



# Ruby on Rails

Jeremy Lightsmith

# Section I - Intro

- Hopes & Fears
- Intro
- Install Rails
- Watch the Ball
- Instant Gratification
- About Rails

# Hopes & Fears

# Intro

# What is Rails?

# Web Framework

ActionPack

ActiveRecord

ActiveSupport

ActionMailer

ActiveResource

# Convention over Configuration



Don't  
Repeat  
Yourself

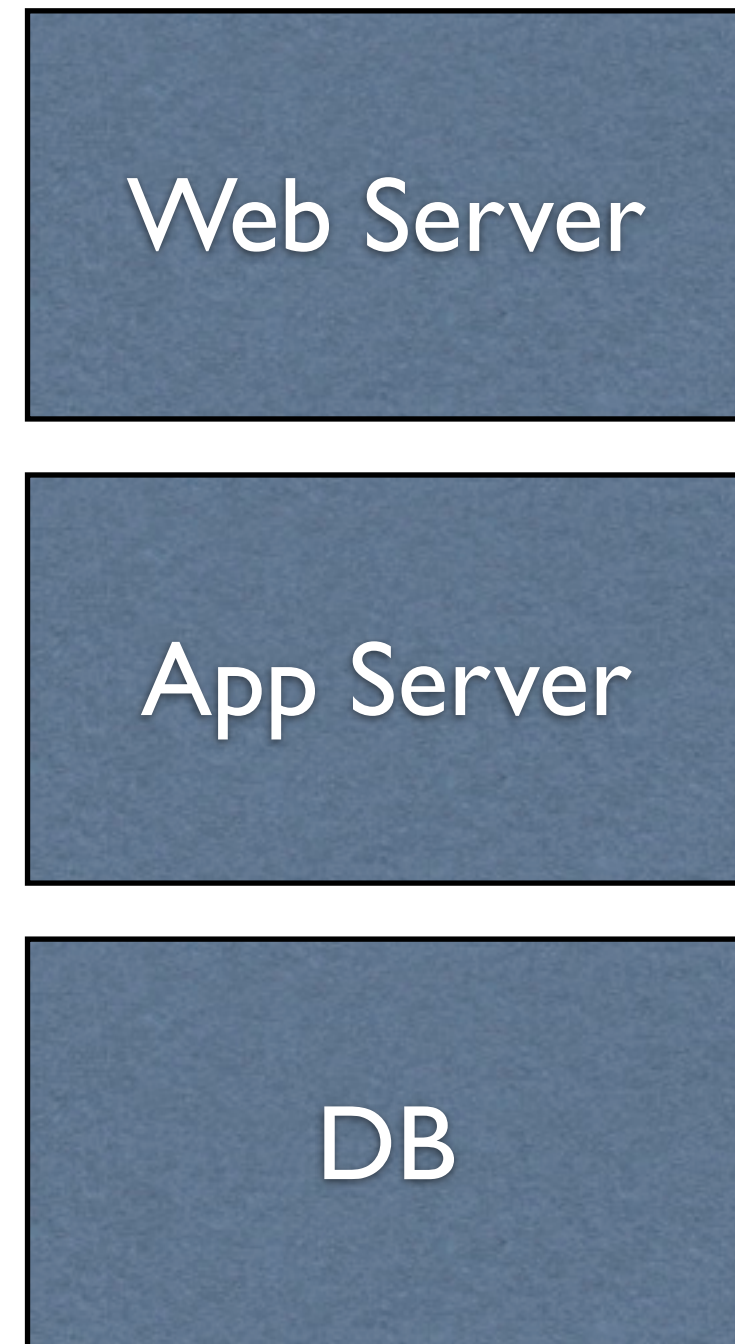
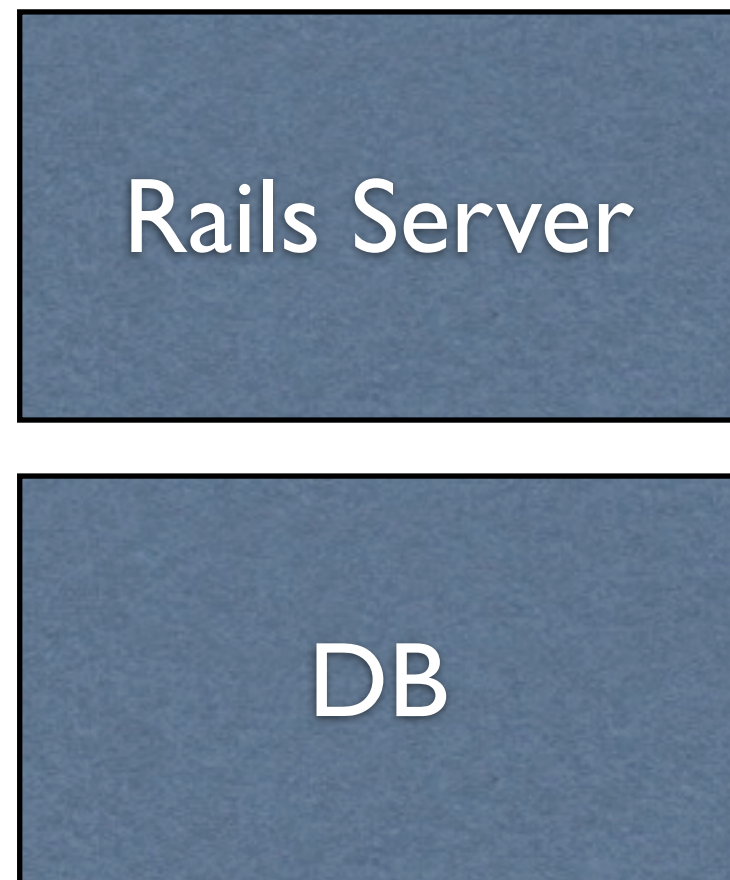
# Domain Specific Languages

**“magic”**  
possibly too much

# Why is Rails Important?

# Simplify


# 2 Tier vs 3 Tier



# Faster

# A History Lesson



37signals 

# A Better Way To Work.

Over 3 million people use our web-based apps to get things done the simple way.

- Nothing to download
  - Safe, secure, backed-up
  - Access from anywhere
  - Works on Mac, PC, Linux
  - No "IT Guy" required
  - Always up-to-date
- [More reasons](#) why web-based is better.

"One of the Net's rising stars." — **TIME**

"Reader's Choice." — **BusinessWeek**

[More praise from the press](#)

## Manage Projects and Collaborate with Your Team & Clients.

Share files, meet deadlines, assign tasks and centralize feedback.



**Basecamp**®

Manage Your Projects

## Track Your Contacts, Leads, and Deals. Always Be Prepared.

Keep track of past conversations, calls, and emails. Never forget to follow-up.



**Highrise**®

Track Your Contacts

## Organize and Share Information Across Your Business.

The quickest way to create and share information with your whole team.



**Backpack**®

Organize Your Business

## Real-Time Chat, File & Code Sharing for Remote Teams.

Campfire is like instant messaging, but designed specifically for groups.



**Campfire**™

Chat with Your Group



**David  
Heinemeier  
Hansson**





# JUNE 7-10 2010

BALTIMORE, MARYLAND

[HOME](#) [PROPOSALS](#) [ABOUT](#) [EXHIBIT HALL](#) [CONNECT](#) [MORE RAILS](#) [YOUR ACCOUNT](#)



## RAILSCONF 2010 CALL FOR PARTICIPATION IS NOW OPEN

TWITTER

(OFFICIAL TAG: #RAILSCONF) —

- @jeffcohen sure, RailsConf is probably cool and all. But what about Chicago

- BaseCamp
- CrunchBase
- Github
- Hulu
- Penny Arcade
- Scribd
- Shopify
- Spiceworks
- Twitter
- Urban Dictionary
- XING
- Yellowpages.com

**Rails == Agile**

# This Class

- 10 weeks
- Lecture / Lab ~ 33% / 66%
- Working in rotating pairs
- Grading in class / on board

# To Pass

- Attendance
  - 80% of classes
  - 20 min late == absence
- 100% of assignments
- project that meets requirements

# Project Requirements

- at least 3 tables / models
- tests (model & controller)
- some client-side javascript
- validation
- login / signup (or equivalent complexity)
- must be “approved”



# Resources

- Homework completion sheet
- Mailing List
- The Book
  - Agile Web Developement w/ Ruby on Rails
- <http://apidock.com/>
- [jeremy.lightsmith@gmail.com](mailto:jeremy.lightsmith@gmail.com)
- 312-953-1193

# Install Rails

# Pass the Stewie

[Google Search](#)[I'm Feeling Lucky](#)[Advanced Search](#)  
[Language Tools](#)

[Information, resources, and ways you can help](#) survivors of the Haiti earthquake.

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

©2010 - [Privacy](#)

**You**Tube

Broadcast Yourself™

[Home](#) [Videos](#) [Channels](#) [Shows](#)[Search](#)**Recommended for You** ([view all](#)) [Learn More](#)**Haiti Earthquake  
Emergency Appea...**13 hours ago  
311 views  
★★★★★  
[internetguide4muslim](#)**FeFe "Mr.UnPlug"-  
Ayl ti Deploge**1 year ago  
32,759 views  
★★★★★  
[BrothersDredProd](#)**Your media on the  
Haiti earthquake**1 day ago  
4,937 views  
★★★★★  
[AJazeeraEnglish](#)**Muslim Aid - Haiti  
Earthquake EM...**14 hours ago  
206 views  
★★★★★  
[MuslimAidUK](#)**Haiti Earthquake,  
Dominican Repu...**1 day ago  
7,338 views  
no rating  
[newstop04](#)**Haiti earthquake  
aftermath (Warn...**1 day ago  
2,513 views  
★★★★★  
[gmbrenzo](#)**Haiti Earthquake:  
Thousands Fear...**19 hours ago  
7,020 views  
★★★★★  
[skynews](#)**Haitians fight poverty  
with art ...**1 month ago  
3,956 views  
★★★★★  
[AJazeeraEnglish](#)**flickr**[Create Your Account](#)

Only takes a moment with your Yahoo! ID

**Share your photos.  
Watch the world.**AND  
VIDEO[SEARCH](#)5,214 uploads in [the last minute](#) · 6,292 things tagged with [fresco](#) · 2.5 million things [geotagged](#) this month · [Take the tour](#)**flickr** from Yahoo!Signed in as [Jeremy Lightsmith](#) [Sign Out](#)[Home](#) [You](#) [Organize & Create](#) [Contacts](#) [Groups](#) [Explore](#) [Search](#)**Tere Jeremy Lightsmith!**

Now you know how to greet people in Estonian!

» [Your Photostream](#) [pro](#)Recent Uploads | [Recent Activity](#)» [Upload Photos & Video](#)[Flickr Blog](#)

Posted 13 Jan 10

**Favorites of favorites of favorites**  
Looking for new content on Flickr, but want a more personalized 'explore' experience? Look no farther than m'ckr, an application...» [Your Contacts](#)Photos From | [Photos Of](#)From [dave @ zaslca](#)From [dave @ zaslca](#)From [reahervykoze](#)From [reahervykoze](#)From [reahervykoze](#)[Stay in \(or out of\) the loop](#)Twiddle various knobs to [control when you want updates from friends](#).[Make stuff with your photos](#) [\(hide\)](#)[Make Prints](#): Print your favorite photos with Snapfish[Design a Card](#): Customize cards with your

# Instant Gratification

# About Rails

# Directory Structure

# Naming Conventions



# script/console

# Rails Code

# Active Support Extensions

- date / time
  - 5.seconds.ago
  - Date.today.to\_s(:db)
- string helpers - pluralize, classify, underscore, etc
- blank?

# Environments

# Section 2 - Models

- database.yml
- Migrations
- Active Record Models
- Active Record Relationships
- Active Record Validations

# database.yml

# Migrations



**script/generate model post**

# Active Record Models

# Active Record Relationships

belongs\_to

**has\_many**

has\_one

has\_many :through

# Active Record Validations



`validates_presence_of`  
`validates_uniqueness_of`  
`validates_length_of`  
...

# Section 3 - Agile Practices

- Testing in Rails (5)
- Red, Green, Refactor (15)
- Ping Pong Pairing (60)
- Going Further (5)
- Test Models (60)
- Fixtures (10)

# Testing in Rails

test/  
  fixtures/  
  functional/  
  integrational/  
  performance/  
  unit/  
  test\_helper.rb

# Red, Green, Refactor

Make it fail,

Make it pass

Make it clean

# Refactoring?

changing

**STRUCTURE**  
**!BEHAVIOR**



# Ping Pong Pairing

# Going Further

# What to test?

*Stuff to know about that  
we won't use here*

# Behavior Driven Design

# rSpec

# Shoulda

# Acceptance Test Driven Design



# Cucumber

# Autotest

# Test Models

# Fixtures

# Section 4 - Controllers

- Retrospective (20)
- Routes (20)
- REST (20)
- RESTful Controllers & Views (1:30)

# Retrospective

# Routes

# Review : Pass the Stewie



# example 4.1

# REST

# It's about the internet

every **RESOURCE**  
has **ONE** name

**txt**  
**xml** **vml**  
**html** **pdf**

different versions of  
same resource

consistent **VERBS**  
to access **RESOURCES**

**GET**  
**PUT** **POST**  
**DELETE**

**POST**

**GET**

**PUT**

**DELETE**

**CREATE**

**READ**

**UPDATE**

**DELETE**



CRUD	REST verb	Rails method
create	POST	create (new)
read	GET	show, index
update	PUT	update (edit)
delete	DELETE	destroy

# example 4.2

# RESTful Controllers & Views

watch Jeremy code

get music project  
building & running

# homework 4.3

# Section 5 - Views

- About Views
  - Templates, Partials, Layouts, Helpers
- CSS
- Other view options
- Pagination

# About Views



# Templates

<% “something” %>

vs

<%= “something” %>

`<%=h params[:name] %>`

# Partials

# Layouts

# Helpers

# CSS

**HTML == Structure**



CSS == Style

```
.album .about h1 {  
    font-size: 22px;  
    margin-top: 0;  
}
```

# Pagination

# Will Paginate

[http://wiki.github.com/mislav/will\\_paginate/](http://wiki.github.com/mislav/will_paginate/)

# In your controller...

```
@posts = Post.paginate :page => params[:page],  
                        :order => 'created_at DESC'
```

# In your view...

```
<%= will_paginate @posts %>
```

# Other View Options

# ERB

```
<div id="profile">
  <div class="left column">
    <div id="date"><%= print_date %></div>
    <div id="address"><%= current_user.address %></div>
  </div>
  <div class="right column">
    <div id="email"><%= current_user.email %></div>
    <div id="bio"><%= current_user.bio %></div>
  </div>
</div>
```



# HAML

```
#profile
  .left.column
    #date= print_date
    #address= current_user.address
  .right.column
    #email= current_user.email
    #bio= current_user.bio
```

# Homework

# Install Image Magick

- You can tell it works, by downloading and running the music example. It should correctly resize a photo.

# Section 6 - Plugins

- Projects?
- Plugins
- Upload/Resize a photo
- Logging In/Out

# Projects?

# Plugins

# Upload/Resize a Photo

# Upload a File



# Upload a Photo

# Resize a Photo

# Loggin In / Out

# Session

before\_filter

# helper\_method

# Section 7 - AJAX

- AJAX
- RJS Templates
- jQuery
- Firebug

# AJAX



# RJS Templates

# jQuery

# Firebug

# Section 8 - Deployment

- Heroku
- E-mail
- Capistrano
- Other Deployment Options
- Deployment Strategies

# Heroku

# E-Mail

# Capistrano

# Other Deployment Options



# Deployment Strategies

# Section 9 - Advanced

- Caching
- Searching

# Caching

# Searching

# Section 10 - Project Demos

- Project Demos

# Project Demos