Athens Ruby Meetup

Welcome to #27 Ruby Meetup
Friday 18th November 2016

Sinatra

http://www.sinatrarb.com/

Why Sinatra?

…or

…the hard way!

background

- Created by **Blake Mizerany 2007**
- **Ruby Learning :**
    - **How do I learn and master Sinatra?**
- Sinatra – quickly create tiny web apps and services
- Ideal for micro-styling
- Sinatra <= 5-10 end points vs Rails > 15 -20 end points
- Top 200 most download gems
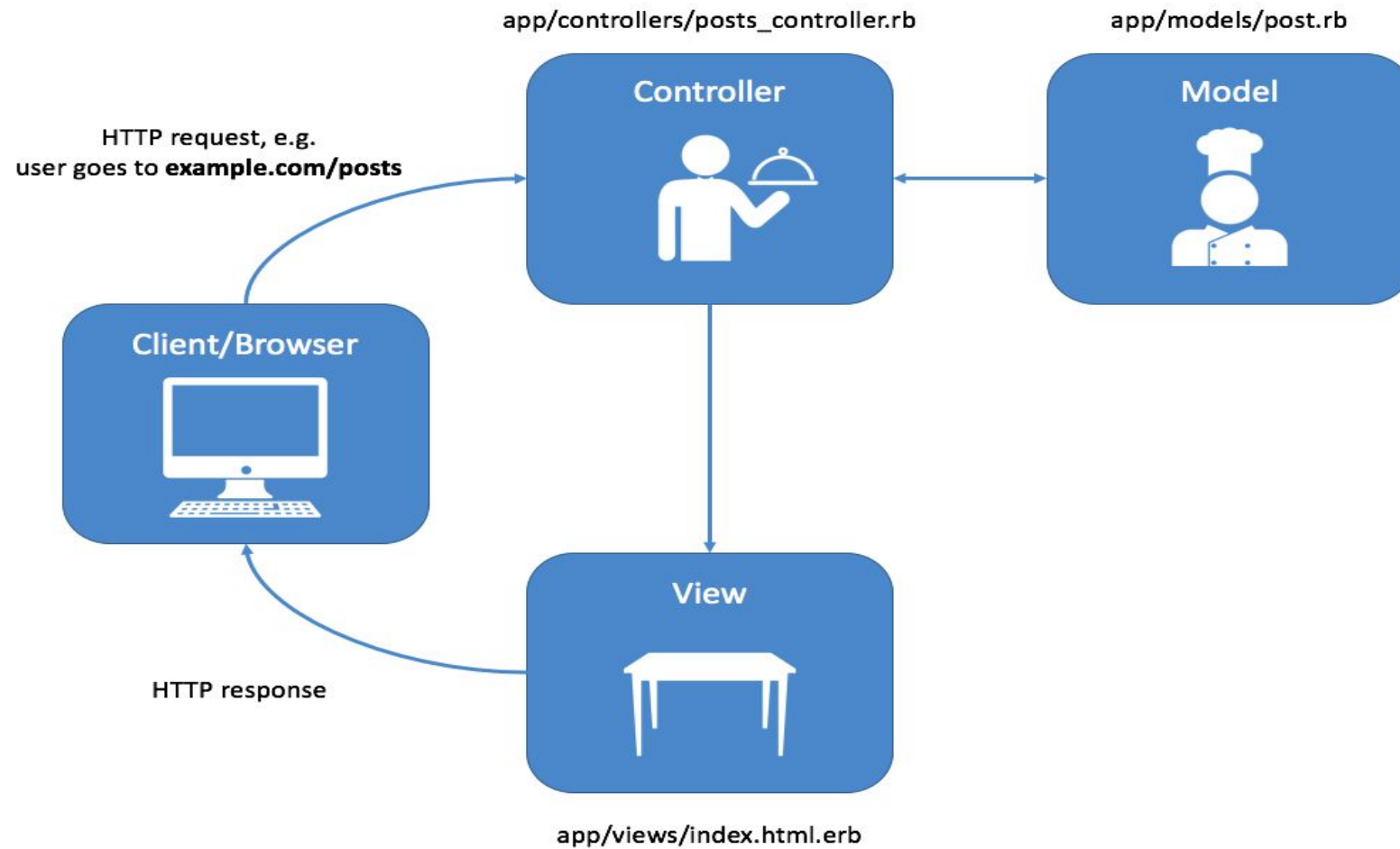- 40 million vs 80 million downloads

Companies Using Sinatra

- Heroku
- GitHub
- Apple
- BBC
- LinkedIn
- National Security Agency
- Agency Rainford
- Curbed Network
- Solutios
- Centro
- Apartment Therapy
- Inventive Labs

- ENTP
- Engine Yard
- Citrusbyte
- Lomographic Society International
- Nth Metal Interactive
- Osborne Brook
- Robot Mode
- Thoughtbot
- Forward
- WyeWorks
- Idealist Digital
- A Good Company

- Ylastic
- Fork
- Ant genomics database
- Mu Dynamics
- Scribble Squad
- Stanford
- Hiboux
- PentesterLab
- Animoto
- Red Hat
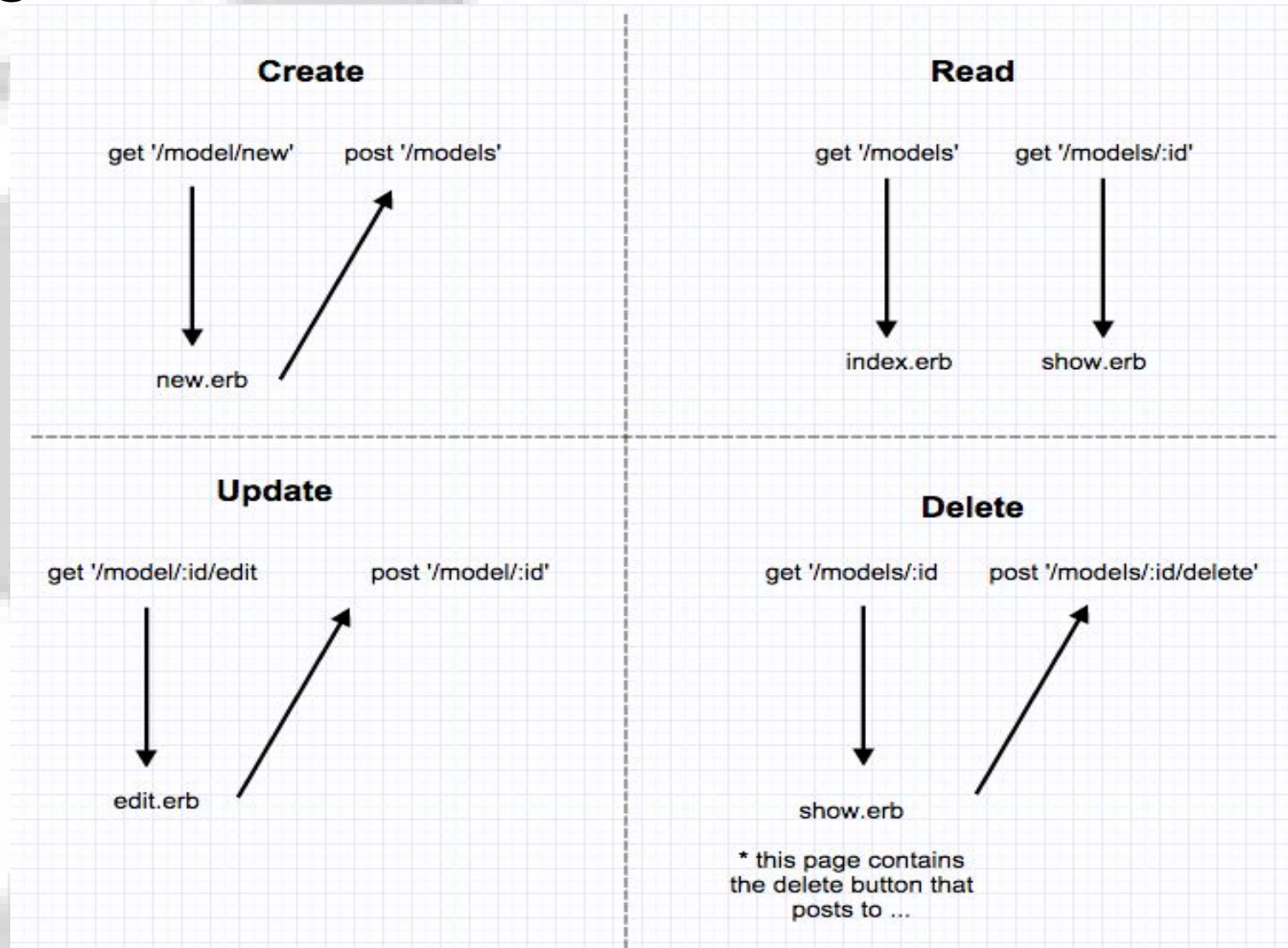- Travis CI
- Clearhaus

The Foundation

- *Object Relation Mapping (ORM)*
  - *db <--> code*

- *ActiveRecord included in rails by default*
  - *ORM on steroids!*

- *Rack (used by Sinatra and Rails)*
  - *Ruby HTTP interface*

MVC cycle

Routes

Create

get '/model/new'   post '/models'

new.erb

Read

get '/models'   get '/models/:id'

index.erb   show.erb

Update

get '/model/:id/edit   post '/model/:id'

edit.erb

Delete

get '/models/:id   post '/models/:id/delete'

show.erb

* this page contains
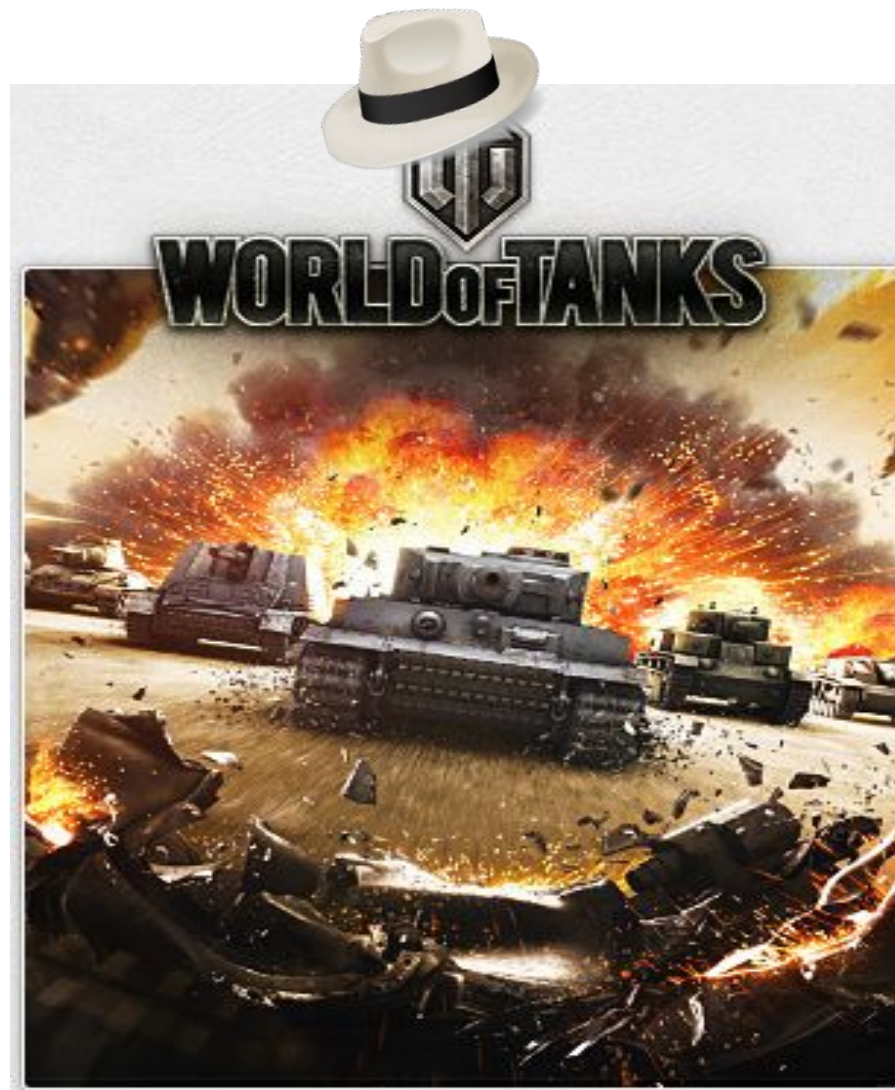the delete button that
posts to ...

Routes

```
1   get '/' do
2     .. show something ..
3   end
4
5   post '/' do
6     .. create something ..
7   end
8
9   put '/' do
10    .. replace something ..
11  end
12
13  patch '/' do
14    .. modify something ..
15  end
16
17  delete '/' do
18    .. annihilate something ..
19  end
20
21  options '/' do
22    .. appease something ..
23  end
24
25  link '/' do
26    .. affiliate something ..
27  end
28
29  unlink '/' do
30    .. separate something ..
31  end
```

…with Sinatra

Building everything from scratch

```
Gemfile                    ×
1    source 'http://rubygems.org'
2
3    gem 'sinatra'
4    gem 'activerecord', :require => 'active_record'
5    gem 'sinatra-activerecord', :require => 'sinatra/activerecord'
6    gem 'rake'
7    gem 'require_all'
8    gem 'sqlite3'
9    gem 'thin'
10   gem 'shotgun'
11   gem 'pry'
12   gem 'bcrypt'
13   gem 'rack-flash3'
14   gem "tux"
15
16   group :test do
17     gem 'rspec'
18     gem 'capybara'
19     gem 'rack-test'
20     gem 'database_cleaner', git: 'https://github.com/bmabey/database_cleaner.git'
21   end
22
```

Routes in action

```ruby
tanks_controller.rb

class TanksController < ApplicationController

  get '/tanks' do
    if logged_in?
      @user = current_user
      erb :'users/tanks'
    else
      redirect to "/login"
    end
  end
```

Routes in action

```
config.ru                    ×
1   require './config/environment'
2
3   if ActiveRecord::Migrator.needs_migration?
4     raise 'Migrations are pending. Run `rake db:migrate` to resolve the issue.'
5   end
6
7   use Rack::MethodOverride
8   use UsersController
9   use TanksController
10  run ApplicationController
11
```

```
46
47      post '/tanks/:id' do
48        @tank = Tank.find(params['id'])
49        @tank.name = params['name']
50        @tank.nation = params['nation']
51        @tank.save
52        redirect to "/tanks/#{@tank.id}"
53      end
54
55      delete '/tanks/:id' do
56        @tank = Tank.find(params['id'])
57        @tank.delete
58        redirect to '/tanks'
59      end
60    end
61
```

html.erb

```erb
<body>
  <h1>Update Tank</h1>

  <form action="/tanks/<%=@tank.id%>" method="POST">

    Tank Name: <input type="text" name="name" value="<%=@tank.name%>">
    Tank Nation: <input type="text" name="nation" value="<%=@tank.nation%>">
    <br>

    <input type="submit" value="Update Tank">
  </form>
```

html.erb

```html
<h1>To delete tank click the button below</h1>

<form method="post" action="/tanks/<%=@tank.id%>">
  <input id="hidden" type="hidden" name="_method" value="delete">
  <button id="delete" type="submit" class="btn btn-danger" value="delete">Delete</button>
<form>
```

Basic Authentication in Sinatra -1

```ruby
1   # Gemfile
2   gem 'bcrypt'
3
4   # Application.rb
5   class ApplicationController < Sinatra::Base
6   use Rack::Flash
7
8     configure do
9       set :public_folder, 'public'
10      set :views, 'app/views'
11      enable :sessions
12      set :session_secret, "secret"
13    end
14    helpers do
15
16      def logged_in?
17        !!session[:user_id]
18      end
19
20      def current_user
21        User.find(session[:user_id])
22      end
23    end
```

Basic Authentication in Sinatra -2

```ruby
# Migration ..._create_user.rb
class CreateUsers < ActiveRecord::Migration[4.2]
  def change
    create_table :users do |t|
      t.string :username
      t.string :password_digest
      t.string :email
    end
  end
end
```

Basic Authentication in Sinatra -3

```ruby
2
3   # Models
4   class User < ActiveRecord::Base
5     has_many :tanks
6     has_secure_password
7   end
8
```

Basic Authentication in Sinatra -4

```ruby
1
2
3  # User Controller
4  post '/login' do
5      @user = User.find_by(username: params["username"])
6      if @user && @user.authenticate(params["password"])
7        session[:user_id] = @user.id
8        redirect to '/tanks'
9      else
10       flash[:message] = "Wrong username and/or password"
11       erb :'/users/login'
12     end
13   end
```
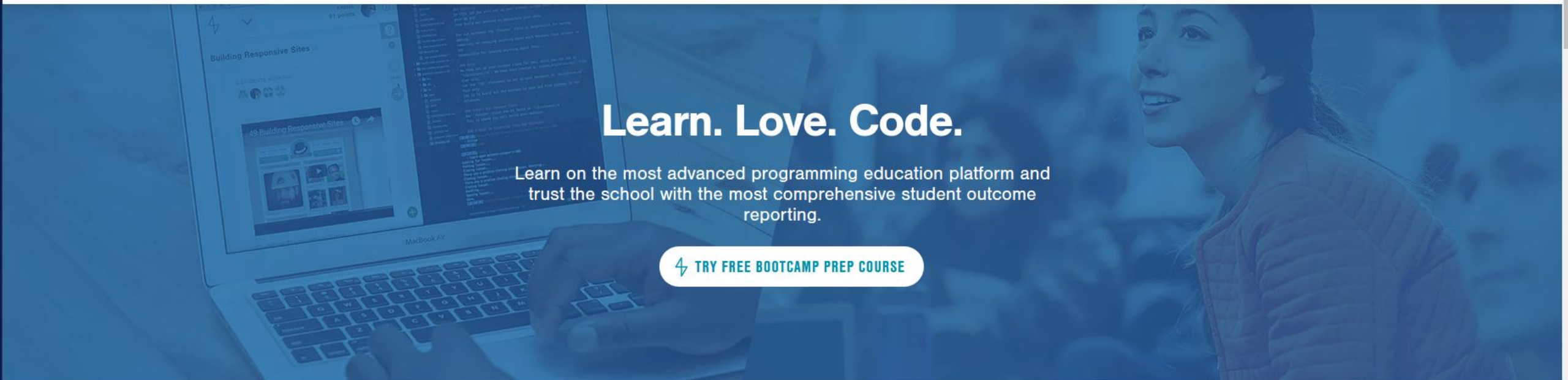
tux

- gem "tux"
- Access database
- CRUD
- Loads environment in the console – routes & views

shotgun

- Running local server
- Gem "shotgun" or gem install shotgun

```
[18:41:28] (master) sinatra-fwitter-project-v-000
// ♥ shotgun
== Shotgun/Thin on http://127.0.0.1:9393/
Thin web server (v1.6.4 codename Gob Bluth)
Maximum connections set to 1024
Listening on 127.0.0.1:9393, CTRL+C to stop
```

🎩 Thank you

Let's fly, let's fly away