

Ruby On Rails

A brief tutorial

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- ◆ Introduce Rails via these slides
- ◆ Show me the code!
 - ◆ Code up a Rails application from scratch

(This tutorial assumes a very limited knowledge of Ruby ... did you attend Premshree or Yogi's talks?)

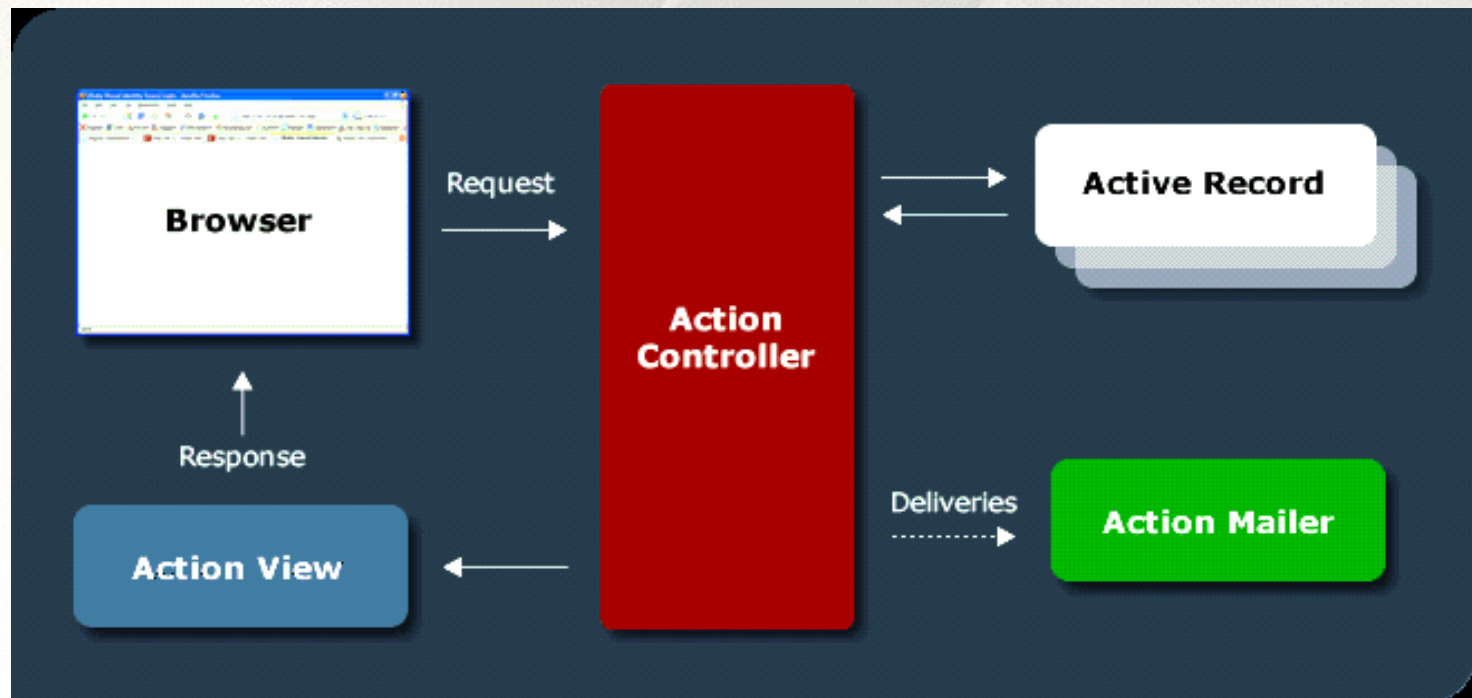
“Rails is a full-stack, open-source web framework in Ruby for writing real-world applications with joy and less code than most frameworks spend doing XML sit-ups”
Rails Creator - David H. Hansson

What is Rails

- ◆ Full Stack
 - ◆ Model (Object Relation Mapping) – Active Record
 - ◆ View – Action View +ERb
 - ◆ Controller – Action Controller
 - ◆ Mail integration – ActionMailer
 - ◆ Web Services – Action Web services
- ◆ ..therefore, all layers work seamlessly (DRY)



The Rails request cycle



Automated mappings :

Given this table..

```
CREATE TABLE entries (  
  id int(11) NOT NULL auto_increment,  
  name varchar(255),  
  comments varchar(255),  
  PRIMARY KEY (id)  
);
```


You can do

```
class Entry < ActiveRecord::Base
  # nothing here!
end
```

```
entry = Entry.new
entry.name = "John"
entry.comments = "What a great Web site!"
entry.save
```

```
entry = Entry.find(1)
puts entry.name # output: "John"
```



◆ Associations only need to be declared

```
class Firm < ActiveRecord::Base
  has_many :clients
  has_one :account
  belongs_to :conglomerate
end
```

```
firm.clients.each do |client| {...}
firm.has_clients?
```


- ◆ Action Controller
 - ◆ Handles the entire request cycle
 - ◆ Actions grouped into Controller
 - ◆ Each action is method in the controller class
 - ◆ Instance variables are passed to the view

```
class GuestbookController <
  ActionController::Base
  def index
    @entries = Entries.find_all
  end
end
```



- ◆ Templates in Embedded Ruby (like JSP or ASP)
- ◆ Expression language is Pure Ruby
- ◆ Helper classes provide common functionality for strings, dates, forms etc.

```
<html>
  <body>
    <h1>Cookbook</h1>
    <% for e in @entries %>
      <p><%= e.name %>: <%= e.description %></p>
    <% end %>
  </body>
</html>
```



◆ Integrate e-mails from Rails applications

```
# send email with attachment
def report_notification(recipient)
  recipients recipient.email_address_with_name
  subject "Your Report"
  from "owner@app.com"

  attachment :content_type => "image/gif", :body =>
    File.read("logo.gif")

  attachment "image/gif" do |a|
    a.body = generate_chart()
  end
end
end
```



Action Web Services

- ◆ Server side WS and XML-RPC protocols
- ◆ Export API's as Web Services



Demo

Build a web based cookbook, live, from scratch.

For reference, some of the steps we will go through are illustrated in the following slides. However, for the tutorial, we will write the code directly ourselves!



Downloads and Installation

◆ Install Ruby

- ◆ On Windows you can use the One-Click installer. For other platforms, use your platform packages

◆ Install RubyGems (a ruby package management system)

- ◆ Download from <http://rubyforge.org/projects/rubygems/>
- ◆ Unpack the downloaded archive and in that directory run the command:

```
ruby install.rb
```

◆ Install Rails

- ◆ From the command line execute: From the command line execute:

```
gem install rails
```



- ◆ Generate Application Structure
`$ rails cookbook`
- ◆ Create Database
- ◆ Generate Models and Controllers
- ◆ Use scaffold to create basic app

- ◆ Flesh out the application
 - ◆ Create Views
 - ◆ Use partials and helpers
 - ◆ Use layouts
 - ◆ Implement Validations
 - ◆ Model complex relationships



- ◆ Callbacks
- ◆ Transactions
- ◆ Caching
- ◆ Rails makes AJAX easy
 - ◆ Go to Vamsee Kankala's tutorial
- ◆ Rails makes testing easy
 - ◆ Again, go to Vamsee's tutorial

Questions?



Curiosity killed the cat... or did it?

- ◆ This presentation inspired by
 - ◆ Rolling with Rails (OnLamp) by Curt Hibbs
 - ◆ <http://www.onlamp.com/pub/a/onlamp/2005/01/20/rails.html>
 - ◆ Presentation at Chicago ACM by Ryan Platte and John W. Long
 - ◆ <http://www.ruby-doc.org/docs/Get to the Point Development with>

- ◆ Main Ruby Site
 - ◆ <http://www.ruby-lang.org>
- ◆ One Click Ruby Installer for Windows
 - ◆ <http://rubyinstaller.rubyforge.org>
- ◆ Main Rails Site
 - ◆ <http://www.rubyonrails.org>
- ◆ This presentation
 - ◆ <http://www.sengupta.net/talks/>

