Ruby on Rails Intro

- Open-source web framework, like web2py, used to create web apps
- Uses the language Ruby instead of Python
- Uses a Model View Controller design
Ruby

- Ruby is a general object oriented programming language
- Ruby was created February 24, 1993 by Yukihiro Matsumoto

"I wanted a scripting language that was more powerful than Perl, and more object-oriented than Python."

~Yukihiro Matsumoto
Why Ruby on Rails

- Widely used in the industry
- It's purpose was to increase programmer happiness
- It's a very fast and productive way to create web applications
- Is it the best framework? That is left up to you to decide
Install

- Available for Windows, Mac, Linux
- Install Ruby, Rails, a Web server, A database system
- Procedure can be tough follow a tutorial for your specific OS

- This method worked for me on Ubuntu 12.04
INSTALL RUBY
sudo apt-get install ruby-full build-essential
sudo aptitude install ruby build-essential libopenssl-ruby ruby1.8-dev

INSTALL RUBYGEMS
sudo apt-get install rubygems
export PATH=/var/lib/gems/1.8/bin:$PATH
sudo apt-get install rubygems1.8
sudo gem install rubygems-update
sudo update-rubygems

INSTALL RAILS
sudo gem install rails

I had to do the following before an app would work
INSTALL sqlite3
sudo apt-get install libsdl-ruby
sudo gem install sqlite3-ruby

INSTALL A JAVASCRIPT RUNTIME
sudo apt-get install nodejs
Tools

• There are IDE's for developing Ruby on Rails apps (I don't have to much experience)
• Apanta Studio previously (RadRails)
• Eclipse works too...

• I'll be using the terminal on Ubuntu in this tutorial (folder locations may change)
Start a new app

//create a new app, move into its directory
$ rails new /home/myuser/www/newapp
$ cd /home/myuser/www/newapp
$ rails server //start the server

• Go to http://0.0.0.0:3000 to see the default page
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.
Models, views, controllers

- You can generate models, views, and controllers with scaffolding which creates a CRUD (create, read, update, delete) interface

EX.

```
$ rails generate scaffold NAME [field:type field:type] [options]
```

OR

- You can generate models, views, controllers manually

EX.

```
$ rails generate controller note NAME [action action] [options]  //for controller
                //and views

$ rails generate model NAME [field:type]
```
Database

- When you generate the model either with scaffold or manually it creates a model which is the same type of model web2py creates, basically a database table. To see the model we need to do a few things first.
  
  $ rake db:create
  
  $ rake db:migrate

- You can run sql commands with $ rails db:console

- Or check out the ./db directory for your model .rb file to edit it manually, similarly to editing .py database files in web2py
Magic

• Run this command

  $ rails generate scaffold notes name:string title:string contents:text

  Then

  $ rake db:migrate

• Go to http://localhost:3000/notes to see the magic
Click on 'New Note' and.. You'll see this nice little form
Next...

- Great but there's no index page, let's make one
- Generate the controller and view for the home page
  
  $ rails generate controller home index

- Then
  
  $ rake db:migrate

- Now you can find and edit the view of home in ./app/views/home/index.html.erb
Editing

• Edit the views
  
  $ edit app/views/notes/index.html.erb

  Ruby code is embedded into html using
  
  `<%=` similar to pythons `<%= }>` tags

  A link to your note add view pages
  would look like this

  `<%= link_to “View Notes”, notes_path %>`
  `<%= link_to “Create a note”, new_note_path %>`

• Edit the controllers

  $ edit app/controllers/...

• The controllers use ruby code
Now remove the current homepage
$ rm public/index.html

Next you have to create the url to your new home page using Rails routing
Routing

$ edit config/routes.rb

• You need to point the root to your new page
  add the line at the end
  root :to => 'home#index'

• Try http://localhost:3000 again...
After creating and viewing some notes, you get something like this:

---

**Listing notes**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Contents</th>
<th>Show</th>
<th>Edit</th>
<th>Destroy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis</td>
<td>My Note</td>
<td>This is the contents of my note</td>
<td>Show</td>
<td>Edit</td>
<td>Destroy</td>
</tr>
<tr>
<td>Joe</td>
<td>Note 2</td>
<td>Contents of note 2</td>
<td>Show</td>
<td>Edit</td>
<td>Destroy</td>
</tr>
</tbody>
</table>

New Note