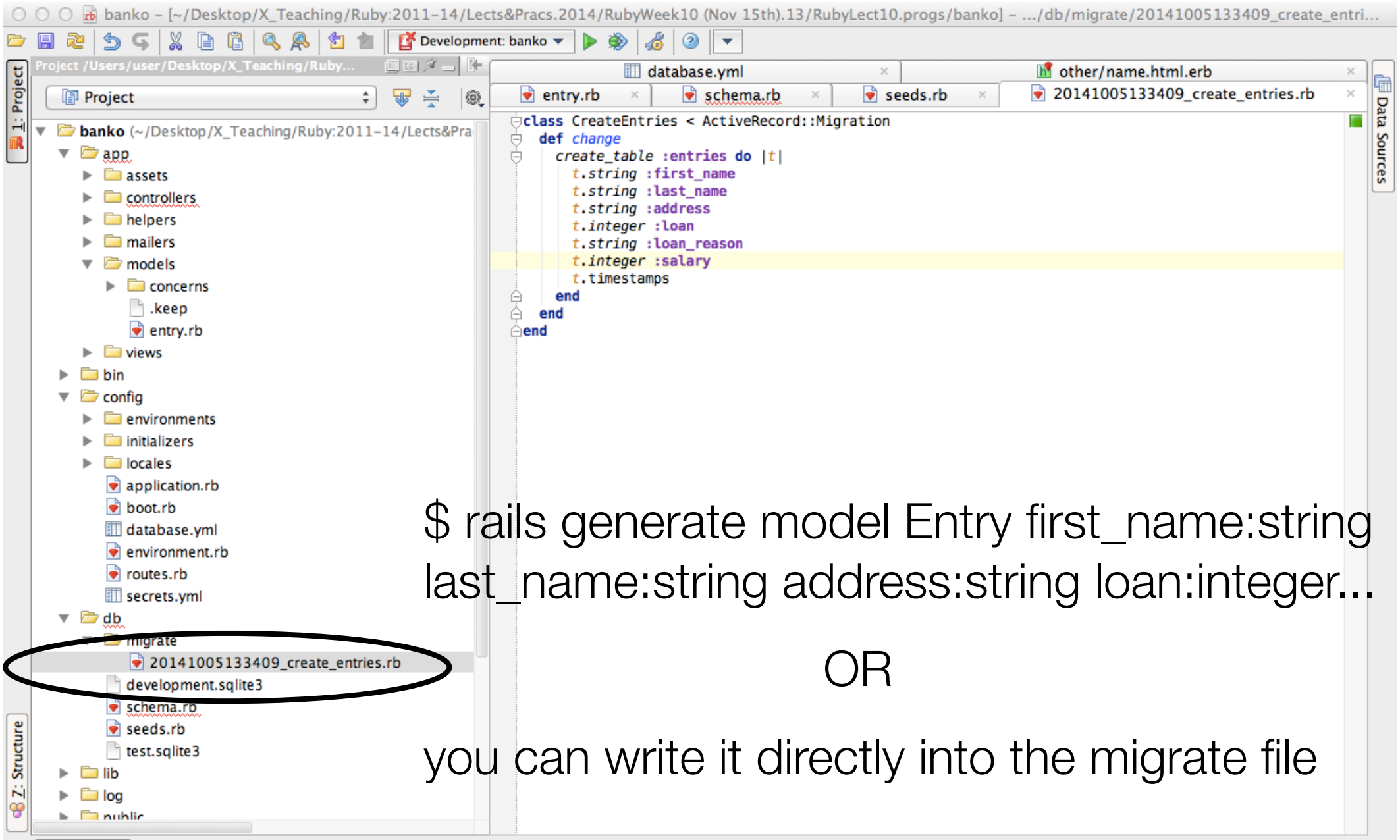


generate model Entry...does



model **Entry**
where you put the
has_many and
belongs_to stuff

generate model Entry...does

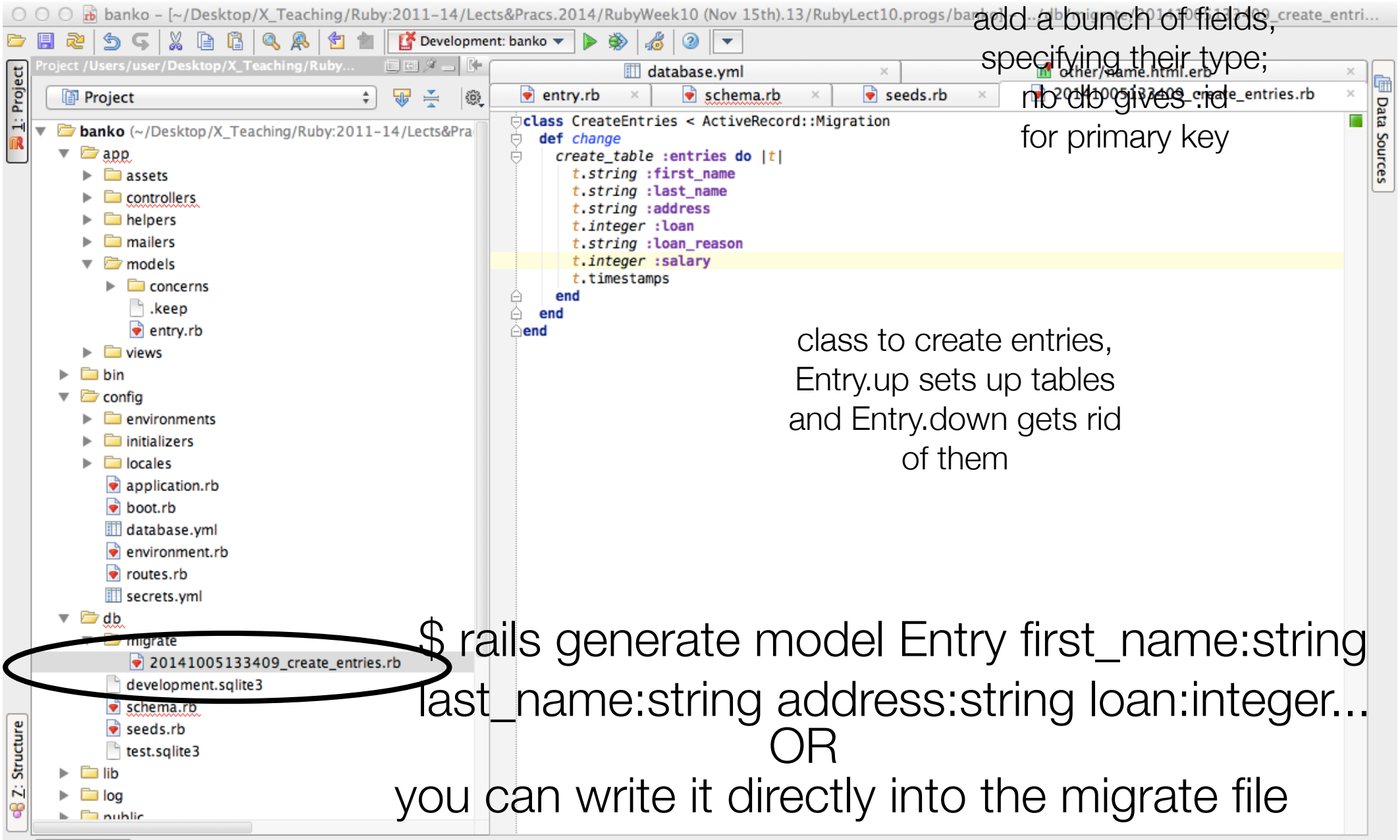


$ rails generate model Entry first_name:string last_name:string address:string loan:integer...

OR

you can write it directly into the migrate file

generate model Entry...does



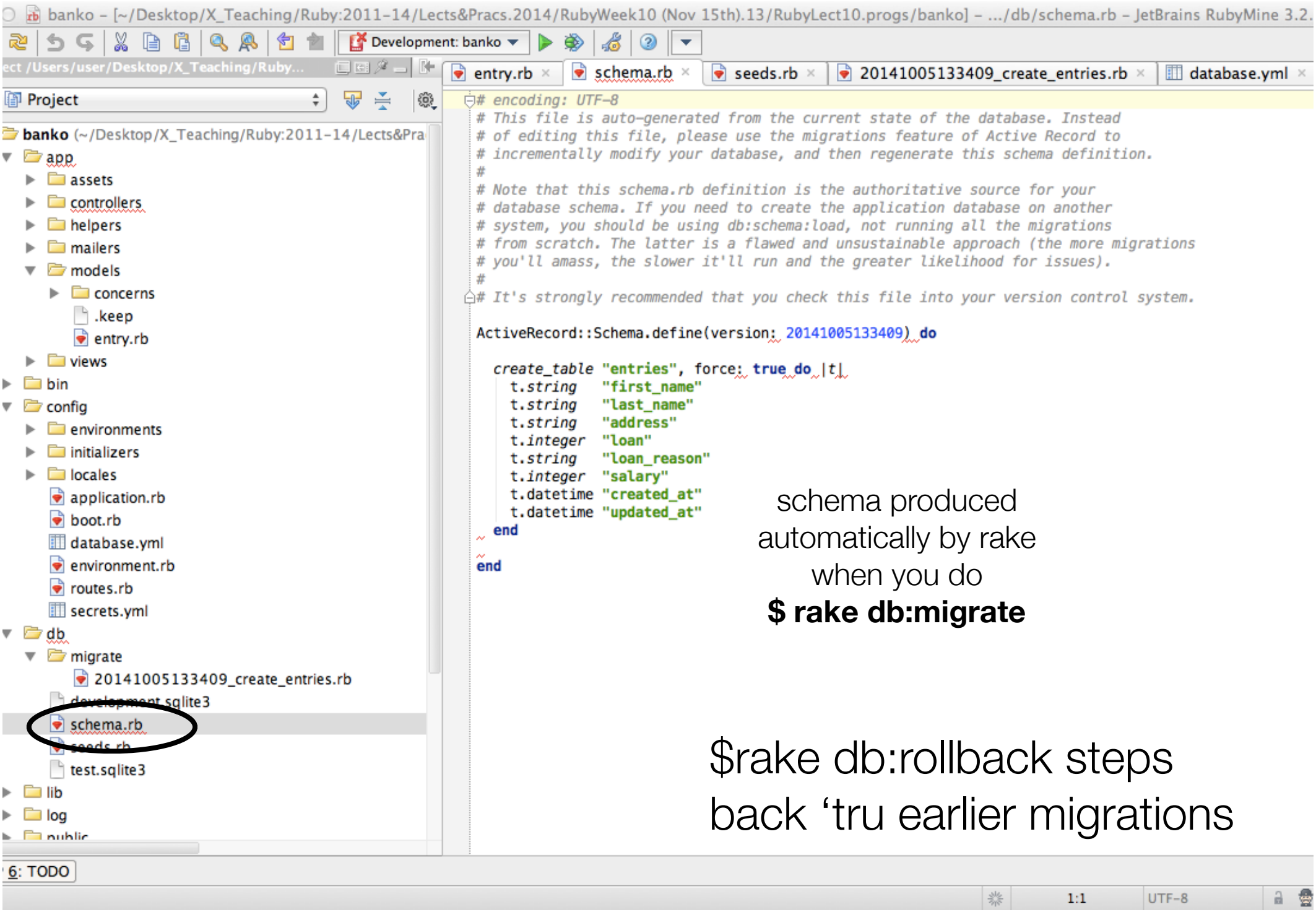
add a bunch of fields,
specifying their type;
rb db gives :id
for primary key

class to create entries,
Entry.up sets up tables
and Entry.down gets rid
of them

$ rails generate model Entry first_name:string last_name:string address:string loan:integer...

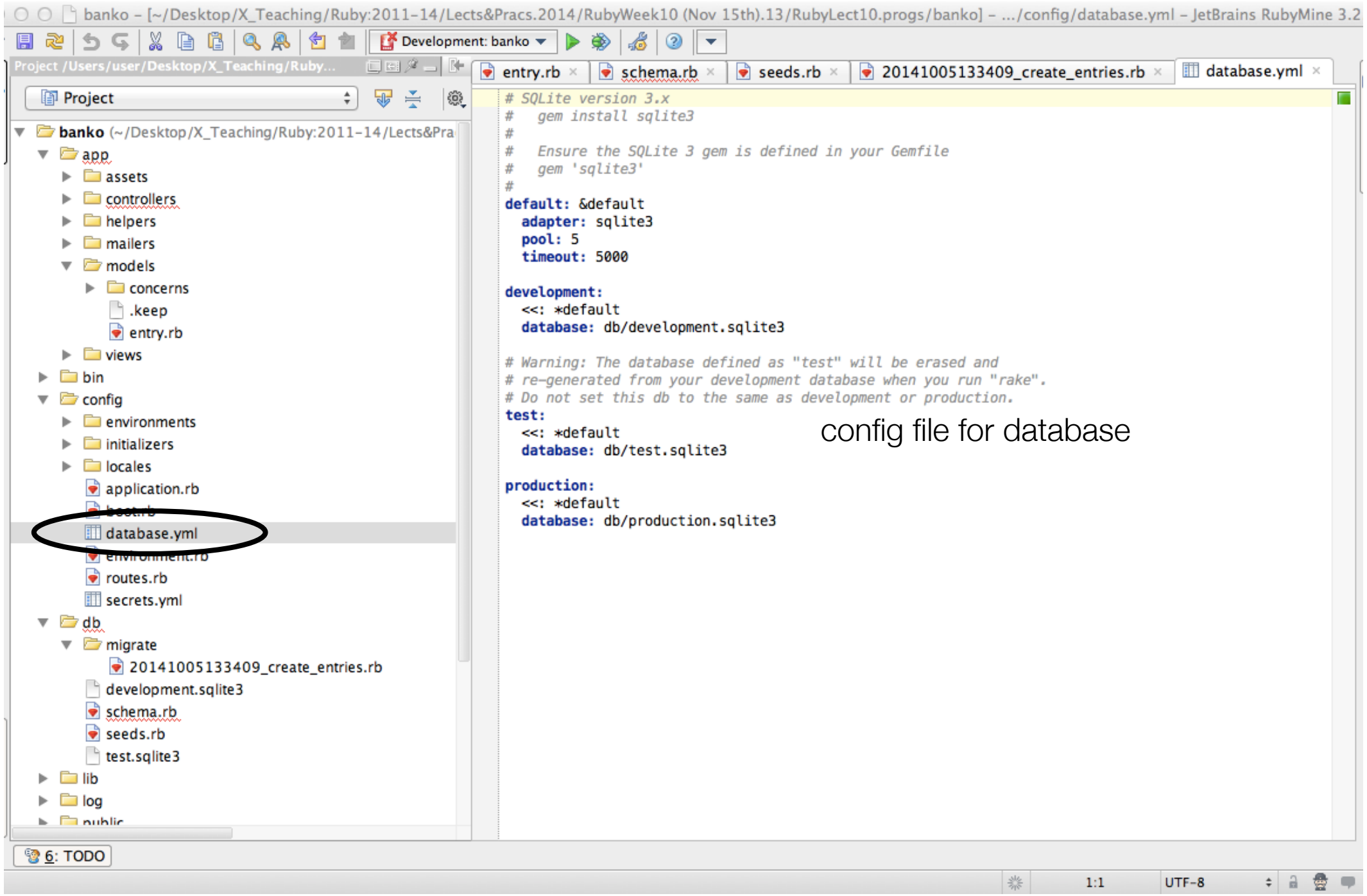
OR

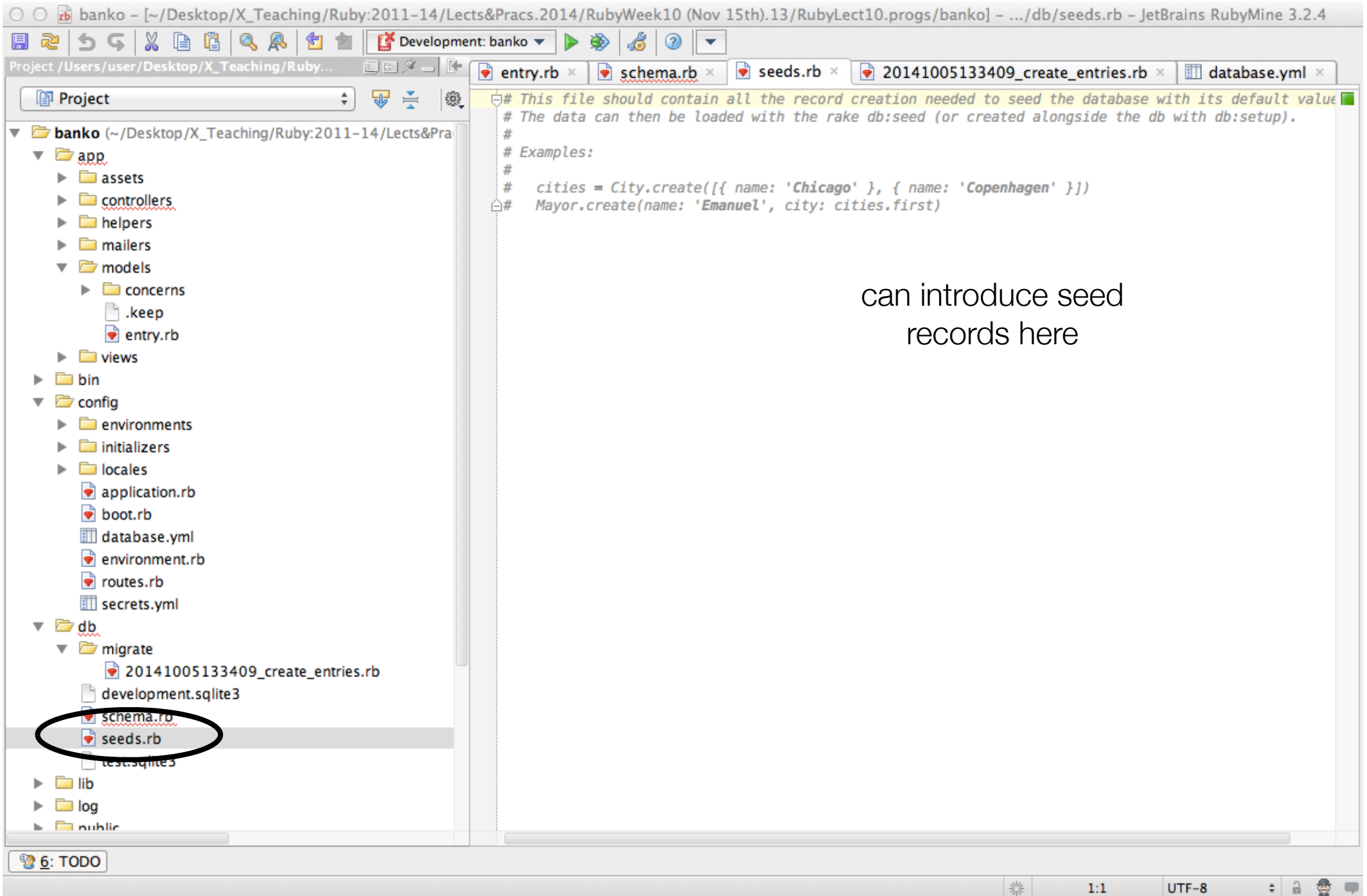
you can write it directly into the migrate file



schema produced
automatically by rake
when you do
$ rake db:migrate

$rake db:rollback steps
back ‘tru earlier migrations


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../config/database.yml – JetBrains RubyMine 3.2
Development: banko
Project /Users/user/Desktop/X_Teaching/Ruby...
Project
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pra
app
assets
controllers
helpers
mailers
models
concerns
.keep
entry.rb
views
bin
config
environments
initializers
locales
application.rb
database.yml
routes.rb
secrets.yml
db
migrate
20141005133409_create_entries.rb
development.sqlite3
schema.rb
seeds.rb
test.sqlite3
lib
log
entry.rb
schema.rb
seeds.rb
20141005133409_create_entries.rb
database.yml
SQLite version 3.x
gem install sqlite3
#
Ensure the SQLite 3 gem is defined in your Gemfile
gem 'sqlite3'
#
default: &default
adapter: sqlite3
pool: 5
timeout: 5000
development:
<<: *default
database: db/development.sqlite3
Warning: The database defined as "test" will be erased and
re-generated from your development database when you run "rake".
Do not set this db to the same as development or production.
test:
<<: *default
database: db/test.sqlite3
production:
<<: *default
database: db/production.sqlite3
config file for database
6: TODO
1:1
UTF-8


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] – .../db/seeds.rb – JetBrains RubyMine 3.2.4
Development: banko
Project /Users/user/Desktop/X_Teaching/Ruby...
Project
banko (~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pra
app
assets
controllers
helpers
mailers
models
concerns
.keep
entry.rb
views
bin
config
environments
initializers
locales
application.rb
boot.rb
database.yml
environment.rb
routes.rb
secrets.yml
db
migrate
20141005133409_create_entries.rb
development.sqlite3
schema.rb
seeds.rb
lib
log
public
entry.rb
schema.rb
seeds.rb
20141005133409_create_entries.rb
database.yml
This file should contain all the record creation needed to seed the database with its default value
The data can then be loaded with the rake db:seed (or created alongside the db with db:setup).
#
Examples:
#
cities = City.create([{ name: 'Chicago' }, { name: 'Copenhagen' }])
Mayor.create(name: 'Emanuel', city: cities.first)
can introduce seed
records here
6: TODO
1:1
UTF-8

Steps

set up dir

$ rails new bank

go to dir

$ cd banko

$ rails generate controller main welcome

$ rails generate controller other name

$ rails generate model Entry first_name:string ...

lets...edit a whole bunch of files...

create model called **entry with field:type**

$ rake db:migrate

set up tables

$ rake db:rollback

rollback to early stage of db

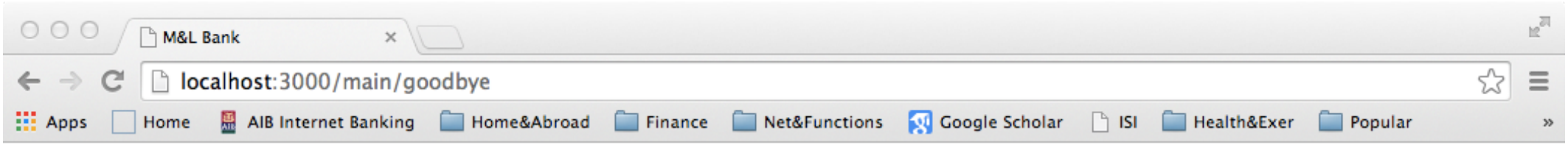
REM:

$ rake db:migrate:reset

clears out all records

The Site: Screen VI

REM:



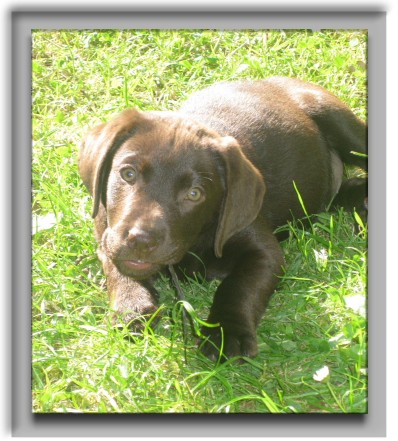
what's this !

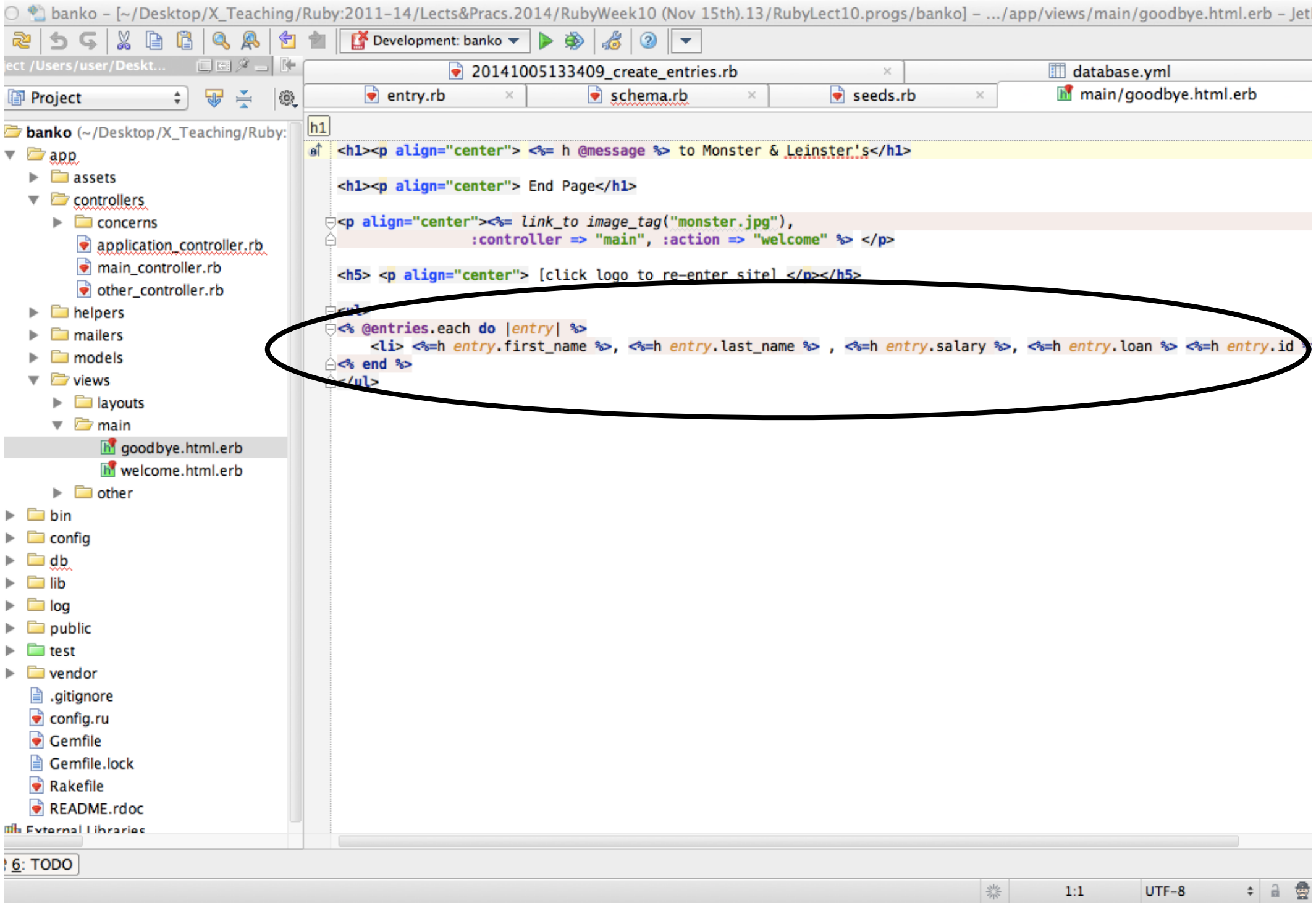
- , , , 1
- mark, keane , , 2
- mark , keane , 2000, 3122 3
- mark , keane , , 4
- mark , keane , 12, 2000000 5
- , , , 6
- Mark, Keane , 5000, 100000 7
- , , , 8
- , , , 9
- Mark, Keane , 5000, 100000 10

Goodbye to Monster & Leinster's

End Page

[click logo to re-enter site]




banko - [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/banko] - .../app/views/main/goodbye.html.erb - Jet
Development: banko
20141005133409_create_entries.rb
database.yml
entry.rb
schema.rb
seeds.rb
main/goodbye.html.erb
Project
banko (~/Desktop/X_Teaching/Ruby:
app
assets
controllers
concerns
application_controller.rb
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
main
goodbye.html.erb
welcome.html.erb
other
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
Gemfile.lock
Rakefile
README.rdoc
External Libraries
h1
<h1> <%= h @message %> to Monster & Leinster's</h1>
<h1> End Page</h1>
<%= link_to image_tag("monster.jpg"),
:controller => "main", :action => "welcome" %>
<h5> [click logo to re-enter site] </h5>
<% @entries.each do |entry| %>
 <%=h entry.first_name %>, <%=h entry.last_name %> , <%=h entry.salary %>, <%=h entry.loan %> <%=h entry.id
<% end %>

6: TODO
1:1
UTF-8

Problem Banko...

this, finallly, clears up the mystery of what all the crap on the goodbye page is about...

however, it also shows that something odd is going on in our db

why are there two entries, some of which have no values? What's the other crap about ?

...a question not to be asked...

Part E:

Some Residuals in Banko...
controllers, routing & images

Basic Banko Functionality...

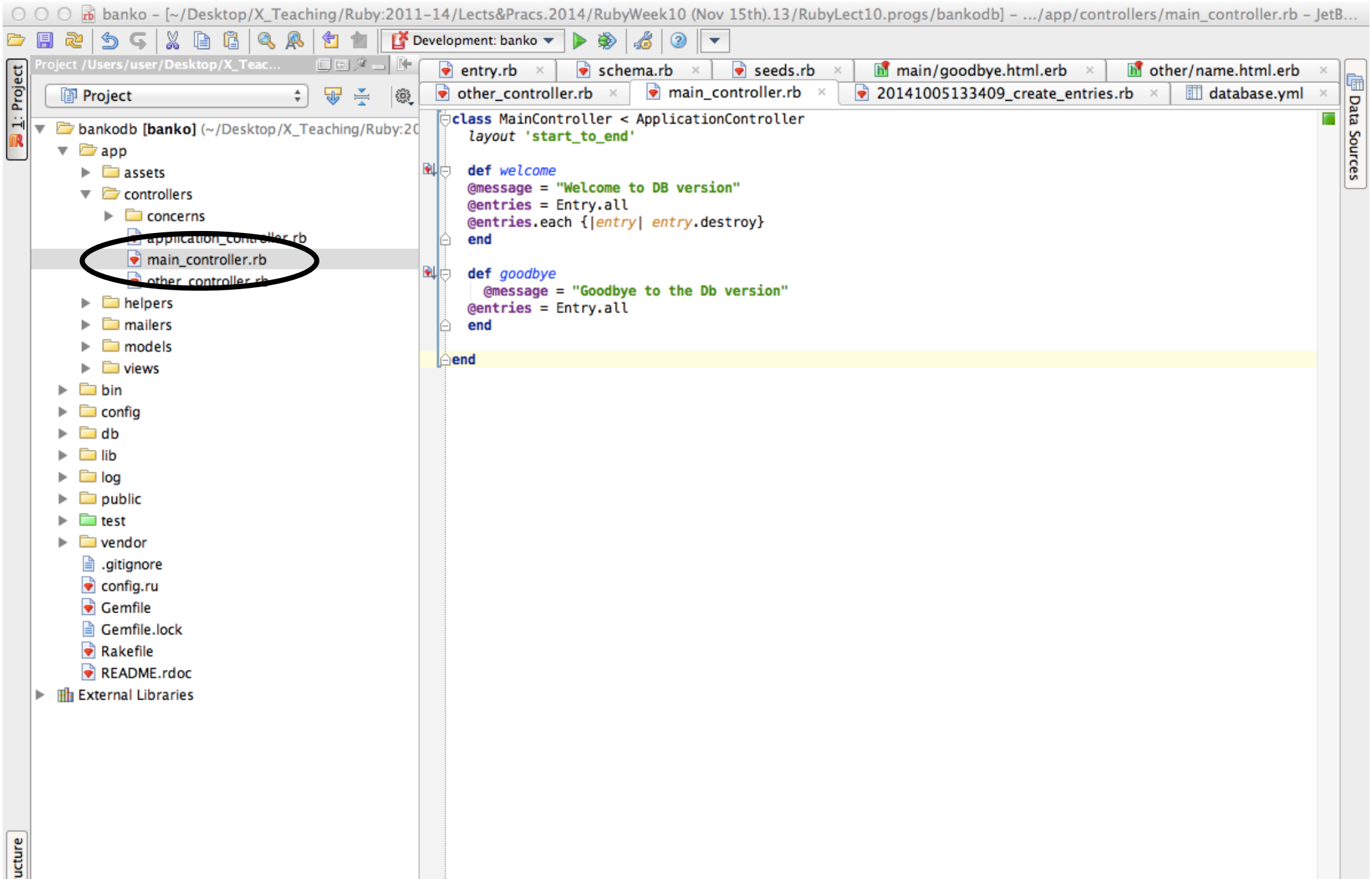
note, that each screen has an associated, controller-method, view and layout

controllers/main_controller.rb has two methods **welcome** and **goodbye**

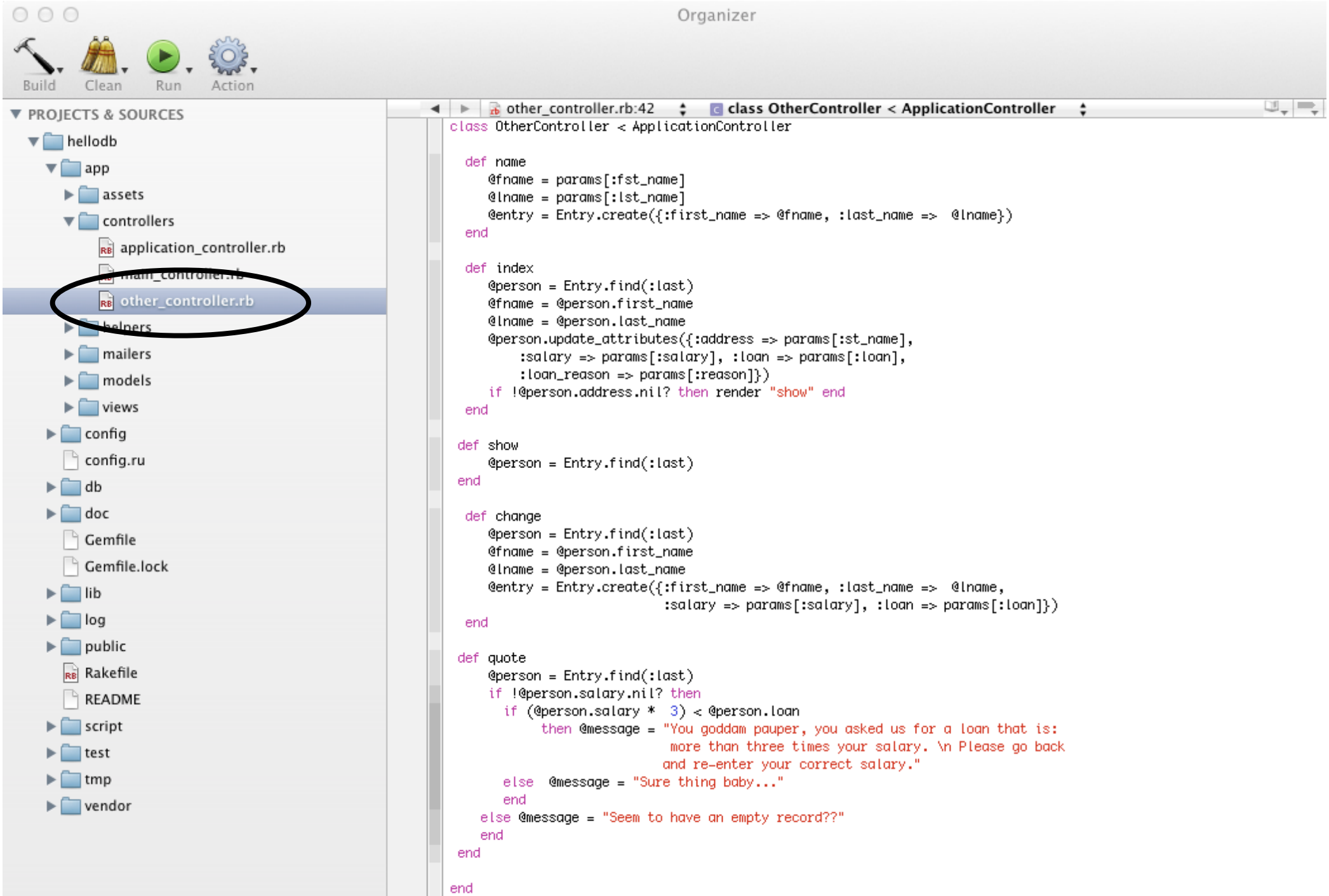
controllers/other_controller.rb has four methods **index**, **name, show, change,** and **quote**

there are all fairly simple...its the co-ordination that is complicated

The Main Controller



The Other Controller



Banko Routing...

Rails style is sort-of weird in the way it creates objects and calls methods

essentially, methods run by linking to pages with uri-s; when a page is entered the method runs

action tags in forms also call methods (e.g., **submit_tag**; they are usually helper methods)

obviously, methods call other methods too (more conventionally)

Banko Routing...

this means that routing becomes very important, as it is a sort-of shorthand for calling methods

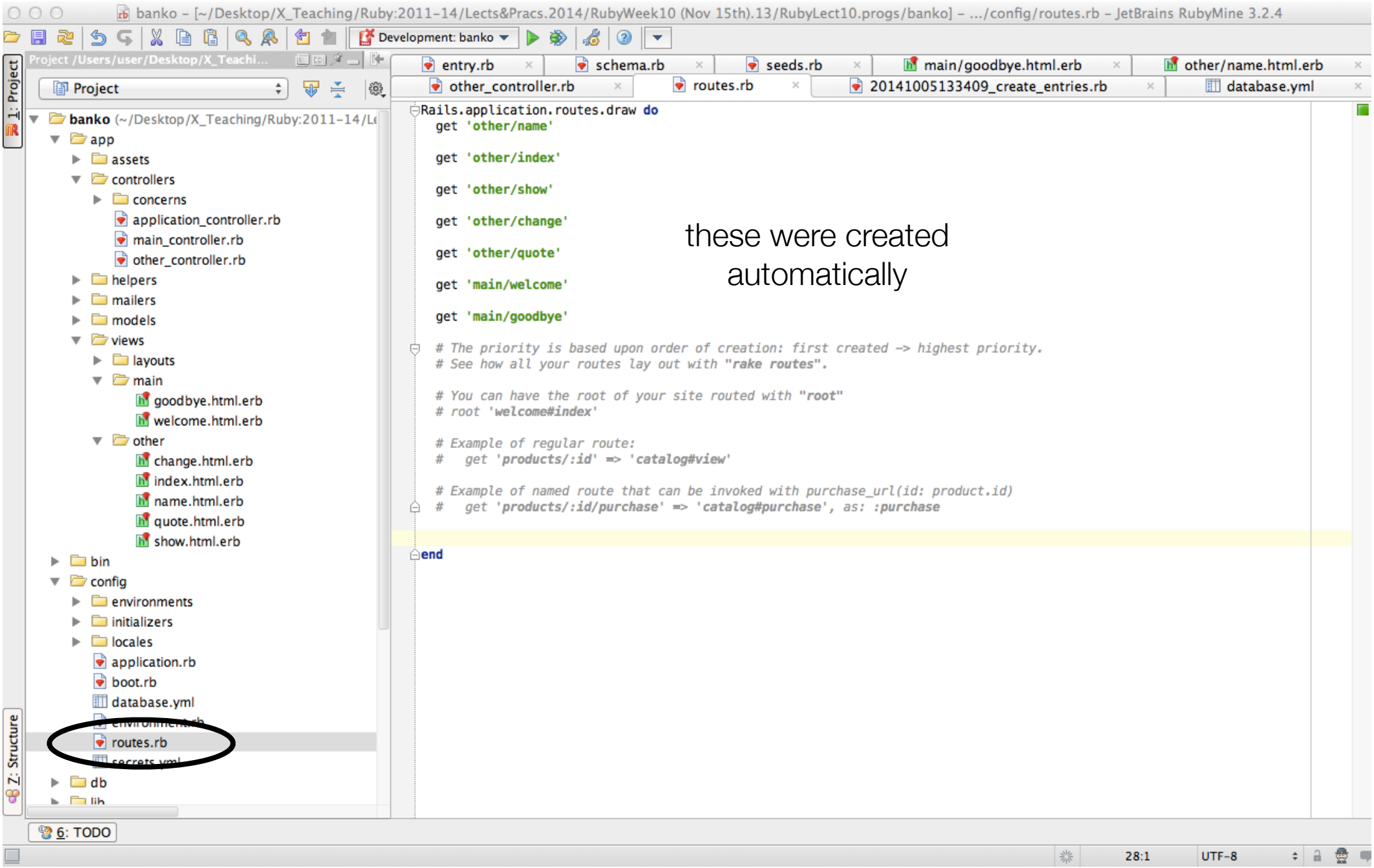
will return to it in detail, but just note it here

btw, its is often a source of error in the browser, as you fail to address the page with the right uri

what is the “right uri” will be set by stuff in banko/config/routes.rb

will cause bugs

routes.rb on setup...

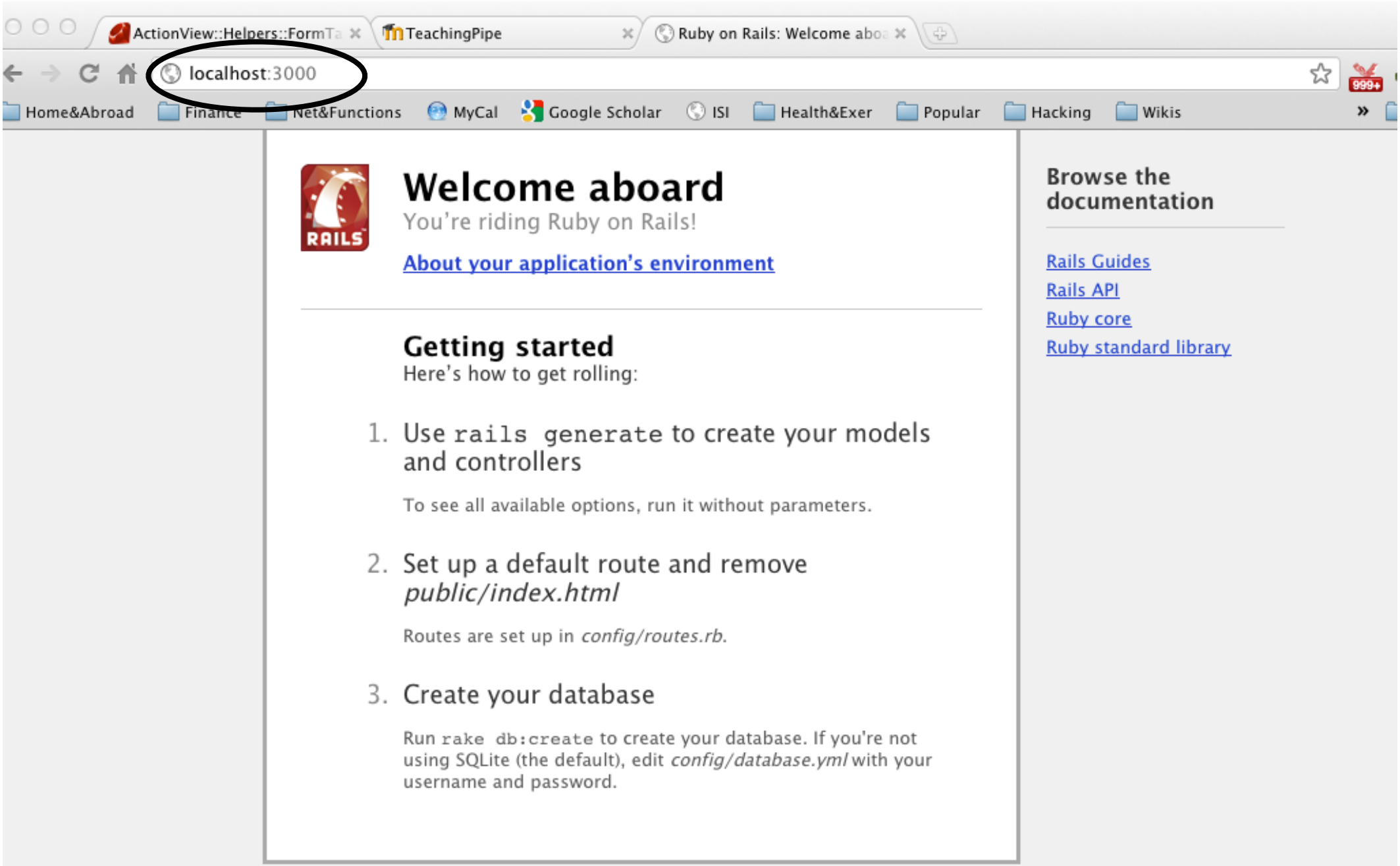


Banko Routing...

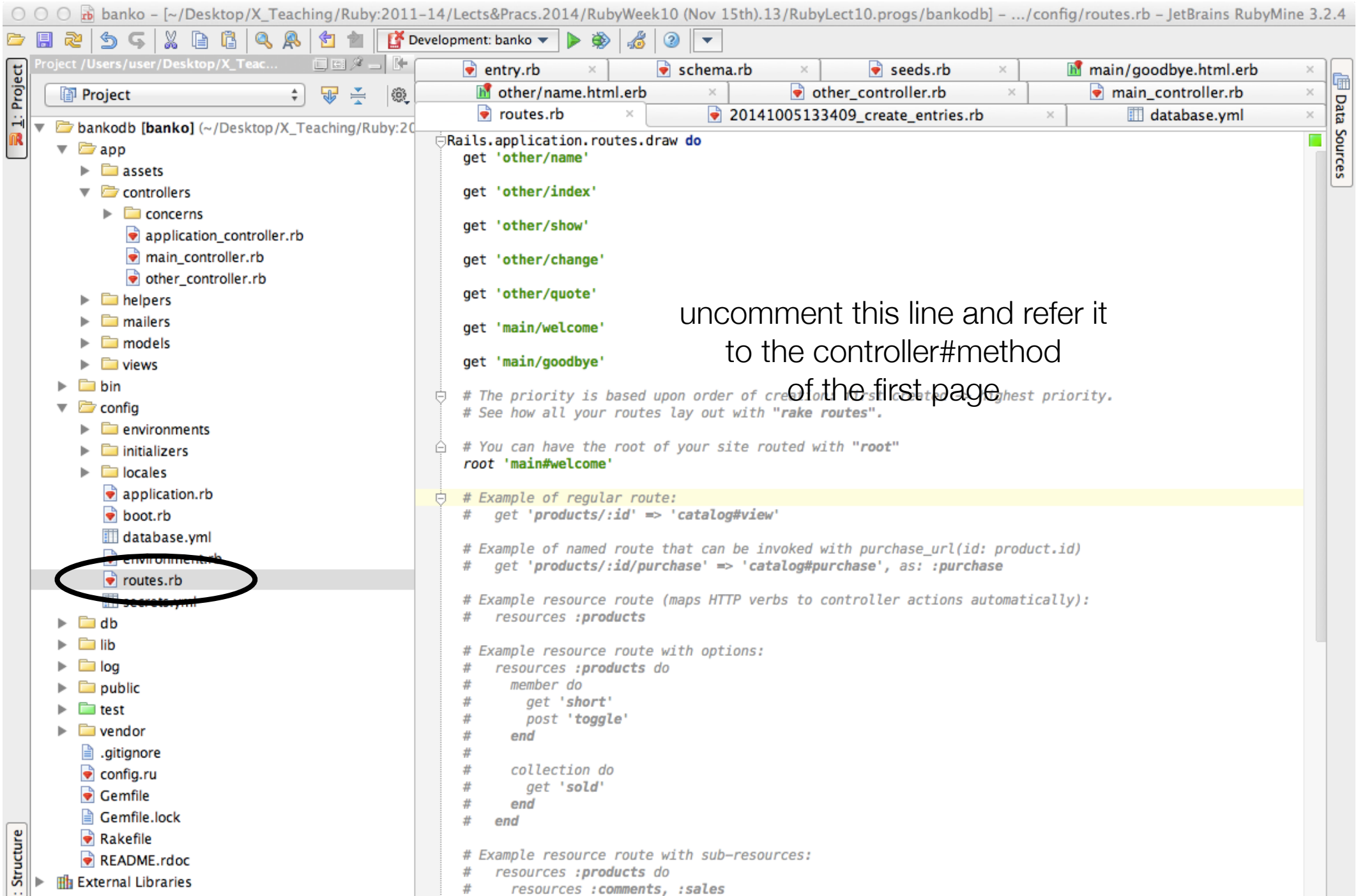
one of the things you can do is change the routing statements in this routes.rb file

often people want to have the browser default connect to the first page in your site

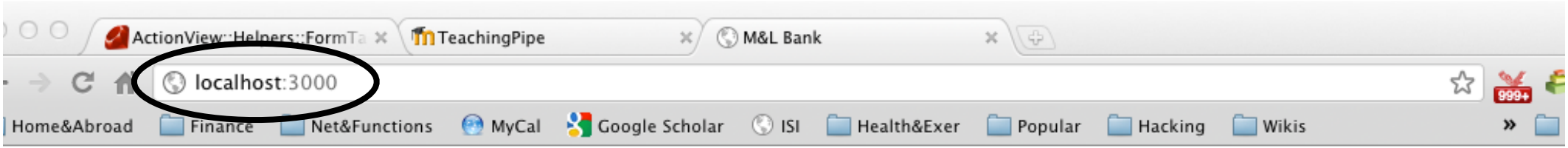
not like this...



routes.rb...what we do



so, we now get this...



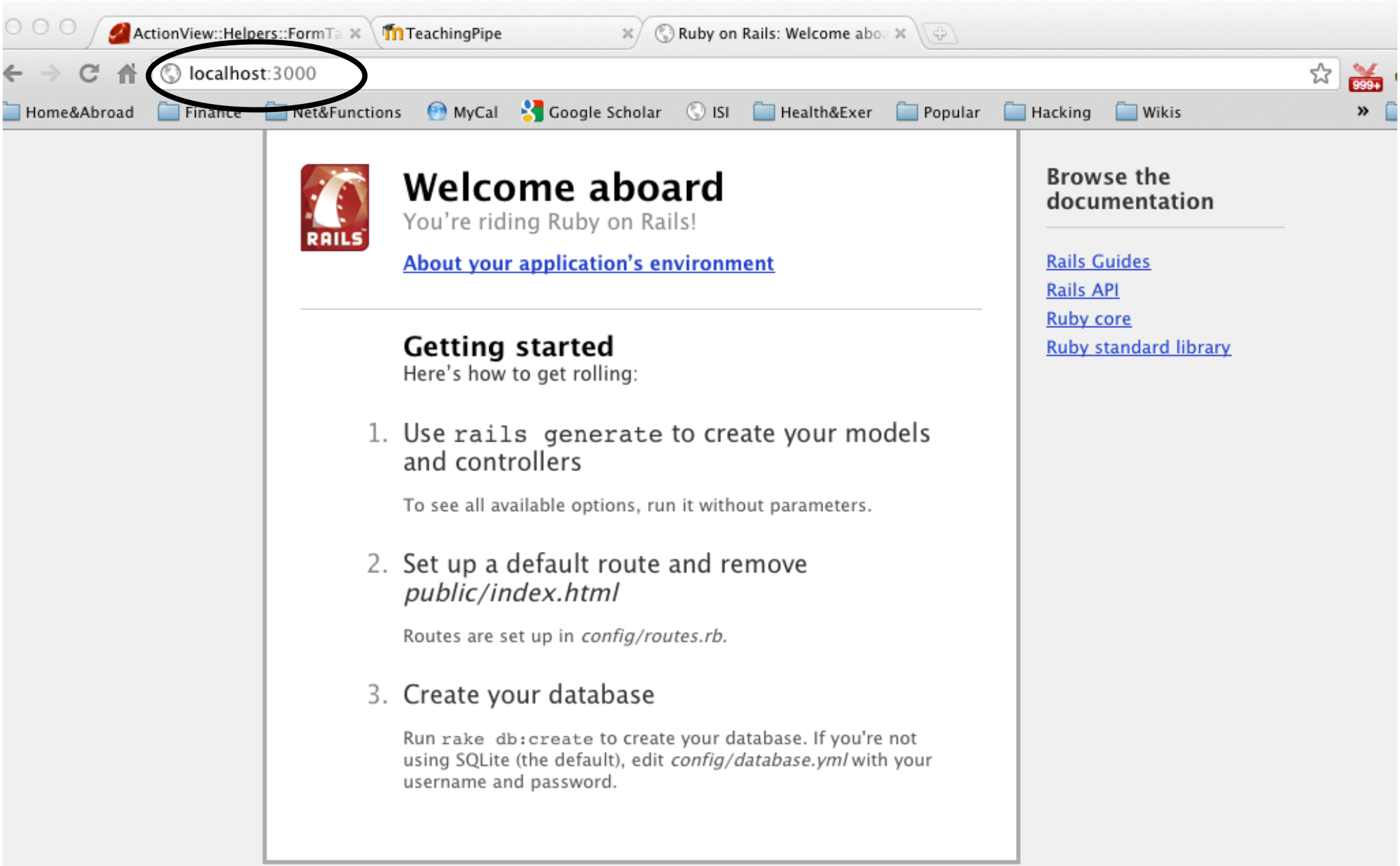
Welcome to DB version to Monster & Leinster's

Home Page

[click logo to enter]

Monster & Leinster Inc. © 2011

Instead of this...



BY THE WAY..

user$ rake routes

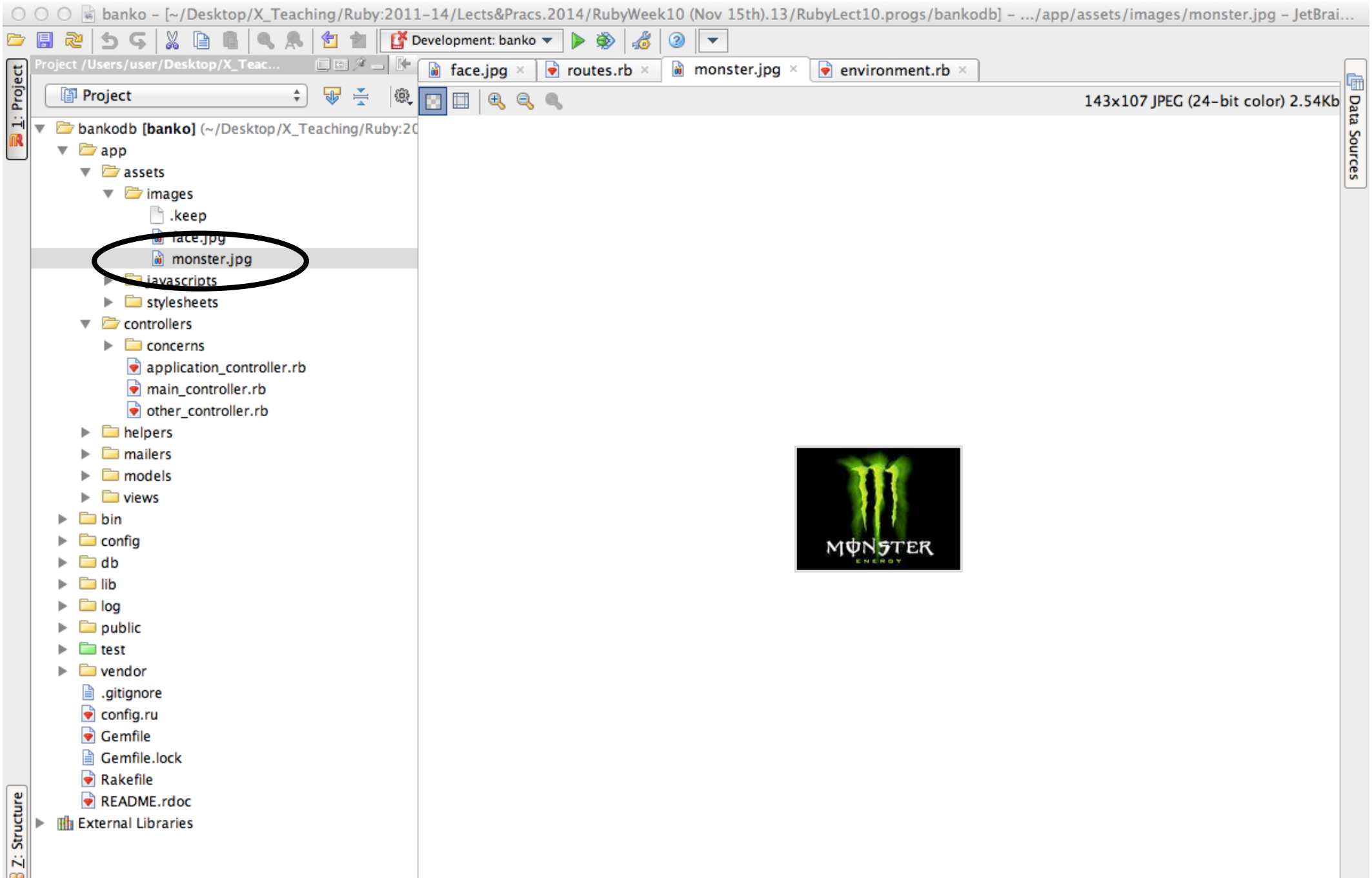
```
  Prefix    Verb URI Pattern          Controller#Action
other_name GET  /other/name(.:format)   other#name
other_index GET  /other/index(.:format)  other#index
other_show GET  /other/show(.:format)   other#show
other_change GET  /other/change(.:format) other#change
other_quote GET  /other/quote(.:format)  other#quote
main_welcome GET  /main/welcome(.:format) main#welcome
main_goodbye GET  /main/goodbye(.:format) main#goodbye
root GET  /                           main#welcome

user$
```

Where are Images ?

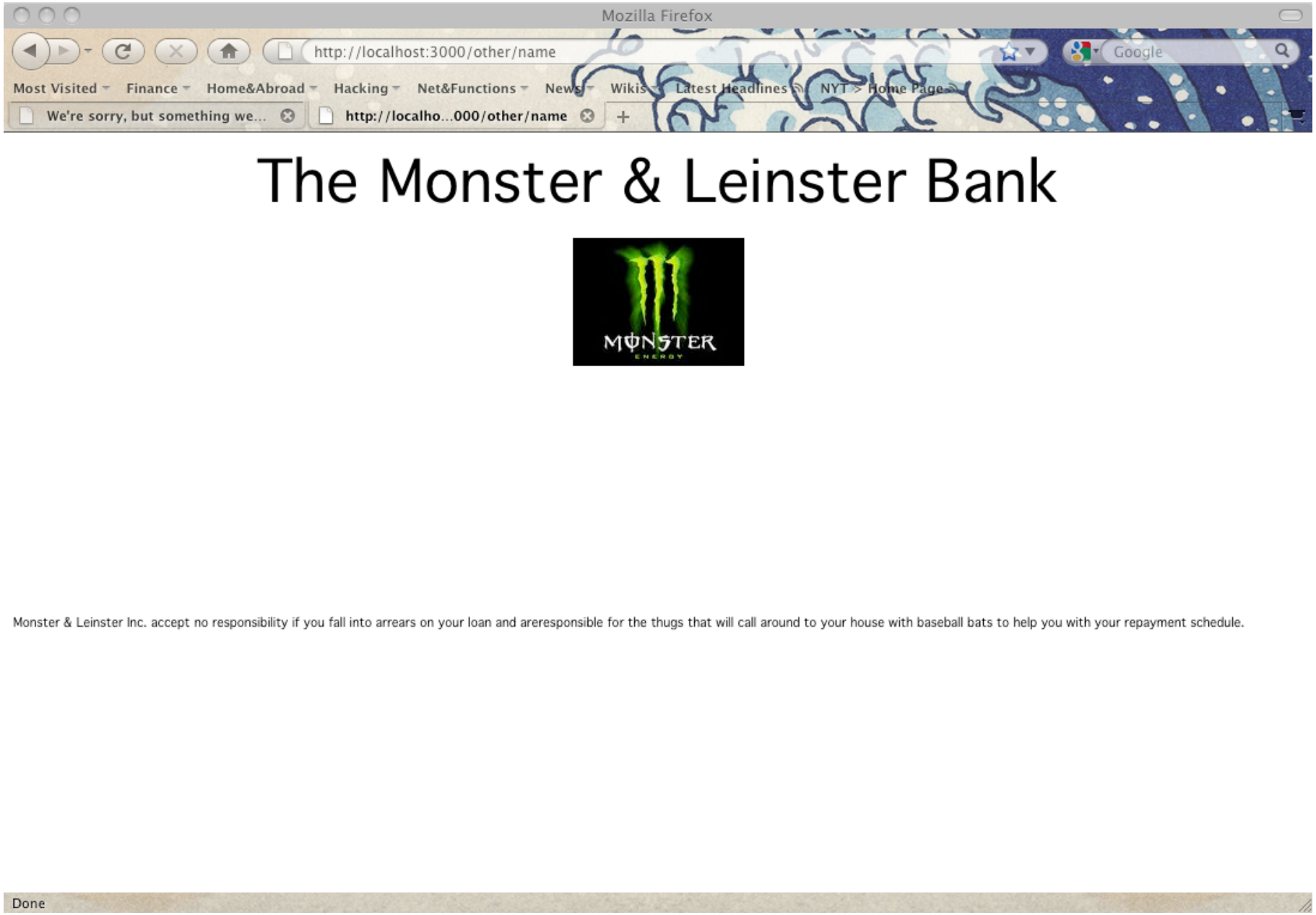
Rails stores images in bankodb/app/assets/images

they are then referenced in various view and layout files

Where are images...



Layouts: Frame



Where are images...ref'ed

application.html.erb:17

```
<html>
<head><title><%= @message %> </title>
    <%= stylesheet_link_tag 'application' %>
    </head>
<body>
<p align="center">  <font size="7">The Monster & Leinster Bank </font></p>
<p align="center"> <%= image_tag("monster.jpg") %> </p>

<%= yield %>


<p> <font size="1"> Monster & Leinster Inc. accept no responsibility if
you fall into arrears on your loan and are not responsible for the thugs that will call around
to your house with baseball bats to help you with your repayment schedule. </font> </p>
</body>
</html>
```

Part F:

Fixing Banko’s Problems...

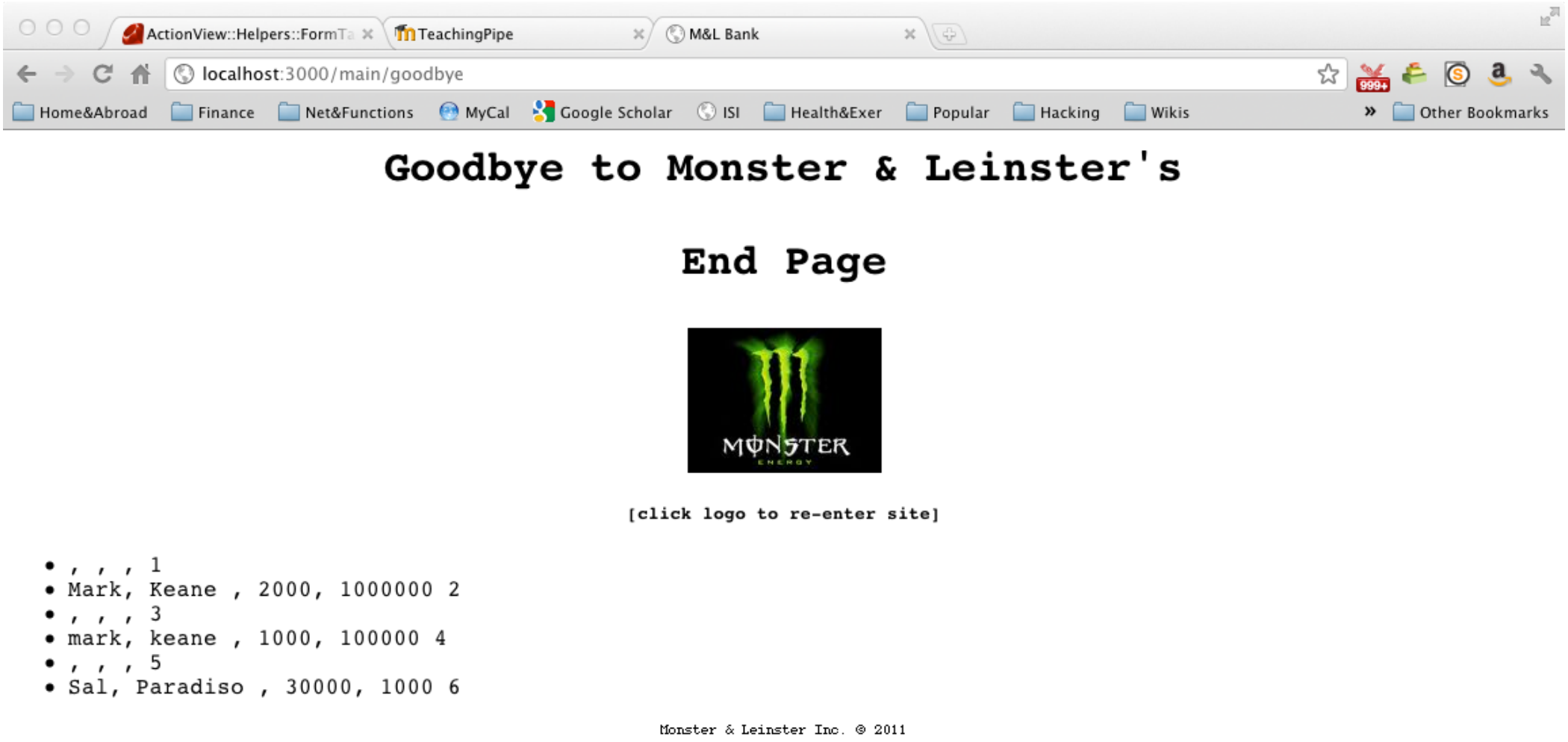
Problem Banko…

REM:

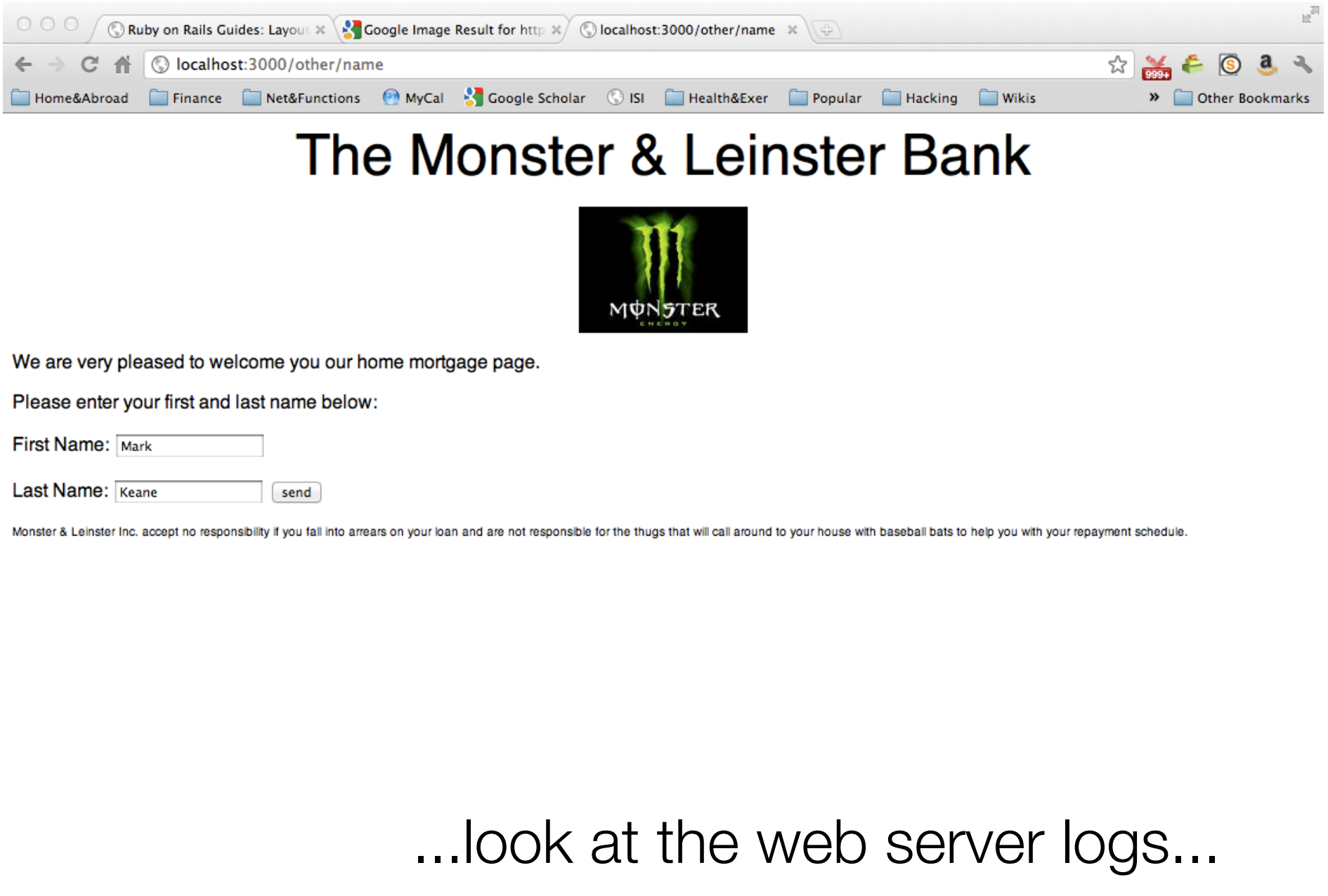
if you look at the goodbye page, which prints out the state of the db at the end; it progressively seems to spit out loads of crap

why do we have these odd entries...

The Problem


ActionView::Helpers::FormTa
TeachingPipe
M&L Bank
localhost:3000/main/goodbye
Home&Abroad
Finance
Net&Functions
MyCal
Google Scholar
ISI
Health&Exer
Popular
Hacking
Wikis
Other Bookmarks
Goodbye to Monster & Leinster's
End Page
MONSTER
ENERGY
[click logo to re-enter site]
• , , , 1
• Mark, Keane , 2000, 1000000 2
• , , , 3
• mark, keane , 1000, 100000 4
• , , , 5
• Sal, Paradiso , 30000, 1000 6
Monster & Leinster Inc. © 2011

The Problem starts here...



...look at the web server logs...

Log...

```
Started GET "/other/name" for 127.0.0.1 at 2011-10-18 12:36:09 +0100
  Processing by OtherController#name as HTML
  SQL (139.9ms)  INSERT INTO "entries" ("address", "created_at", "first_name", "last_name", "loan"
"loan_reason", "salary", "updated_at") VALUES (?, ?, ?, ?, ?, ?, ?, ?)  [["address", nil], ["created_at",
Tue, 18 Oct 2011 11:36:10 UTC +00:00], ["first_name", nil], ["last_name", nil], ["loan", nil],
["loan_reason", nil], ["salary", nil], ["updated_at", Tue, 18 Oct 2011 11:36:10 UTC +00:00]]
Rendered other/name.html.erb within layouts/application (20.0ms)
Completed 200 OK in 445ms (Views: 159.8ms | ActiveRecord: 140.9ms)
...
Started GET "/other/name?utf8=%E2%9C%93&fst_name=Mark&lst_name=Keane&commit=send"
127.0.0.1 at 2011-10-18 12:36:21 +0100
  Processing by OtherController#name as HTML
  Parameters: {"utf8"=>"✓", "fst_name"=>"Mark", "lst_name"=>"Keane", "commit"=>"send"}
  SQL (1.5ms)  INSERT INTO "entries" ("address", "created_at", "first_name", "last_name", "loan",
"loan_reason", "salary", "updated_at") VALUES (?, ?, ?, ?, ?, ?, ?, ?)  [["address", nil], ["created_at",
Tue, 18 Oct 2011 11:36:21 UTC +00:00], ["first_name", "Mark"], ["last_name", "Keane"], ["loan", nil]
["loan_reason", nil], ["salary", nil], ["updated_at", Tue, 18 Oct 2011 11:36:21 UTC +00:00]]
Rendered other/name.html.erb within layouts/application (1.3ms)
Completed 200 OK in 66ms (Views: 7.4ms | ActiveRecord: 2.2ms)
```

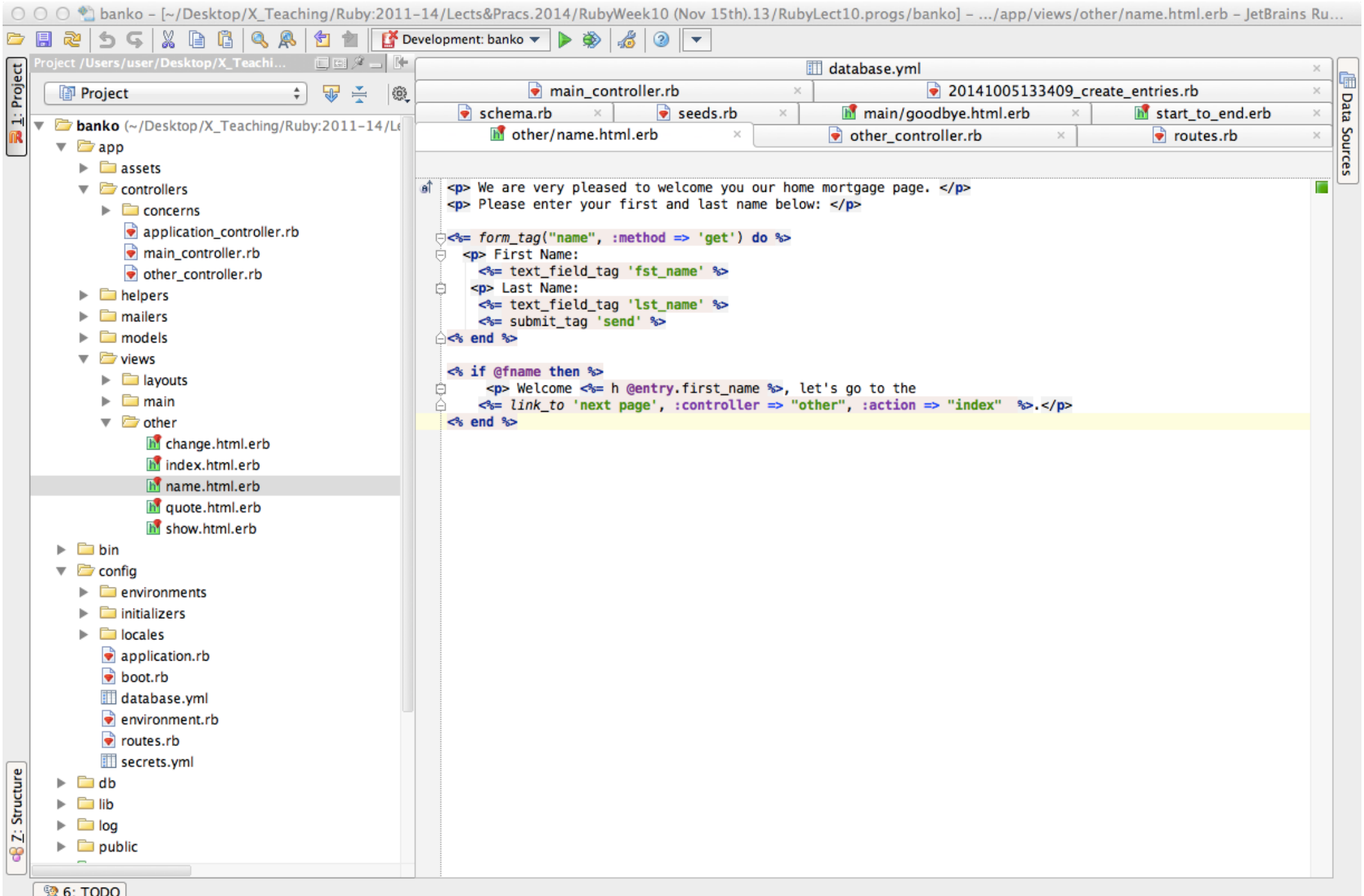
What’s the problem...

Well, remember what I said about the way Rails works by calling methods when you move pages

If you look at the log, you can see that it creates one entry when you enter the name-page and another when you press the **send** tag

So, how can we fix this ?

other/name View...



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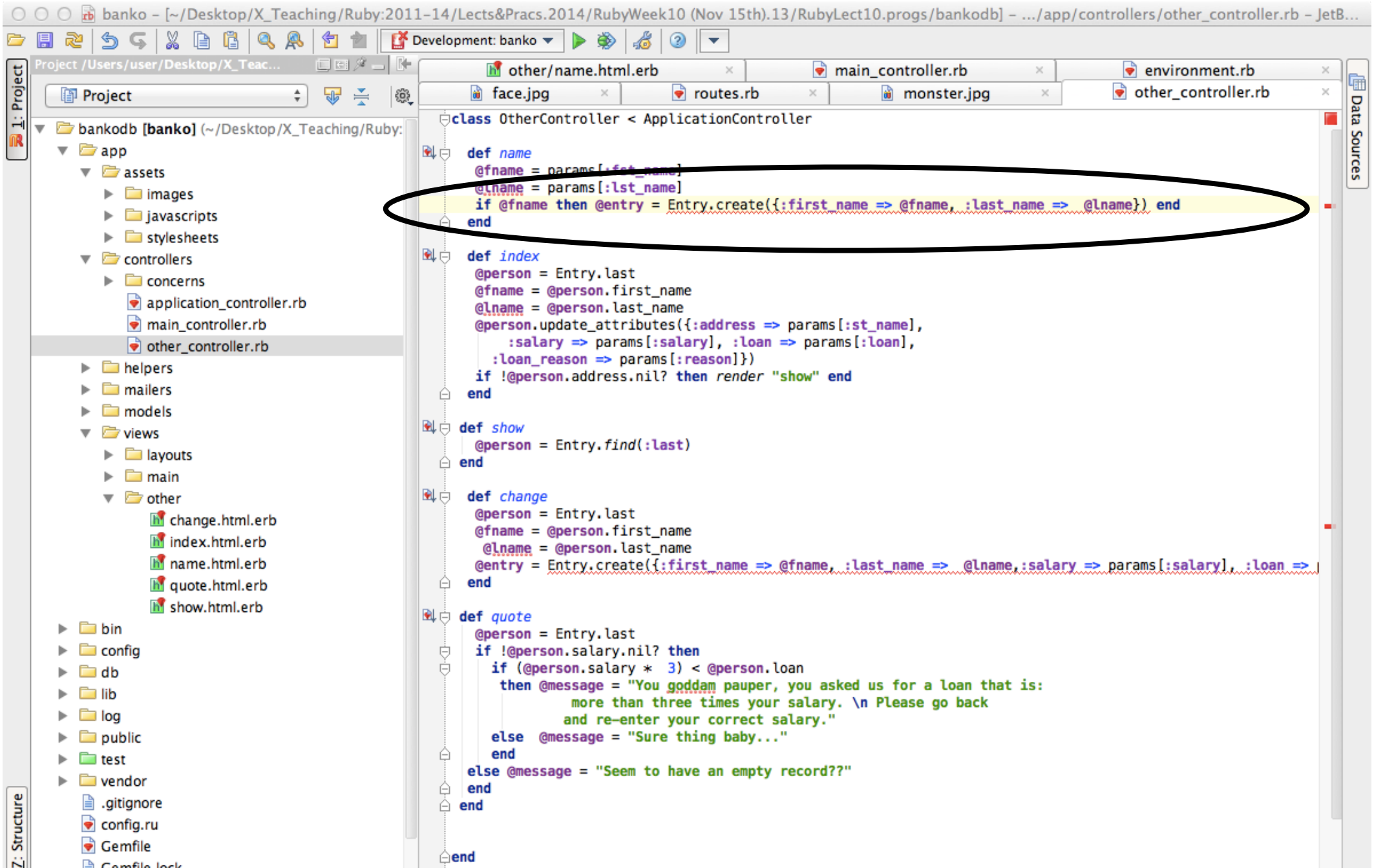
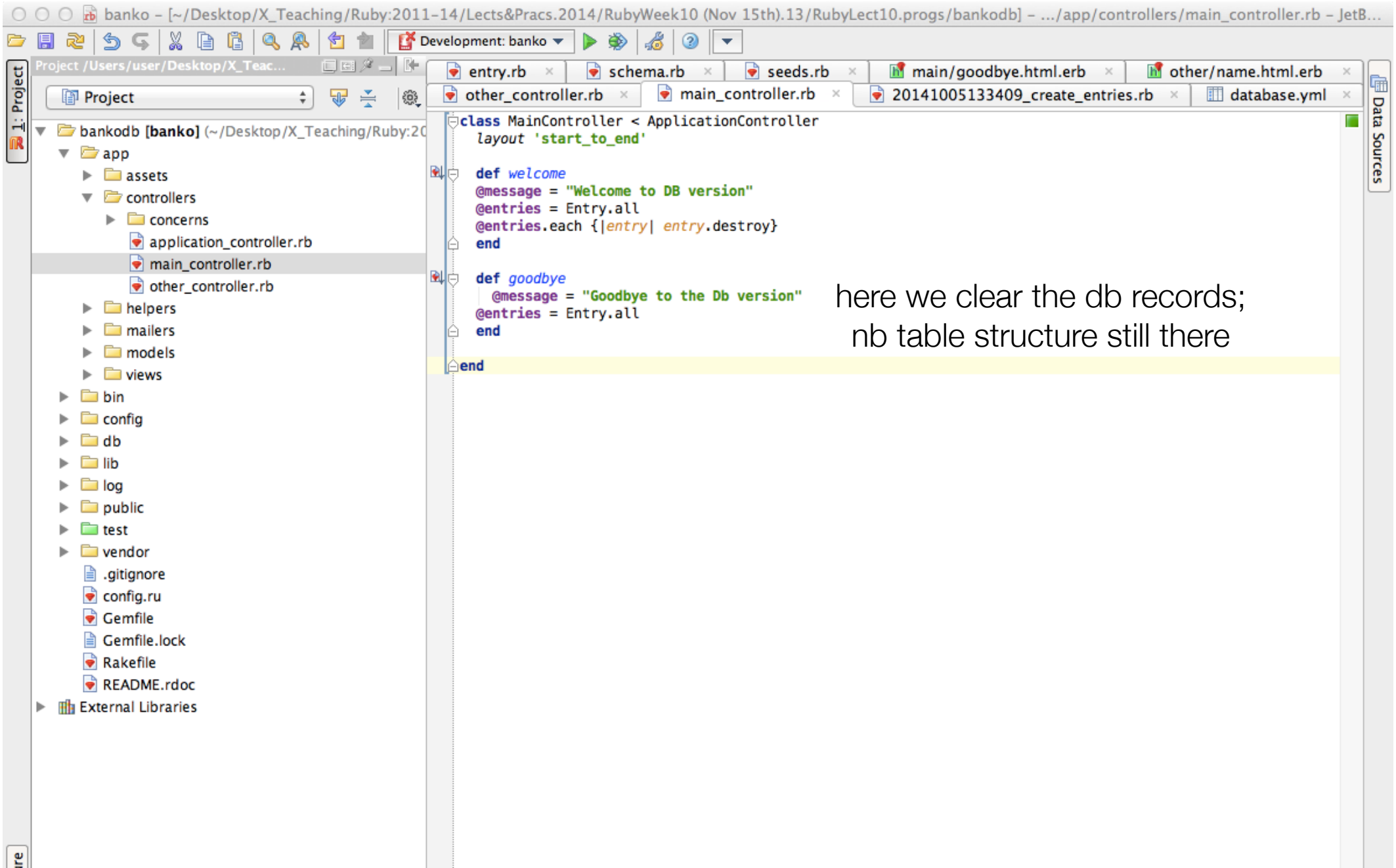
If you look at the log, you can see that it create one entry when you enter the name-page and another when you press the **send** tag

So, how can we fix this ?

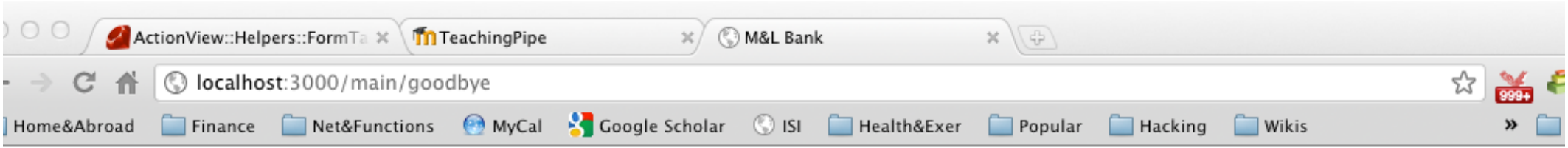
The Change...


banko – [~/Desktop/X_Teaching/Ruby:2011-14/Lects&Pracs.2014/RubyWeek10 (Nov 15th).13/RubyLect10.progs/bankodb] – .../app/controllers/other_controller.rb – JetB...
Development: banko
Project /Users/user/Desktop/X_Teac...
Project
bankodb [banko] (~/Desktop/X_Teaching/Ruby:
app
assets
images
javascripts
stylesheets
controllers
concerns
application_controller.rb
main_controller.rb
other_controller.rb
helpers
mailers
models
views
layouts
main
other
change.html.erb
index.html.erb
name.html.erb
quote.html.erb
show.html.erb
bin
config
db
lib
log
public
test
vendor
.gitignore
config.ru
Gemfile
other/name.html.erb
main_controller.rb
environment.rb
face.jpg
routes.rb
monster.jpg
other_controller.rb
class OtherController < ApplicationController
def name
@fname = params[:fst_name]
@lname = params[:lst_name]
if @fname then @entry = Entry.create({:first_name => @fname, :last_name => @lname}) end
end
def index
@person = Entry.last
@fname = @person.first_name
@lname = @person.last_name
@person.update_attributes({:address => params[:st_name],
:salary => params[:salary], :loan => params[:loan],
:loan_reason => params[:reason]})
if !@person.address.nil? then render "show" end
end
def show
@person = Entry.find(:last)
end
def change
@person = Entry.last
@fname = @person.first_name
@lname = @person.last_name
@entry = Entry.create({:first_name => @fname, :last_name => @lname,:salary => params[:salary], :loan =>
end
def quote
@person = Entry.last
if !@person.salary.nil? then
if (@person.salary * 3) < @person.loan
then @message = "You goddam pauper, you asked us for a loan that is:
more than three times your salary. \n Please go back
and re-enter your correct salary."
else @message = "Sure thing baby..."
end
else @message = "Seem to have an empty record??"
end
end
end
Data Sources
1: Project
7: Structure

...also should change Main



Last Screen...BANG !



Goodbye to Monster & Leinster's

End Page

[click logo to re-enter site]

- mark, keane , 2000, 100000 9

Monster & Leinster Inc. © 2011

PC Problems: Path Var

To create a new rails website in Windows 8 follow the lecture instructions below:

1. Run command prompt
2. **gem install rails**
3. **gem update --system**
4. **gem install bundle**
5. **bundle install**
6. Go to your Ruby Project directory: **cd C:\RubyMine**
7. Make a new directory: **mkdir temp**
8. **cd temp**
9. **rails new newsite**
10. **cd newsite**
11. **rails generate controller test hello**
12. look at /newsite/app/controllers/test_controller.rb
13. add @message = "hello" to hello method
14. look at newsite/app/views/test/hello.html.erb
15. add <%= @message %> to file
16. **rails server**
17. load page in browser: http://localhost:3000/test/hello

An error page occurs (sorry I have no screenshot - post it if you can). I think it has to do with a missing system path variable - but I am not entirely sure. To fix this:

1. Install NodeJs from http://nodejs.org/dist/v0.10.22/node-v0.10.22-x86.msi
2. Restart your computer.

To run the example code RubyLect10.progs in Windows 8:

1. Download the RubyLect10.progs from Moodle (https://csimoodle.ucd.ie/moodle/mod/resource/view.php?id=20485)
2. Extract the zip to your Ruby Project folder (e.g. C:\RubyMine\temp)
3. Run command prompt
4. Navigate to the extracted zip
5.

```
C:\RubyMine\temp>cd RubyLect10.progs

C:\RubyMine\temp\RubyLect10.progs>cd hello

C:\RubyMine\temp\RubyLect10.progs\hello>rails server
C:/Ruby200/lib/ruby/gems/2.0.0/gems/sqlite3-1.3.4-x86-mingw32/lib/sqlit
n `require': cannot load such file -- sqlite3/sqlite3_native (LoadError)
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/sqlite3-1.3.4-x86-ming
qlite3.rb:6:in `rescue in <top (required)>'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/sqlite3-1.3.4-x86-ming
qlite3.rb:2:in `<top (required)>'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:72:in `require'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:72:in `block (2 levels) in require'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:70:in `each'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:70:in `block in require'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:59:in `each'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
me.rb:59:in `require'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/bundler-1.3.5/lib/bund
2:in `require'
        from C:/RubyMine/temp/RubyLect10.progs/hello/config/application
`<top (required)>'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/railties-3.1.0/lib/rai
ds.rb:52:in `require'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/railties-3.1.0/lib/rai
ds.rb:52:in `block in <top (required)>'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/railties-3.1.0/lib/rai
ds.rb:49:in `tap'
        from C:/Ruby200/lib/ruby/gems/2.0.0/gems/railties-3.1.0/lib/rai
ds.rb:49:in `<top (required)>'
        from script/rails:6:in `require'
        from script/rails:6:in `<main>'
```

6.

```
C:\RubyMine\temp\RubyLect10.progs\hello>bundle update sqlite3
Fetching gem metadata from http://rubygems.org/.........
Fetching gem metadata from http://rubygems.org/..
Resolving dependencies...
Using rake (0.9.2)
Using multi_json (1.0.3)
Using activesupport (3.1.0)
Installing bcrypt-ruby (3.0.1)
Using builder (3.0.0)
Using i18n (0.6.0)
Using activemodel (3.1.0)
Using erubis (2.7.0)
Using rack (1.3.4)
Using rack-cache (1.0.3)
Using rack-mount (0.8.3)
Using rack-test (0.6.1)
Using hike (1.2.1)
Using tilt (1.3.3)
Using sprockets (2.0.2)
Using actionpack (3.1.0)
Using mime-types (1.16)
Using polyglot (0.3.2)
Using treetop (1.4.10)
Using mail (2.3.0)
Using actionmailer (3.1.0)
Using arel (2.2.1)
Using tzinfo (0.3.30)
Using activerecord (3.1.0)
Using activeresource (3.1.0)
Using ansi (1.3.0)
Using bundler (1.3.5)
Using coffee-script-source (1.1.2)
Using execjs (1.2.9)
Using coffee-script (2.2.0)
Using rack-ssl (1.3.2)
Using json (1.6.1)
Using rdoc (3.10)
Using thor (0.14.6)
Using railties (3.1.0)
Using coffee-rails (3.1.1)
Using jquery-rails (1.0.14)
Using rails (3.1.0)
Using sass (3.1.10)
Using sass-rails (3.1.4)
Using sqlite3 (1.3.8)
Using turn (0.8.3)
Using uglifier (1.0.3)
Your bundle is updated!
```

7.

```
C:\RubyMine\temp\RubyLect10.progs\hello>rails server
=> Booting WEBrick
=> Rails 3.1.0 application starting in development on http://0.0.0.0:30
=> Call with -d to detach
=> Ctrl-C to shutdown server
[2013-11-15 04:28:27] INFO  WEBrick 1.3.1
[2013-11-15 04:28:27] INFO  ruby 2.0.0 (2013-06-27) [i386-mingw32]
[2013-11-15 04:28:27] INFO  WEBrick::HTTPServer#start: pid=124 port=300
```

8. Now the server runs. Request the page in a browser:
   http://localhost:3000/other/name
9. When you request the page in a browser you get an error because of a missing or incompatible version of the bcrypt-ruby gem (see screenshots below)
10.

```
[2013-11-15 04:28:44] ERROR LoadError: cannot load such file -- 2.0/bcr
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `block in require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:223:in `block in load_dependency'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:640:in `new_constants_in'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:223:in `load_dependency'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/bcrypt-ruby-3.0.1-x86-mingw
rypt_ext.rb:2:in `<top (required)>'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `block in require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:223:in `block in load_dependency'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:640:in `new_constants_in'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:223:in `load_dependency'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `require'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/bcrypt-ruby-3.0.1-x86-mingw
rypt.rb:12:in `<top (required)>'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/activesupport-3.1.0/lib/act
rt/dependencies.rb:240:in `require'
```

```
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/rack-1.3.4/lib/rack/lock.rb
all'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/actionpack-3.1.0/lib/action_
/middleware/static.rb:53:in `call'
        C:/Ruby200/lib/ruby/gems/2.0.0/gems/railties-3.1.0/lib/rails/eng
55:in `call'
```

11. Press CTRL-C in the terminal to shut down the server. Press y and enter. (see screenshot below)
12.

```
[2013-11-15 04:33:45] INFO  going to shutdown ...
[2013-11-15 04:33:45] INFO  WEBrick::HTTPServer#start done.
Exiting
Terminate batch job (Y/N)? y
```

13. The following step is not necessary but will make you understand the problem. Notice the **ruby x86-mingw32** post-fix to the gem.
14.

```
C:\RubyMine\temp\RubyLect10.progs\hello>gem list bcrypt-ruby

*** LOCAL GEMS ***

bcrypt-ruby (3.0.1 ruby x86-mingw32)
```

15.

```
C:\RubyMine\temp\RubyLect10.progs\hello>gem uninstall bcrypt-ruby

You have requested to uninstall the gem:
        bcrypt-ruby-3.0.1-x86-mingw32

activemodel-3.1.0 depends on bcrypt-ruby (~> 3.0.0)
If you remove this gem, these dependencies will not be met.
Continue with Uninstall? [yN]  y
Successfully uninstalled bcrypt-ruby-3.0.1-x86-mingw32
```

16. Make sure you type the next command correctly, its: **gem install bcrypt-ruby --version=3.0.1 --platform=ruby**

17.

```
C:\RubyMine\temp\RubyLect10.progs\hello>gem install bcrypt-ruby --versi
--platform=ruby
Fetching: bcrypt-ruby-3.0.1.gem (100%)
Temporarily enhancing PATH to include DevKit...
Building native extensions.  This could take a while...
Successfully installed bcrypt-ruby-3.0.1
Parsing documentation for bcrypt-ruby-3.0.1
unable to convert "\x90" from ASCII-8BIT to UTF-8 for lib/bcrypt_ext.so
g
Installing ri documentation for bcrypt-ruby-3.0.1
1 gem installed
```

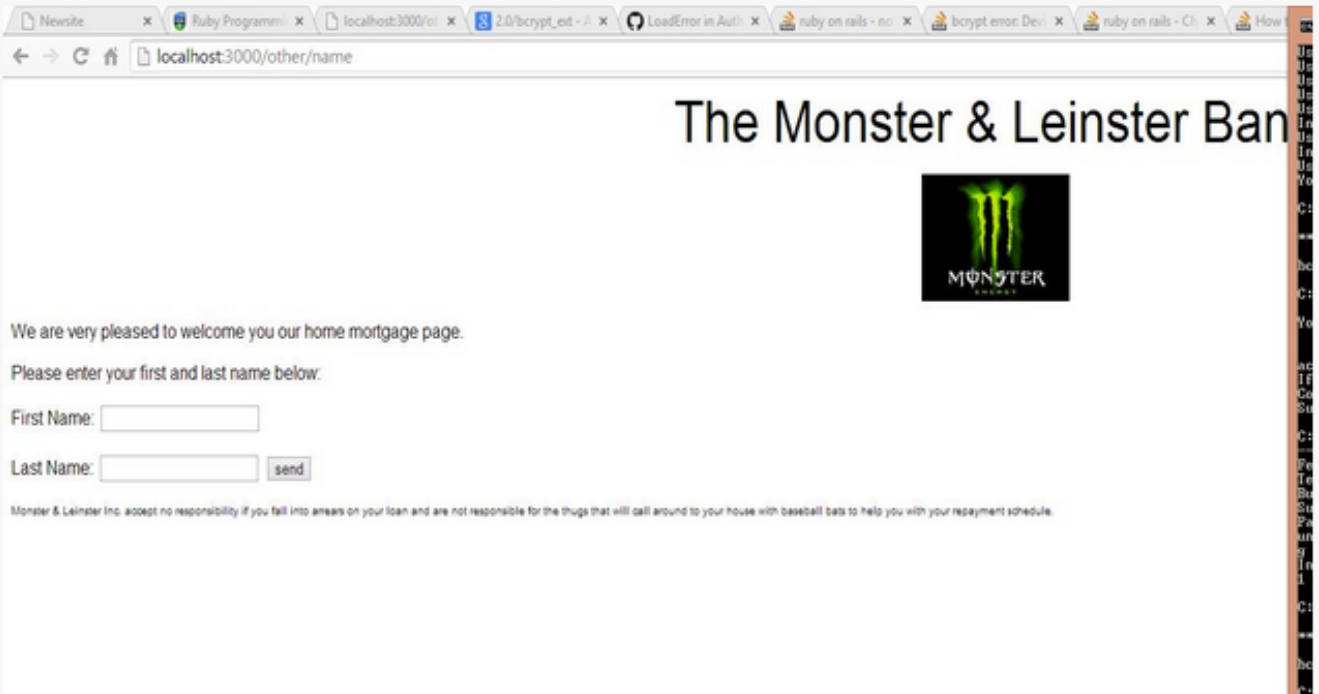
18. Again the following step is not necessary, compare the bcrypt-ruby gem description to the one in step 13. See the difference :)
19.

```
C:\RubyMine\temp\RubyLect10.progs\hello>gem list bcrypt-ruby

*** LOCAL GEMS ***

bcrypt-ruby (3.0.1)
```

20. Execute the server again: **rails server** and request the page in the browser. (http://localhost:3000/other/name)
21.



22. If you see an error page (sry I have no screenshot - post it if you can) you might be missing a system path variable - but I am not entirely sure. To fix this:
23. Install NodeJs from http://nodejs.org/dist/v0.10.22/node-v0.10.22-x86.msi
24. Restart your computer.
25. Run command prompt, navigate to the hello folder, execute the **rails server**, and request the page.