



Ruby and Rails

An Introduction

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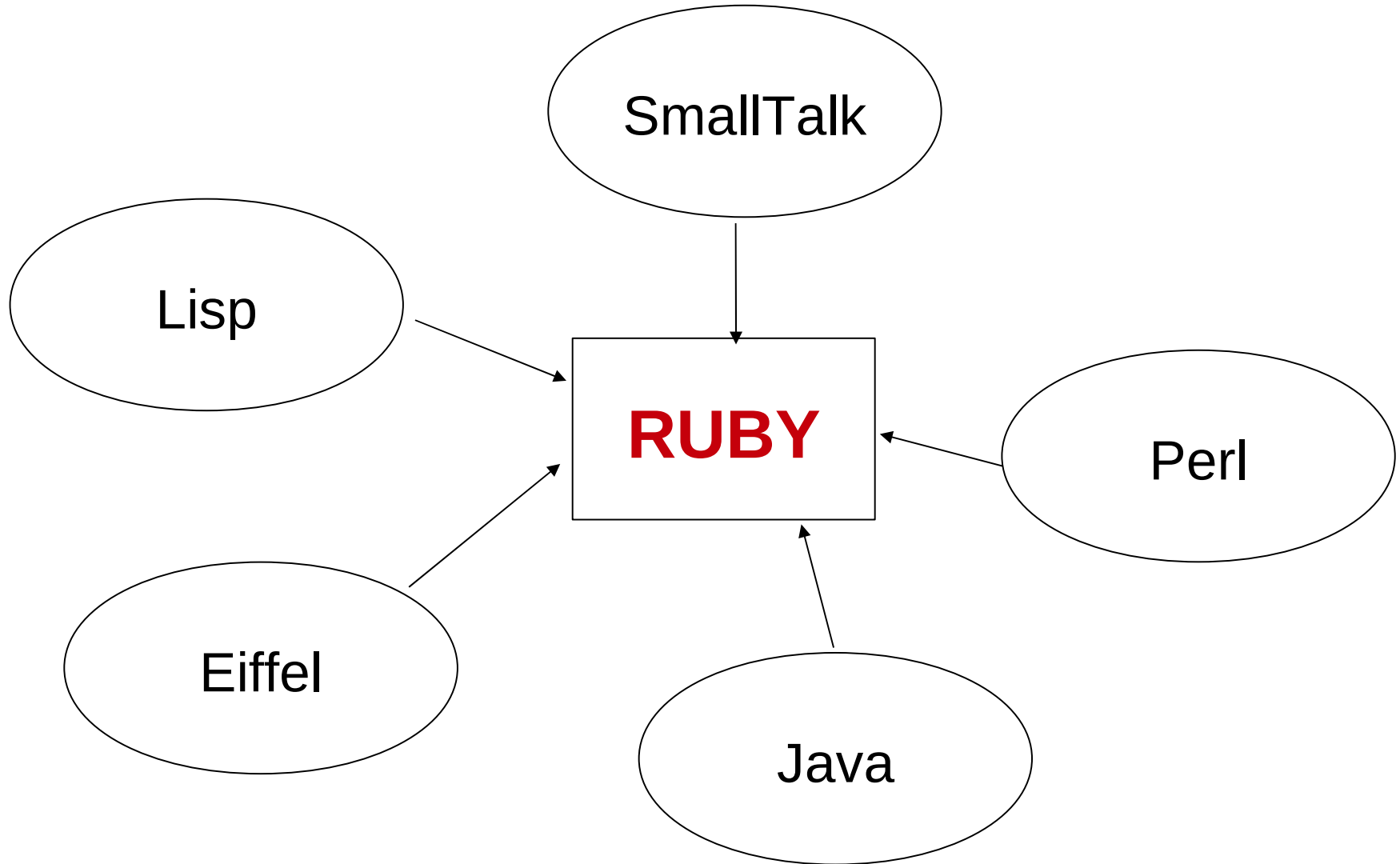
Agenda

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





Ruby



Ruby
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Ruby



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





Idioms

- Principle of least surprise
- Principle of succinctness
- 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
```



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Examples

```
rectangle = Rectangle.new(10,5)
puts rectangle.area
# prints 50
puts rectangle.perimeter
# prints 30
```



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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





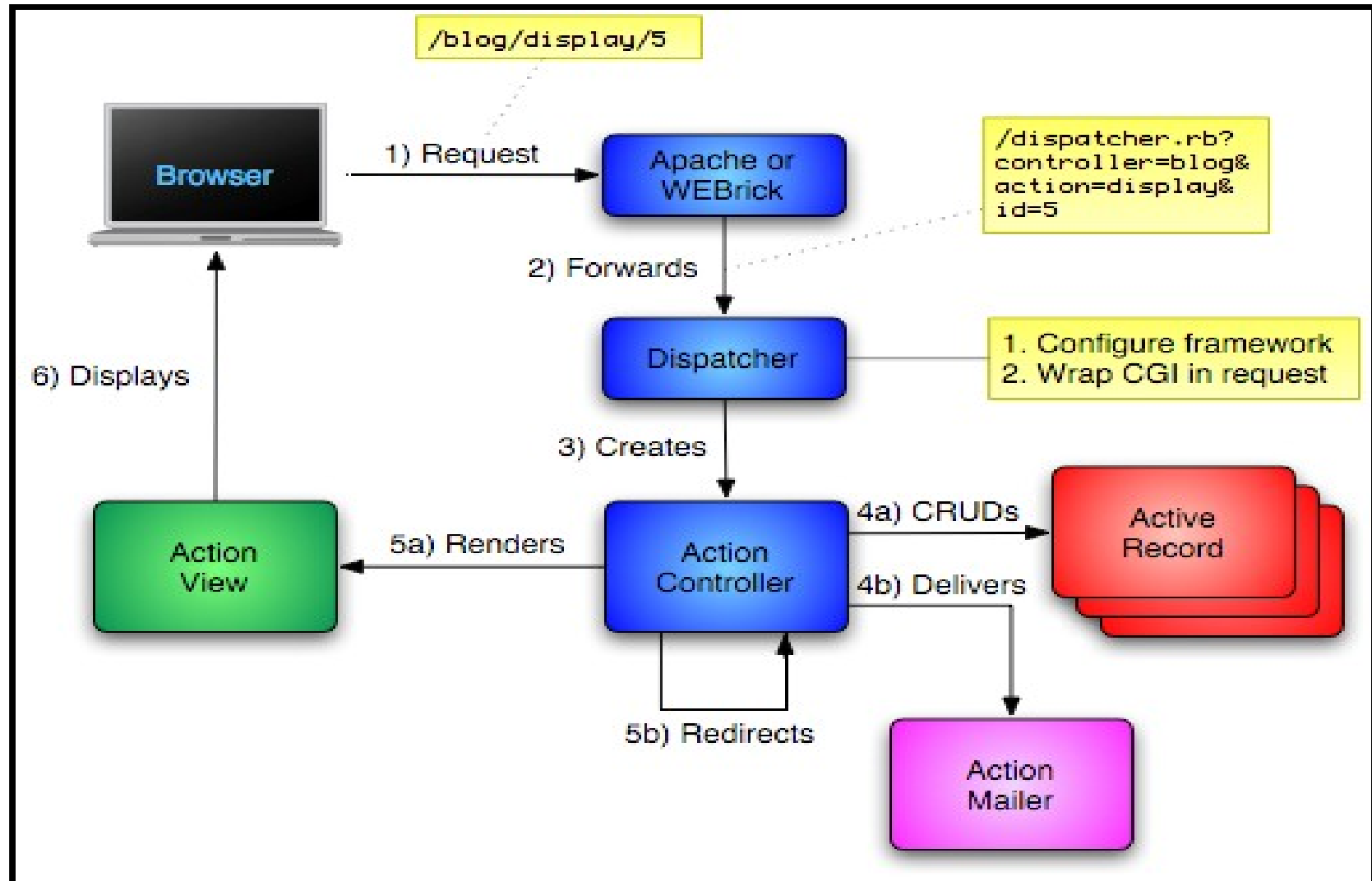
Philosophy

- **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



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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
```



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Integration Testing

```
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>

The Rails Community



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

Rails Wiki - <http://wiki.rubyonrails.com/>

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>



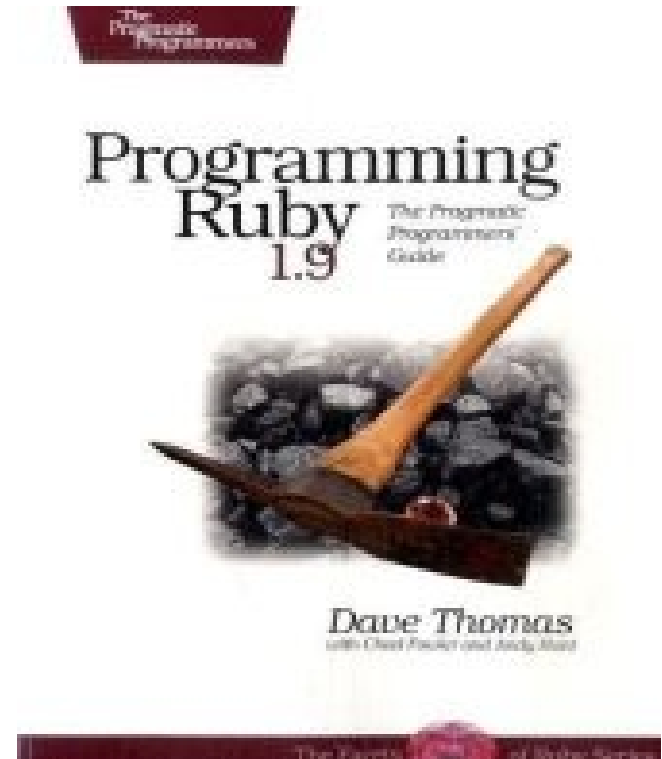
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Resources - Ruby



- <http://www.ruby-lang.org>
- <http://www.rubycentral.com/book>
- <http://www.ruby-doc.org/>



Resources - Rails



- <http://rubyonrails.org>
- <http://guides.rubyonrails.org/>
- <http://railsbrain.com/>
- <http://railscasts.com>

Agile Web Development with Rails

Third Edition



Scott Ruby
Clark Thomas
David Héctor Hernandez



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Questions?

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

