DOCUMENTATION IS FREAKING AWESOME

a magical afternoon with Kyle Neath

Kyle Neath is...

~designer

@

github

SOCIAL CODING

@kneath

warpspire.com

A favorite pastime...

Building small projects with ruby

There's a library for almost everything

It’s not if the library exists…

It’s whether I can figure out how to use the @!&*# thing

Documentation is...

```ruby
##############################################################################
#
# Tags
#
##############################################################################

# Extract all tags into the tagmap and replace with placeholders.
#
# data - The raw String data.
#
# Returns the placeholder'd String data.
def extract_tags(data)
  data.gsub(/(.?)\[\[(.+?)\]\]([^\[]?)/m) do
    if $1 == '\'' && $3 != '\''
      "[[#{$2}]]#{$3}"
    elsif $2.include?('][')
      $&
    else
      id = Digest::SHA1.hexdigest($2)
      @tagmap[id] = $2
      "#{$1}#{id}#{$3}"
    end
  end
end

# Process all tags from the tagmap and replace the placeholders with the
# final markup.
```

CODE COMMENTS

First there was RDoc

rdoc.sourceforge.net

"latest via CVS"

Ruby on Rails v3.0.3

File

README.rdoc

Path: README.rdoc
Modified: Tue Nov 16 17:09:19 +0000 2010

Welcome to Rails

Rails is a web-application framework that includes everything needed to create database-backed web applications according to the Model-View-Control pattern.

This pattern splits the view (also called the presentation) into "dumb" templates that are primarily responsible for inserting pre-built data in between HTML tags. The model contains the "smart" domain objects (such as Account, Product, Person, Post) that holds all the business logic and knows how to persist themselves to a database. The controller handles the incoming requests (such as Save New Account, Update Product, Show Post) by manipulating the model and directing data to the view.

In Rails, the model is handled by what's called an object-relational mapping layer entitled Active Record. This layer allows you to present the data from database rows as objects and embellish these data objects with business logic methods. You can read more about Active Record in its README.

The controller and view are handled by the Action Pack, which handles both layers by its two parts: Action View and Action Controller. These two layers are bundled in a single package due to their heavy interdependence. This is unlike the relationship between the Active Record and Action Pack that is much more separate. Each of these packages can be used independently outside of Rails. You can read more about Action Pack in its README.

Getting Started

1. Install Rails at the command prompt if you haven't yet:

```
gem install rails
```

2. At the command prompt, create a new Rails application:

```
rails new myapp
```

   where "myapp" is the application name.

3. Change directory to `myapp` and start the web server:

RDoc Documentation [ruby-doc.org]

Files

array.c
bignum.c
class.c
compar.c
compile.c
complex.c
cont.c
debug.c
dir.c

Classes

ARGF
ArgumentError
Array
BasicObject
Bignum
Binding
Class
Comparable
Complex

Methods

!~ (Object)
% (Fixnum)
% (Numeric)
% (Bignum)
% (String)
% (Float)
& (Bignum)
& (NilClass)
& (FalseClass)

Class **ArgumentError**

In: error.c
Parent: StandardError
Ruby version: Ruby 1.9.2

Raised when the arguments are wrong and there isn't a more specific Exception class.

Ex: passing the wrong number of arguments

```
[1, 2, 3].first(4, 5)
```

raises the exception:

```
ArgumentError: wrong number of arguments (2 for 1)
```

Ex: passing an argument that is not acceptable:

```
[1, 2, 3].first(-4)
```

raises the exception:

```
ArgumentError: negative array size
```

Then there was YARD

yardoc.org

Class List
Classes | Methods | Files
Search:

Top Level Namespace
Array < Object
File < Object
Hash < Object
Insertion < Object
Module < Object
String < Object
SymbolHash < Hash
▼ YARD
▸ CLI
▸ CodeObjects
Config < Object
Docstring < String
▸ Handlers
Logger < Logger
▸ Parser
▸ Rake
Registry
RegistryStore < Object
▸ Serializers
▸ Server
▸ Tags
▸ Templates
Verifier < Object

Libraries » yard (0.6.4) » Index » File: README (no frames)

Search: Search

YARD: Yay! A Ruby Documentation Tool

Homepage: http://yardoc.org
IRC: irc.freenode.net / #yard
Git: http://github.com/lsegal/yard
Author: Loren Segal
Contributors: See Contributors section below
Copyright: 2007-2010
License: MIT License
Latest Version: 0.6.4 (codename "Snowy White Picket Fences")
Release Date: December 21st 2010

Synopsis

YARD is a documentation generation tool for the Ruby programming language. It enables the user to generate consistent, usable documentation that can be exported to a number of formats very easily, and also supports extending for custom Ruby constructs such as custom class level definitions. Below is a summary of some of YARD's notable features.

Feature List

1. RDoc/SimpleMarkup Formatting Compatibility: YARD is made to be compatible with RDoc formatting. In fact, YARD does no processing on RDoc documentation strings, and leaves this up to the output generation tool to decide how to render the documentation.

2. Yardoc Meta-tag Formatting Like Python, Java, Objective-C and other languages: YARD uses a '@tag' style definition syntax for meta tags alongside regular code documentation. These tags should be able to happily sit side by side RDoc formatted documentation, but provide a much more consistent and usable way to describe important information about objects, such as what parameters they take and what types they are expected to be, what type amethod should return, what exceptions it can raise, if it is deprecated, etc.. It also allows information to be better (and more consistently) organizedduring the output generation phase. You can find a list of tags in the Tags.md file.

YARD also supports an optional "types" declarations for certain tags. This allows the developer to document type signatures for ruby methods and parameters in a non intrusive but helpful and consistent manner. Instead of describing this data in the body of the description, a developer may formally declare the parameter or return type(s) in a single line. Consider the following Yardoc'd method:

And of course TomDoc

tomdoc.org


FACT
TomDoc will save the world
Photo Credit: Claude Nix


Unless you want
generated docs
Photo Credit: Claude Nix

YARD & RDoc are highly structured

```ruby
# Reverses the contents of a String or IO object.
#
# @param [String, #read] contents the contents to reverse
# @return [String] the contents reversed lexically
def reverse(contents)
  contents = contents.read if respond_to? :read
  contents.reverse
end
```

TomDoc is lightly structured

```
# Extract all code blocks into the codemap and replace
# with placeholders.
#
# data - The raw String data.
#
# Returns the placeholder'd String data.
def extract_code(data)
  ...
end
```

Also, tools like docco

rocco, pycco, shocco

Main Documentation Generation Functions

Generate the documentation for a source file by reading it in, splitting it up into comment/code sections, highlighting them for the appropriate language, and merging them into an HTML template.

```coffee
generate_documentation = (source, callback) ->
  fs.readFile source, "utf-8", (error, code) ->
    throw error if error
    sections = parse source, code
    highlight source, sections, ->
      generate_html source, sections
      callback()
```

Given a string of source code, parse out each comment and the code that follows it, and create an individual **section** for it. Sections take the form:

```
{
  docs_text: ...
  docs_html: ...
  code_text: ...
  code_html: ...
}
```

```coffee
parse = (source, code) ->
  lines    = code.split '\n'
  sections = []
  language = get_language source
  has_code = docs_text = code_text = ''

  save = (docs, code) ->
    sections.push docs_text: docs, code_text: code

  for line in lines
    if line.match language.comment_matcher
      if not (line.match language.comment_filter)
        if has_code
          save docs_text, code_text
          has_code = docs_text = code_text = ''
        docs_text += line.replace(language.comment_matcher, '') + '\n'
    else
      has_code = yes
      code_text += line + '\n'
  save docs_text, code_text
  sections
```

Highlights a single chunk of CoffeeScript code, using **Pygments** over stdio, and runs the text of its corresponding comment through **Markdown**, using the **Github-flavored-Markdown** modification of Showdown.js.

We process the entire file in a single call to Pygments by inserting little marker comments between each section and then splitting the result string wherever our markers occur.

```coffee
highlight = (source, sections, callback) ->
  language = get_language source
  pygments = spawn 'pygmentize', ['-l', language.name, '-f', 'html', '-O', 'encoding=utf-8']
  output   = ''
  pygments.stderr.addListener 'data',  (error)  ->
    console.error error if error
  pygments.stdout.addListener 'data', (result) ->
    output += result if result
  pygments.addListener 'exit', ->
    output = output.replace(highlight_start, '').replace(highlight_end, '')
    fragments = output.split language.divider_html
    for section, i in sections
      section.code_html = highlight_start + fragments[i] + highlight_end
      section.docs_html = showdown.makeHtml section.docs_text
    callback()
  pygments.stdin.write((section.code_text for section in sections).join(language.divider_text))
  pygments.stdin.end()
```

docco.coffee

Main Documentation Generation Functions

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```
{
  docs_text: ...
  docs_html: ...
  code_text: ...
  code_html: ...
}
```

```
parse = (source, code)
  lines    = code.split
  sections = []
  language = get_langua
  has_code = docs_text

  save = (docs, code) ->
    sections.push docs_

  for line in lines
    if line.match langu
      if not (line.matc
        if has_code
          save docs_tex
          has_code = do
        docs_text += li
```

docco.coffee

```coffee
generate_documentation = (source, callback) ->
  fs.readFile source, "utf-8", (error, code) ->
    throw error if error
    sections = parse source, code
    highlight source, sections, ->
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      callback()


parse = (source, code) ->
  lines    = code.split '\n'
  sections = []
  language = get_language source
  has_code = docs_text = code_text = ''

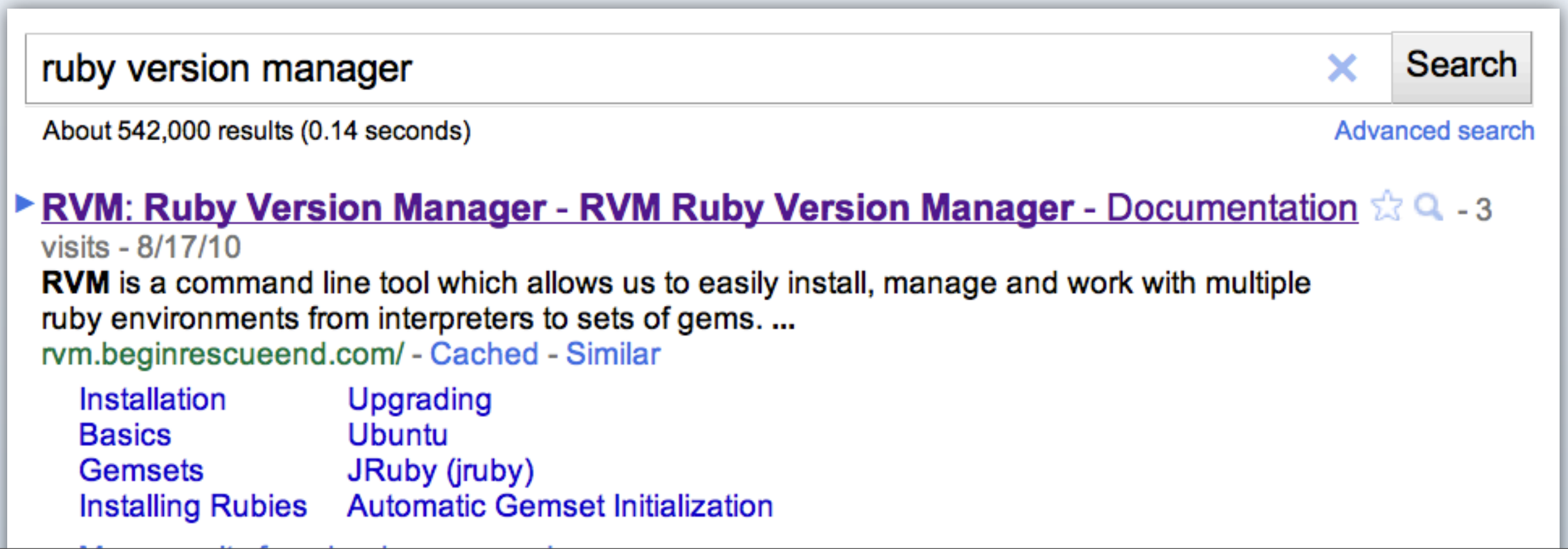
  save = (docs, code) ->
    sections.push docs_text: docs, code_text: code

  for line in lines
    if line.match language.comment_matcher
      if not (line.match language.comment_filter)
        if has_code
          save docs_text, code_text
          has_code = docs_text = code_text = ''
        docs_text += line.replace(language.comment_matcher, '') + '\n'
```

Code comments are just the start

AN AWESOME WEBSITE

Does your project Google?



Bundler: The best way to manage Ruby applications

v0.9 **v1.0**

Fork me on GitHub

The best way to manage your application's dependencies

Bundler

Bundler manages an **application's dependencies** through its entire life across many machines systematically and repeatably.

I am interested in

Reporting a Bug | Understanding Bundler | Gemfile Manual | CLI Manual

Getting Started

Getting started with bundler is easy

```
$ gem install bundler
```

If you're on an old version of Rubygems (before 1.3.6)

Bundler: The best way to manage Ruby applications

v0.9 **v1.0**

What it does

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What it does

How to Contribute

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v0.9 **v1.0**

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Bug Reports

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Bundler: The best way to manage Ruby applications

v0.9 **v1.0**

Fork me on GitHub

What it does

How to Contribute

Bug Reports

Getting Started

More Documentation

The best way to manage your application's dependencies

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```

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Bundler: The best way to manage Ruby applications

v0.9 **v1.0**

Multiple Versions

What it does

Fork me on GitHub

How to Contribute

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Bug Reports

I am interested in

Reporting a Bug | Understanding Bundler | Gemfile Manager | CLI Manual

Getting Started

More Documentation

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Getting started with bundler is easy

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$ gem install bundler
```

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Bundler: The best way to manage Ruby applications

v0.9 **v1.0**

Fork me on GitHub

The best way to manage your application's dependencies

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Reporting a Bug | Understanding Bundler | Gemfile Manual | CLI Manual

Getting Started

Getting started with bundler is easy

```
$ gem install bundler
```

If you're on an old version of Rubygems (before 1.3.6)

(plus, it's pretty)

Great place to post long form tutorials

Ruby on Rails Guides (v3.0.3)

These are the new guides for Rails 3. The guides for Rails 2.3 are still available at http://guides.rubyonrails.org/v2.3.8/.

These guides are designed to make you immediately productive with Rails, and to help you understand how all of the pieces fit together.

Rails Guides are a result of the ongoing Guides hackfest, and a work in progress.

Guides marked with this icon are currently being worked on. While they might still be useful to you, they may contain incomplete information and even errors. You can help by reviewing them and posting your comments and corrections at the respective Lighthouse ticket.

Start Here

Getting Started with Rails

Everything you need to know to install Rails and create your first application.

Models

Rails Database Migrations

This guide covers how you can use Active Record migrations to alter your database in a structured and organized manner.

Active Record Validations and Callbacks

This guide covers how you can use Active Record validations and callbacks.

Active Record Associations

This guide covers all the associations provided by Active Record.

AN AWESOME README

First Contact

Elements of a great README

Description

Installation Instructions

Links to more Docs

How to Contribute

Credits, Alternatives

Think about writing your README first

(readme driven development)

LOTS AND LOTS OF MAN PAGES

WTF is a man page?

Photo Credit: Tom Preston-Werner

Documentation for UNIX tools

(command line programs)

~$ man rails

~ — less — 121×28

```
RAILS(1)                  BSD General Commands Manual                  RAILS(1)

NAME
     rails -- Web-application framework

SYNOPSIS
     rails path [options...]

DESCRIPTION
     Rails is a web-application and persistence framework that includes everything needed to create database-backed
     web-applications according to the Model-View-Control pattern of separation. This pattern splits the view (also
     called the presentation) into "dumb" templates that are primarily responsible for inserting pre-built data in
     between HTML tags. The model contains the "smart" domain objects (such as Account, Product, Person, Post) that
     holds all the business logic and knows how to persist themselves to a database. The controller handles the incom-
     ing requests (such as Save New Account, Update Product, Show Post) by manipulating the model and directing data
     to the view.

     Rails is written with the ruby(1) language. For more information about Rails you can use its ---help flag. There
     is also online documentation available at "http://rubyonrails.org".

SEE ALSO
     ruby(1) mongrel_rails(1) cap(1)

AUTHORS
     Rails was created by David Heinemeier Hansson <david@loudthinking.com> then extended and improved by hundreds of
     open-source contributors.

:
```

Many sections

```
~$ man 5 mustache
```

mustache(5) - Mustache Syntax

mustache(1) - Usage of `mustache`

BIG CAVEAT

gems don't install man pages :(

check out gem-man instead

Documentation is...

CODE COMMENTS

Available with the source

Great for Contributors

AWESOME WEBSITE

Google Juice

Command center for docs

AWESOME README

Available with the source

First contact with docs

LOTS OF MAN PAGES

Available in terminal

First place UNIX nerds look

Documentation is...

A Great Marketing Tool

First contact with your project

(make it count!)

More Docs

=

Better Perceived Quality

More Docs

=

Easier To Learn

More Docs

=

Easier To Contribute

tldr;

More People Using Your Project

"Top ten reasons why I wont use your open source project"

Wynn Netherland
pengwynn

REASON #1

You don't have a friggin' Readme

REASON #3

You have no project home page

Documentation is important marketing

Documentation is...

Therapeutic

Forces you to slow down

Puts you into a different mindset

Forces you to question your code

Explaining code often reveals flaws

(like an invisible pairing partner)

It can also be a great stress reliever

sometimes code just sucks

Knowing how someone *feels* about code is valuable

```
# XXX: I hate myself and want to die.
# --rtomayko 2010-05-27
```

At the end of the day...

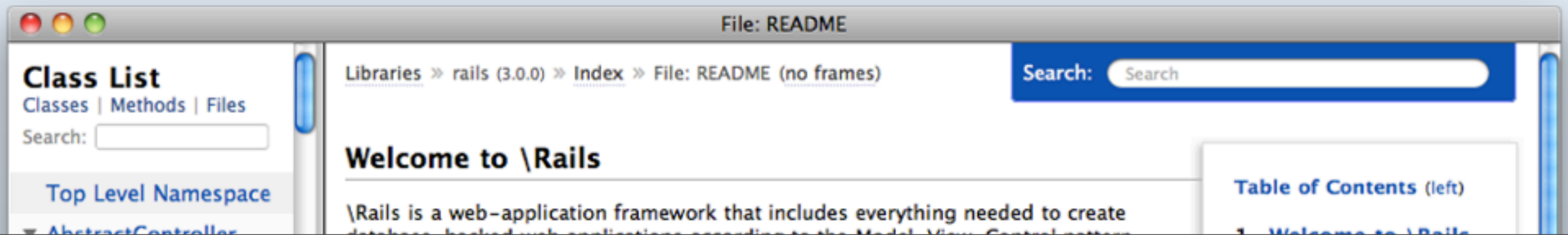
Writing documentation produces higher quality code

Documentation

Hacks & Tools

rdoc.info

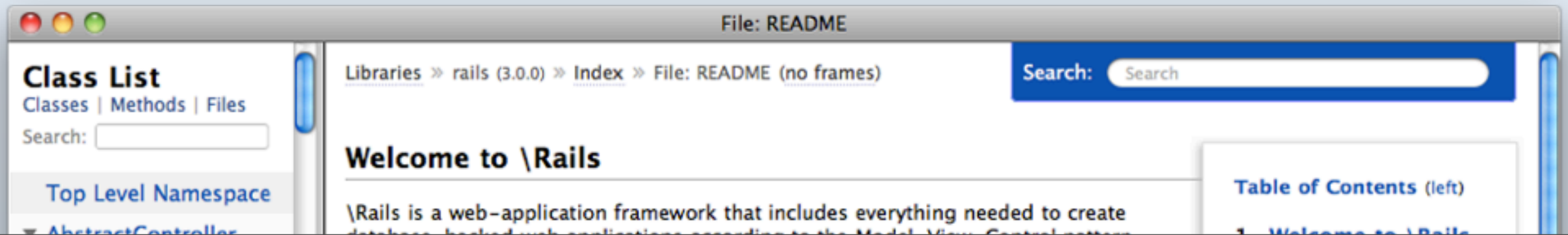
Automatic YARD Generation



rdoc.info

GitHub Integration

(generate docs on push)



File: README

Welcome to \Rails

\Rails is a web-application framework that includes everything needed to create database-backed web applications according to the Model-View-Control pattern.

This pattern splits the view (also called the presentation) into "dumb" templates that are primarily responsible for inserting pre-built data in between HTML tags. The model contains the "smart" domain objects (such as Account, Product, Person, Post) that holds all the business logic and knows how to persist themselves to a database. The controller handles the incoming requests (such as Save New Account, Update Product, Show Post) by manipulating the model and directing data to the view.

In \Rails, the model is handled by what's called an object-relational mapping layer entitled Active Record. This layer allows you to present the data from database rows as objects and embellish these data objects with business logic methods. You can read more about Active Record in its README.

The controller and view are handled by the Action Pack, which handles both layers by its two parts: Action View and Action Controller. These two layers are bundled in a single package due to their heavy interdependence. This is unlike the relationship between the Active Record and Action Pack that is much more separate. Each of these packages can be used independently outside of \Rails. You can read more about Action Pack in its README.

Getting Started

1. Install \Rails at the command prompt if you haven't yet:

   ```
   gem install rails
   ```

2. At the command prompt, create a new \Rails application:

   ```
   rails new myapp
   ```

   where "myapp" is the application name.

3. Change directory to `myapp` and start the web server:

   ```
   cd myapp; rails server
   ```

   Run with `--help` for options.

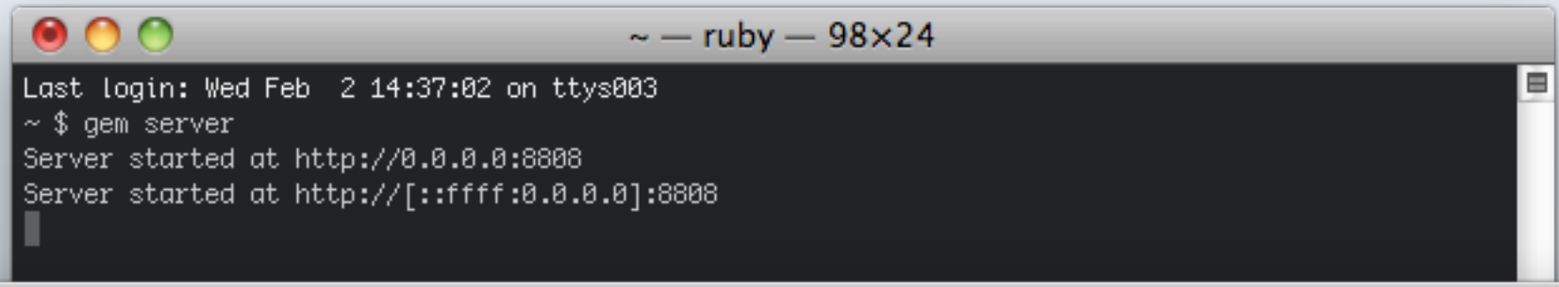
4. Go to localhost:3000/ and you'll see:

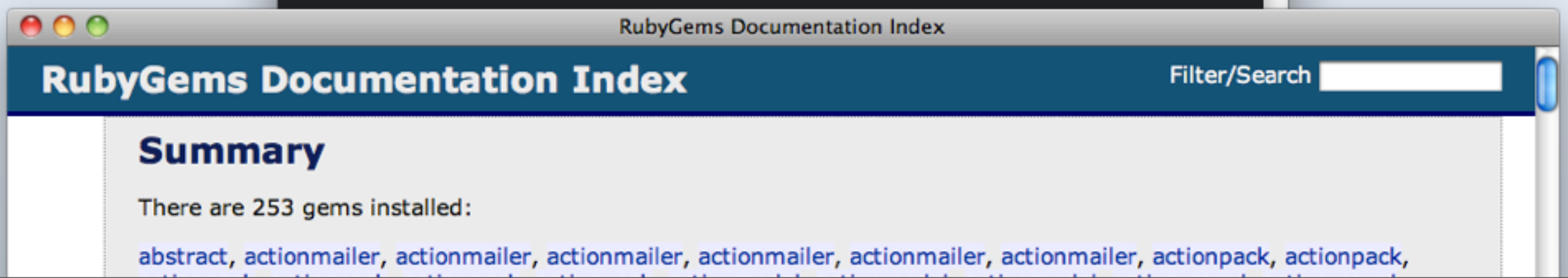
   ```
   "Welcome aboard: You're riding Ruby on Rails!"
   ```

5. Follow the guidelines to start developing your application. You can find the following resources handy:

gem server

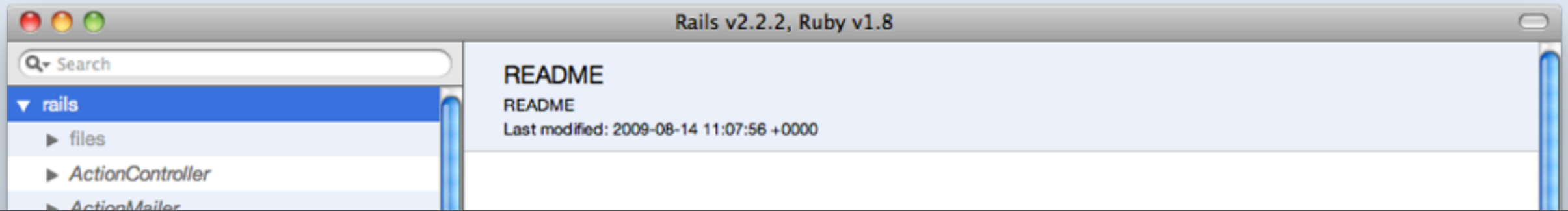
Locally Generated RDoc





railsapi.com

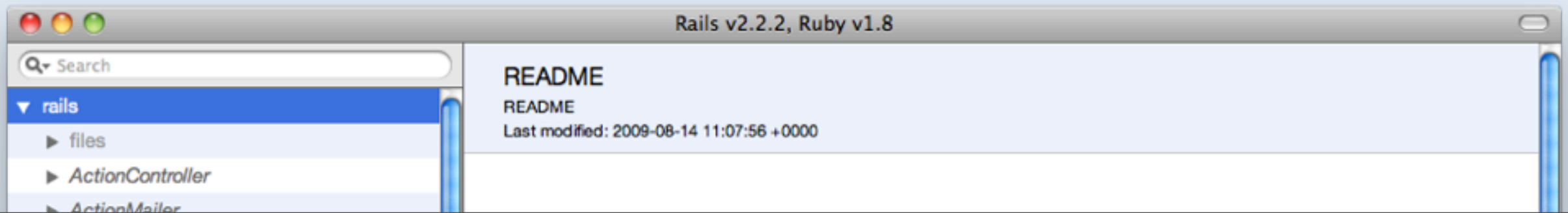
Awesome find-as-you-type Ruby/Rails/Gem Docs



railsapi.com

Downloadable

Combines Multiple Docs



Rails v2.2.2, Ruby v1.8

Search

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  - *ActionMailer*
  - *ActionView*
  - *ActiveRecord*
  - ActiveResource
  - *ActiveSupport*
  - Commands
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  - Dir < Object
  - DispatchServlet < WEBrick::HTTPServlet::
  - ERB < Object
  - Enumerable
  - Fixtures < (RUBY_VERSION < '1.9' ? YAM
  - Gem
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  - Kernel
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  - Repositories < Object

README

README

Last modified: 2009-08-14 11:07:56 +0000

Welcome to Rails

Rails is a web-application framework that includes everything needed to create database-backed web applications according to the Model-View-Control pattern.

This pattern splits the view (also called the presentation) into "dumb" templates that are primarily responsible for inserting pre-built data in between HTML tags. The model contains the "smart" domain objects (such as Account, Product, Person, Post) that holds all the business logic and knows how to persist themselves to a database. The controller handles the incoming requests (such as Save New Account, Update Product, Show Post) by manipulating the model and directing data to the view.

In Rails, the model is handled by what's called an object-relational mapping layer entitled Active Record. This layer allows you to present the data from database rows as objects and embellish these data objects with business logic methods. You can read more about Active Record in files/vendor/rails/activerecord/README.html.

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Getting Started

1. At the command prompt, start a new Rails application using the `rails` command and your application name. Ex: rails myapp
2. Change directory into myapp and start the web server: `script/server` (run with —help for options)
3. Go to localhost:3000/ and get "Welcome aboard: You're riding the Rails!"
4. Follow the guidelines to start developing your application

Web Servers

By default, Rails will try to use Mongrel and lighttpd if they are installed, otherwise Rails will use WEBrick, the webserver that ships with Ruby. When you run script/server, Rails will check if Mongrel exists, then lighttpd and finally fall back to WEBrick. This ensures that you can always get up and running quickly.

railsapi

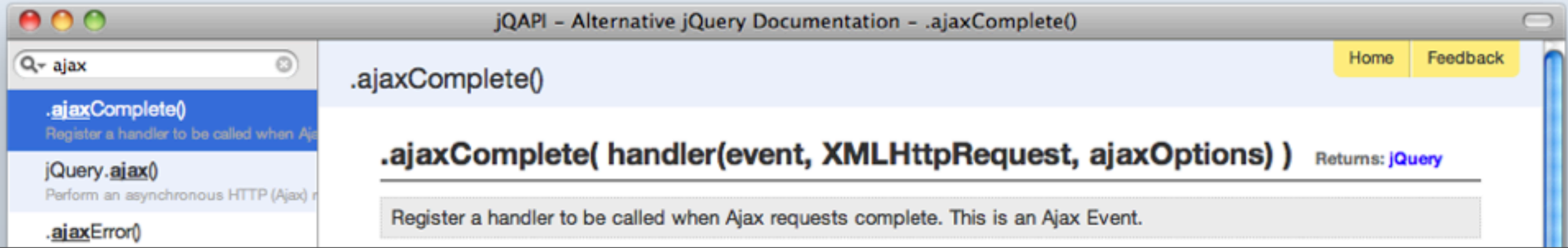
+

Fluid.app

Awesome offline Ruby & Rails documentation

jqapi.com

Like railsapi.com, but for jQuery



ronn

github.com/rtomayko/ronn

Write man pages in markdown

man pages are written in roff

```
.br
\fBronn\fR < \fIfile\fR
.
.SH "DESCRIPTION"
\fBRonn\fR converts textfiles to standard roff\-
formatted UNIX manpages or HTML\. ronn\-format(7) is
based on markdown(7) but includes additional rules
and syntax geared toward authoring manuals\.
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but roff is dumb

use ronn instead

```
## DESCRIPTION

**Ronn** converts textfiles to standard roff-
formatted UNIX manpages or HTML. ronn-format(7) is
based on markdown(7) but includes additional rules
and syntax geared toward authoring manuals.
```

Get HTML generation for free

NAME

mustache -- Logic-less templates.

SYNOPSIS

A typical Mustache template:

```
Hello {{name}}
You have just won ${{value}}!
{{#in_ca}}
Well, ${{taxed_value}}, after taxes.
{{/in_ca}}
```

Given the following hash:

```
{
  "name": "Chris",
  "value": 10000,
  "taxed_value": 10000 - (10000 * 0.4),
  "in_ca": true
}
```

Will produce the following:

```
Hello Chris
You have just won $10000!
Well, $6000.0, after taxes.
```

DESCRIPTION

Mustache can be used for HTML, config files, source code - anything. It works by expanding tags in a template using values provided in a hash or object.

We call it "logic-less" because there are no if statements, else clauses, or for loops. Instead there are only tags. Some tags are replaced with a value, some nothing, and others a series of values. This document

Final Thoughts

Documentation is a lot more than RDoc

Documenting should be something you want to do

ProTip: It's not a guilt trip

Documenting is a great marketing tool

Documenting helps you write better code

… and always keep an offline version of your docs

Fin.

warpspire.com/talks/documentation