Ruby and Rails
An Introduction

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Agenda

• The language – Ruby
• The framework – Ruby On Rails
• Demo
• Resources
• Questions
Ruby

- Dynamic, Interpreted
- Object oriented (True)
- Scripting, RegExp
- Platform independent
- Lots of library support
Idioms

• Principle of least surprise
• Principle of succinctnessness
• Principle of least effort
• Convention
• Extensible
Examples

puts "The obligatory hello world script"
More Examples

10.times do
  puts Time.now.to_s
  sleep 0.5
end
Examples - Blocks

def wish(to)
    puts "Good Afternoon, #{to}" 
end

["people", "friends", "all!"].each do |addressee|
    wish addressee
end
Examples

ages = [15, 20, 30, 20, 10, 50, 35, 30]
puts ages.uniq.sort.reverse

puts ages - [30, 50]
Examples

class Rectangle

  def initialize(l,b)
    @length = l
    @breadth = b
  end

  def area
    @length * @breadth
  end

  def perimeter
    2*(@length + @breadth)
  end
end
rectangle = Rectangle.new(10,5)
puts rectangle.area
  # prints 50
puts rectangle.perimeter
  # prints 30
Rails in a nutshell

- Web development that doesn't hurt
- Open source web framework built in Ruby
- Includes everything needed to create web apps according to the Model-View-Control pattern
- Opinionated software(!)

“Rails is the killer app for Ruby.”

Yukihiro Matsumoto, Creator of Ruby
Philosophy

• **DRY** – “Don’t Repeat Yourself” – writing the same code over and over again is a bad thing

• **Convention Over Configuration** – Rails makes assumptions about what you want to do and how you’re going to do it, rather than letting you tweak every little thing through endless configuration files.

• **The 80-20 Rule**

• **REST** is the best pattern for web apps – organizing your app around resources and HTTP verbs is the fastest way to go.
Architecture

1. Configure framework
2. Wrap CGI in request
3. Creates
4a) CRUDs
4b) Delivers
5a) Renders
5b) Redirects
6) Displays

/Rblog/display/5

/apache or WEBrict

Dispatcher

Action Controller

Active Record

Action Mailer
Components

- Action Controller
- Action View
- Active Record
- Action Mailer
- Active Resource
- Railties
- Active Support
Demo

$ rails myblog
$ cd myblog
$ ./script/server
$ script/generate scaffold Post title:string content:text
$ rake db:migrate
$ ./script/server
CRUD, posts.xml
validates_presence_of :title, :content
validates_uniqueness_of :title
Demo

• File structure of a rails app
• MVC
• Database
• Code Walkthrough
Unit Testing

- Unit testing: rspec – BDD

  Post.should have(:no).record
  Post.create(“first”, “some contents”)
  Post.create(“second”, “more contents”)
  Post.should have(2).records
new_session do |bob|
bob.goes_to_login
bob.goes_to_signup
bob.signs_up_with :name => "bob", :passwd => "bob"
assert_response :success
end
Deployment

- RAKE - Ruby’s Build System
- WEBrick- Server is packaged with app
- Preferred: Apache/mongrel
- Environments: development, test, production
Development Environment

- Eclipse – RadRails
- NetBeans
- ...

Syntax highlighting, debuggers, autocomplete, some amount of refactoring
Plugins

- Very easy to write plugins
- Think of reuse before writing any piece of generic code
- Most probably, someone has written a plugin
- http://agilewebdevelopment.com/plugins

Ruby
A Programmer's Best Friend
The Rails Community

The developer community around Rails is very active, helpful and excited

Rails Mailing List – very active
Success Stories

- Twitter (http://www.twitter.com)
- Github (http://www.github.com)
- YellowPages (http://www.yellowpages.com)
- SlideShare (http://www.slideshare.net)
- Lots more! @ http://rubyonrails.org/applications
Resources - Ruby

- [http://www.ruby-lang.org](http://www.ruby-lang.org)
Resources - Rails

- http://rubyonrails.org
- http://guides.rubyonrails.org/
- http://railsbrain.com/
- http://railscasts.com
Questions?

[This ppt and code will be available at ~karthiksr]