

INTRODUCTION TO RUBY AND RAILS WITH
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RUBY IS ...

- DYNAMIC
- INTERPRETED
- OPEN SOURCE
- OBJECT ORIENTED
- FOCUSED ON DEVELOPER PRODUCTIVITY (SUGAR)

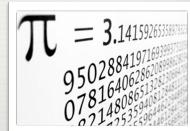
```
#!/usr/bin/env ruby
# encoding UTF8-
love = "Ruby" # => Ruby-
puts "Hello #{love}." # => Hello Ruby.-
puts "where have you been all my life, #{love.class}?"#
# => where have you been all my life, String?-
puts nil.object_id # => 4-
3.times do |i|
  puts i-
end-
# => 0, 1, 2
```

Class Exercises

- ➊ IRB
- ➋ Output "Hello World"
- ➌ Get the object_id of String
- ➍ Output 'Ho Ho Ho Ho Ho Ho' in 12 Characters or less

VARIABLES

- foo = Local variable
- @foo = Instance variable
- @@foo = Class variable
- FOO = Constant
- \$foo = Global (not recommended)
- :foo = Symbol



FLOW CONTROL

- ==, !=, ||, ss
- if/elsif/else/end
- unless
- condition ? true : false
- case
- while
- each



IF AND UNLESS

```
name = 'Scott'  
if name == 'Scott'  
  puts 'Oh Hai!!!'  
elsif name == 'Barrett'  
  puts 'Howdy'  
else  
  puts 'Hello'  
end  
  
is_gone = true  
puts 'Hello' unless is_gone
```

CASE

```
name = 'Scott'  
case name  
when 'Scott' then  
  puts "Hello #{name}"  
when 'Barrett' then  
  puts "Howdy #{name}"  
else  
  puts 'Hi!!!'  
end
```

WHILE

```
counter = 1
file = File.new("readfile.rb", "r")
while (line = file.gets)
  puts "#{counter}: #{line}"
  counter = counter + 1
end
file.close
```

```
while true
  puts "This is the song that never ends"
  sleep 5
end
```

EACH

```
for (i=0; i<=3; i+=1) do
  puts i
end
=> SyntaxError
```

```
for i in 0..3
  puts i
end
```

```
fruits = ['apple', 'orange', 'pear']
fruit.each do |fruit|
  puts "#{fruit} for sale!"
end
```

ENUMERABLE

Ranges ..)

(0..2), (0...2)

Arrays []

push, pop, [], [], <=>, -1, %w(1 2)

Hashes {}

h = { :key => "value", :key2 => "value2" }

h = { key: "value", key2: "value2" } # Ruby 1.9.x

h[:key] = "value"



Class Exercises

- ① Print your name 10 times
- ② Print "This is sentence number #' with 1-10
- ③ Print each letter of your name on a line
 - ④ [note] "String".split("//) returns an Array
- ⑤ Create a hash with your first and last name

CLASSES

- class MyClass< Superclass
end
- new
- initialize
- private/protected/public
- self



METHODS & BLOCKS

```
def method (val, arg=d, *args, &block)
  # content
end
```

```
[1,2,3,4].map { |x| x * 2 } #=> [2,4,6,8]
```

```
[1,2,3,4].map do |x|
```

```
  x * 2
```

```
end #=> [2,4,6,8]
```

```
yield
```



YIELD

```
def test
  yield 5
  puts "You are in the method test"
  yield 100
end
test { |i| puts "You are in the block #{i}"}

You are in the block 5
You are in the method test
You are in the block 100
```

OBJECT MODEL



MODULES

- module MyModule <Superclass
 - new
 - initialize
 - Base::Child::Name::Space
 - Mix-in (include & extend)



META-PROGRAMMING

- open class
- eigenclass, meta-class, singleton
- reflection
 - inspect, methods
 - class, superclass, constantize
- eval
 - instance_eval, class_eval,
 - instance_variable_get [iset], define_method
- method_missing



Class Exercises

- ➊ Write my_times
- ➋ Write my_attr_accessor

BREAK

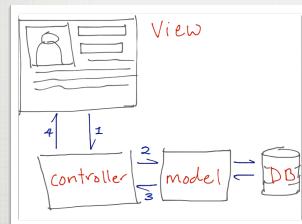


RAILS IS ...

- RUBY
- DAVID HEINEMEIER HANSSON
- MVC FRAMEWORK
- CONVENTION OVER CONFIGURATION
- OPINIONATED

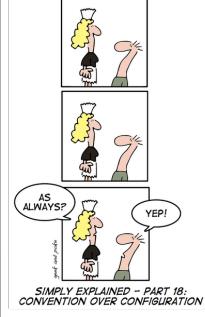


MVC



1. RECEIVE REQUEST
2. DETERMINE ACTION & DRIVE MODELS
3. COLLECT DETAILS FROM MODELS
4. DISPLAY RESULTS

CONVENTION CONFIGURATION



CONVENTION CONFIGURATION

```
# app/models/answer.rb
class Answer < ActiveRecord::Base
  attr_accessible :question_id, :sequence, :text, :value
  belongs_to :question
  validates_uniqueness_of :sequence, :scope => :question_id
  validates_uniqueness_of :value, :scope => :question_id
end
```

```
# app/controllers/answers_controller.rb
class AnswersController < ApplicationController
  before_filter :set_current_question
  # GET /answers
  # GET /answers.json
  def index
    @answers = Answer.all
  end
end
```

ANSWERS

Name	Type
id	int
question_id	int
text	text
sequence	int
value	varchar



OPINIONATED



Class Exercises

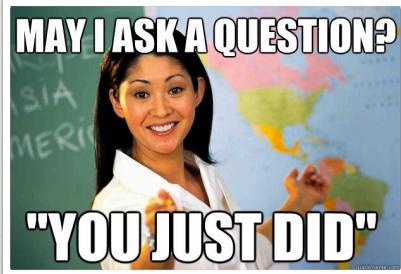
- ➊ gem install rails
- ➋ rails new say
- ➌ cd say
- ➍ rails s[erver]
- ➎ <http://localhost:3000/index.html>
- ➏ rails g scaffold greeting
- ➐ rake db:migrate



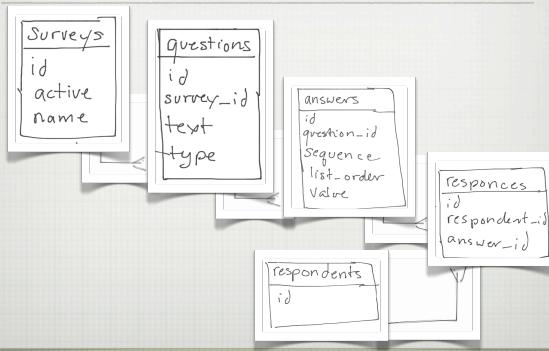
Class Exercises

- ➊ Add custom greeting views
- ➋ hello
- ➌ goodbye
- ➍ Add routes
- ➎ Add link_to goodbye on hello

BUILD A SURVEY APPLICATION



MODEL OUR APP



Class Exercises

- ➊ Rails new Survey
- ➋ Rails Status Page
- ➌ git init; add; commit -m
- ➍ rails scaffold survey name:string
- ➎ rake db:migrate
- ➏ rails s

The Console

```
$ rails c[onsole]  
  
Loading development environment (Rails 3.2.8)  
  
>> survey = Survey.new  
  
SCHEMA (2.8ms) PRAGMA table_info("surveys")  
SCHEMA (0.1ms) SELECT name FROM sqlite_master WHERE type =  
'table' AND NOT name = 'sqlite_sequence' AND name = "surveys"  
SCHEMA (0.1ms) PRAGMA table_info("surveys")  
  
=> #<Survey id: nil, name: nil, created_at: nil, updated_at: nil>
```

Database CLI

```
$ rails db  
  
SQLite version 3.7.13 2012-06-11 02:05:22  
Enter ".help" for instructions  
Enter SQL statements terminated with a ";"  
sqlite> select * from surveys;  
1|survey1|2012-08-24 01:30:43.312135|2012-08-24 01:30:43.312135  
2|survey2|2012-08-24 01:45:12.614149|2012-08-24 01:45:21.124396  
  
sqlite> .quit
```

Class Exercises

- ➊ rails g scaffold questions text:string kind:string
- ➋ rails g scaffold answers question_id:integer text:string sequence:integer value:string
- ➌ rails g scaffold responses answer_id:integer respondent_id:integer
- ➍ rails g scaffold respondent
- ➎ rake db:migrate

git clone git://github.com/
barrettclark/rails_intro.git

Whoo!

Class Exercises

- ➊ rails g controller Interview
- ➋ code walk through
- ➌ InterviewController
- ➍ No model
- ➎ Views
- ➏ start -> next -> done

TIPS AND TRICKS

- RAILS SERVER
- RAILS CONSOLE
- RAILS DB
- RAKE -T
- RAKE DB:MIGRATE
- RAKE ROUTES
- FAIL @OBJECT.INSPECT

RESOURCES

- [HTTP://WWW.RUBY-LANG.ORG/EN/DOCUMENTATION/](http://WWW.RUBY-LANG.ORG/EN/DOCUMENTATION/)
- [HTTP://WWW.CODEACADEMY.COM/TRACKS/RUBY](http://WWW.CODEACADEMY.COM/TRACKS/RUBY)
- [HTTP://WWW.RUBY-DOC.ORG/CORE-1.9.3/ARRAY.HTML](http://WWW.RUBY-DOC.ORG/CORE-1.9.3/ARRAY.HTML)
- [HTTP://GUIDES.RUBYONRAILS.ORG/](http://GUIDES.RUBYONRAILS.ORG/)
- [HTTPS://GITHUB.COM/RAILS/RAILS](https://GITHUB.COM/RAILS/RAILS)
- [HTTP://PRAGPROG.COM/BOOK/RAILS2/AGILE-WEB-DEVELOPMENT-WITH-RAILS](http://PRAGPROG.COM/BOOK/RAILS2/AGILE-WEB-DEVELOPMENT-WITH-RAILS)
- [HTTP://PRAGPROG.COM/BOOK/RUBY3/PROGRAMMING-RUBY-1.9](http://PRAGPROG.COM/BOOK/RUBY3/PROGRAMMING-RUBY-1.9)

[HTTP://WWW.RUBY-LANG.ORG/EN/](http://WWW.RUBY-LANG.ORG/EN/)
[HTTP://RUBYONRAILS.ORG/](http://RUBYONRAILS.ORG/)
[HTTP://BUTTERSCOTCHFART.DEVANTART.COM/ART/SAY-HELLO-TO-MY-BEST-FRIEND-50539303](http://BUTTERSCOTCHFART.DEVANTART.COM/ART/SAY-HELLO-TO-MY-BEST-FRIEND-50539303)
[HTTP://GRAND-CANYON.COM/HELICOP.HTML](http://GRAND-CANYON.COM/HELICOP.HTML)
[HTTP://WWW.ODEC.CA/PROJECTS/2006/RUDNG612/OVERVIEW.HTML](http://WWW.ODEC.CA/PROJECTS/2006/RUDNG612/OVERVIEW.HTML)
[HTTP://CIRCA71.WORDPRESS.COM/2012/03/14/HAPPY-%CF%80/PI/](http://CIRCA71.WORDPRESS.COM/2012/03/14/HAPPY-%CF%80/PI/)
[HTTP://GOHAWAII.ABOUT.COM/OD/DAHUPHOTOS/1G/USS-BOWFIN-PHOTO-GALLERY/USS-BOWFIN-017.HTM](http://GOHAWAII.ABOUT.COM/OD/DAHUPHOTOS/1G/USS-BOWFIN-PHOTO-GALLERY/USS-BOWFIN-017.HTM)
[HTTP://WWW.SIMPLYRECIPES.COM/RECIPES/CRISPY-HASH-BROWNS/](http://WWW.SIMPLYRECIPES.COM/RECIPES/CRISPY-HASH-BROWNS/)
[HTTP://AARDVARKIAN.COM/TAG/SPACESHIPS/](http://AARDVARKIAN.COM/TAG/SPACESHIPS/)
[HTTP://WWW.FITSNEWS.COM/2011/09/05/STAY-CLASSY-PC/](http://WWW.FITSNEWS.COM/2011/09/05/STAY-CLASSY-PC/)

[HTTP://WWW8.OPEN.AC.UK/RESEARCHPROJECTS/ENDURINGLOVE/METHODS](http://www8.open.ac.uk/researchprojects/enduringlove/methods)

[HTTP://LVSYS.COM/WEBSITE-CMS-MODULES](http://lvsy.s.com/website-cms-modules)

[HTTP://RLV.ZCACHE.COM/](http://rlv.zcache.com/)

[HTTP://GEEKANDPOKE.TYPEPAD.COM/GEEKANDPOKE/2008/06/SIMPLY-EXPLAIN.HTML](http://geekandpoke.typepad.com/geekandpoke/2008/06/simply-explain.html)

[HTTP://WWW.VRB.ORG/PAST-ISSUES/1.2004/34](http://www.vrb.org/past-issues/1.2004/34)

[HTTP://CBEAMS.GITHUB.COM/SPRING-3.1-CONFIG/#1](http://cbeams.github.com/spring-3.1-config/#1)

[HTTP://SEASONTOTASTEWORDPRESS.COM/TAG/EASY-BAKE-OVEN-RECIPES/](http://seasontotasteblog.wordpress.com/tag/easy-bake-oven-recipes/)

[HTTP://WWW.GASCONVECTIONOVEN.ORG/](http://www.gasconvectionoven.org/)

[HTTP://WWW.THEMORNINGNEWS.ORG/ARTICLE/FIFTEEN-PRUDENT-GIFTS-FOR-THE-BUDGET-MINDED](http://www.themorningnews.org/article/fifteen-prudent-gifts-for-the-budget-minded)

[HTTP://STEVEСПIZZA.COM/MENUS/MENUS.HTML](http://stevespizza.com/menus/menus.html)

[HTTP://WWW.THEGREATSTEAK.COM/MENU/KIDS_MEALS.HTML](http://www.thegreatsteak.com/menu/kids_meals.html)

[HTTP://WWW.QUICKMEME.COM/MEME/352L83/](http://www.quickmeme.com/meme/352l83/)