Curso de Ruby on Rails - aulas 41 a 50 Jackson Pires

https://www.youtube.com/watch?v=ZHPondVB9RQ&list=PLe3LRfCs4go-mkvHRMSXEOG-HDbzesyaP

Resumo do curso feito por Roberto Pinheiro

AULA 42 - TESTES COM RAILS - PARTE 1/2

Testes unitários

Teste de unidade é toda a aplicação de teste nas assinaturas de entrada e saída de um sistema. Consiste em validar dados válidos e inválidos via I/O (entrada/saída) sendo aplicado por desenvolvedores ou analistas de teste. Uma unidade é a menor parte testável de um programa de computador.

Testes de integração

Teste de integração é a fase do teste de software em que módulos são combinados e testados em grupo. Ela sucede o teste de unidade, em que os módulos são testados individualmente, e antecede o teste de sistema, em que o sistema completo (integrado) é testado num ambiente que simula o ambiente de produção.

Testes de aceitação

Teste de aceitação é uma fase do processo de teste em que um teste de caixa-preta é realizado num sistema antes de sua disponibilização. Tem por função verificar o sistema em relação aos seus requisitos originais, e às necessidades atuais do usuário.

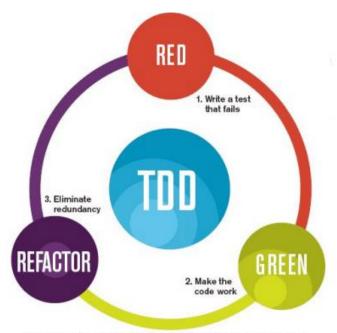
Testes unitários e de integração

- TestUnit <= Rails 3
- MiniTest >= Rails 4
- RSpec

Testes de aceitação

• Capybara

TDD (Test Driven Development)



The mantra of Test-Driven Development (TDD) is "red, green, refactor."

Para não criar a pasta "teste" com MiniTest usar -T

rails new ror-jp-p4 -T --database=mysql

RSPEC

Instalação

group :development, :test do gem 'rspec-rails', '~> 3.0' end

Gemfile

```
source 'https://rubygems.org'
git_source(:github) { |repo| "https://github.com/#{repo}.git" }

ruby '2.5.1'

# Bundle edge Rails instead: gem 'rails', github: 'rails/rails'
gem 'rails', '~> 5.2.3'

# Use mysql as the database for Active Record
```

```
gem 'mysql2', '>= 0.4.4', '< 0.6.0'
# Use Puma as the app server
gem 'puma', '~> 3.11'
# Use SCSS for stylesheets
gem 'sass-rails', '~> 5.0'
# Use Uglifier as compressor for JavaScript assets
gem 'uglifier', '>= 1.3.0'
# See https://github.com/rails/execjs#readme for more supported runtimes
gem 'duktape'
# Use CoffeeScript for .coffee assets and views
gem 'coffee-rails', '~> 4.2'
# Turbolinks makes navigating your web application faster. Read more:
https://github.com/turbolinks/turbolinks
gem 'turbolinks', '~> 5'
# Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
gem 'jbuilder', '~> 2.5'
# Use Redis adapter to run Action Cable in production
# gem 'redis', '~> 4.0'
# Use ActiveModel has secure password
# gem 'bcrypt', '~> 3.1.7'
# Use ActiveStorage variant
# gem 'mini_magick', '~> 4.8'
# Use Capistrano for deployment
# gem 'capistrano-rails', group: :development
# Reduces boot times through caching; required in config/boot.rb
gem 'bootsnap', '>= 1.1.0', require: false
group :development, :test do
 # Call 'byebug' anywhere in the code to stop execution and get a debugger console
 gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
 gem 'rspec-rails', '~> 3.0'
end
group: development do
 # Access an interactive console on exception pages or by calling 'console' anywhere in the code.
 gem 'web-console', '>= 3.3.0'
end
# Windows does not include zoneinfo files, so bundle the tzinfo-data gem
gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

rails generate rspec:install

```
C:\Sites\ror-jp-p4>rails generate rspec:install
    create .rspec
    create spec
    create spec/spec helper.rb
    create spec/rails helper.rb
```

.rspec

```
--color
--require spec_helper
--format documentation
```

Configurações adicionais

```
config/application.rb :

config.generators do |g|
g.test_framework :rspec
end
```

config/application.rb

```
require_relative 'boot'
require "rails"
# Pick the frameworks you want:
require "active_model/railtie"
require "active_job/railtie"
require "active_record/railtie"
require "active_storage/engine"
require "action_controller/railtie"
require "action_mailer/railtie"
require "action_view/railtie"
require "action_cable/engine"
require "sprockets/railtie"
# require "rails/test_unit/railtie"
# Require the gems listed in Gemfile, including any gems
# you've limited to :test, :development, or :production.
Bundler.require(*Rails.groups)
module RorJpP4
```

```
class Application < Rails::Application
# Initialize configuration defaults for originally generated Rails version.
config.load_defaults 5.2

# Settings in config/environments/* take precedence over those specified here.
# Application configuration can go into files in config/initializers
# -- all .rb files in that directory are automatically loaded after loading
# the framework and any gems in your application.

# Don't generate system test files.
config.generators.system_tests = nil

config.generators do |g|
g.test_framework :rspec
end

end
end
```

Gerando teste

rails g scaffold User name:string email:string

rake db:create db:migrate

rake spec

```
C:\Sites\ror-jp-p4>rake spec
C:/Ruby25-x64/bin/ruby.exe -I'C:/Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:/Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspe
.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/**{,/*/**}/*_spec.rb'
 GET #index
   returns a success response (PENDING: Add a hash of attributes valid for your model)
 GET #show
   returns a success response (PENDING: Add a hash of attributes valid for your model)
 GET #new
   returns a success response
 GET #edit
   returns a success response (PENDING: Add a hash of attributes valid for your model)
 POST #create
   with valid params
     creates a new User (PENDING: Add a hash of attributes valid for your model)
     redirects to the created user (PENDING: Add a hash of attributes valid for your model)
   with invalid params
     returns a success response (i.e. to display the 'new' template) (PENDING: Add a hash of attributes invalid for your model)
 PUT #update
   with valid params
     updates the requested user (PENDING: Add a hash of attributes valid for your model)
     redirects to the user (PENDING: Add a hash of attributes valid for your model)
    with invalid params
     returns a success response (i.e. to display the 'edit' template) (PENDING: Add a hash of attributes valid for your model)
  DELETE #destrov
   destroys the requested user (PENDING: Add a hash of attributes valid for your model)
   redirects to the users list (PENDING: Add a hash of attributes valid for your model)
UsersHelper
  add some examples to (or delete) C:/Sites/ror-jp-p4/spec/helpers/users helper spec.rb (PENDING: Not yet implemented)
  add some examples to (or delete) <a href="C:/Sites/ror-jp-p4/spec/models/user-spec.rb">C:/Sites/ror-jp-p4/spec/models/user-spec.rb</a> (PENDING: Not yet implemented)
Users
  GET /users
    works! (now write some real specs)
Users
  GET /users
   works! (now write some real specs)
UsersController
   routes to #index
   routes to #show
    routes to #edit
    routes to #create
    routes to #update via PUT
    routes to #update via PATCH
    routes to #destroy
  renders the edit user form
users/index
  renders a list of users
users/new
```

```
renders new user form
 renders attributes in 
Pending: (Failures listed here are expected and do not affect your suite's status)
 1) UsersController GET #index returns a success response
    # Add a hash of attributes valid for your model
    # _/spec/controllers/users controller spec.rb:45
 2) UsersController GET #show returns a success response
    # Add a hash of attributes valid for your model
    # ./spec/controllers/users controller spec.rb:53
 3) UsersController GET #edit returns a success response
    # Add a hash of attributes valid for your model
    # _/spec/controllers/users controller spec.rb:68
 4) UsersController POST #create with valid params creates a new User
    # Add a hash of attributes valid for your model
    # ./spec/controllers/users controller spec.rb:77
 5) UsersController POST #create with valid params redirects to the created user
    # Add a hash of attributes valid for your model
    # _/spec/controllers/users controller spec.rb:83
 6) UsersController POST #create with invalid params returns a success response (i.e. to display the 'new' template)
    # Add a hash of attributes invalid for your model
    # _/spec/controllers/users controller spec.rb:90
 7) UsersController PUT #update with valid params updates the requested user
    # Add a hash of attributes valid for your model
    # _/spec/controllers/users controller spec.rb:103
 8) UsersController PUT #update with valid params redirects to the user
    # Add a hash of attributes valid for your model
    # _/spec/controllers/users controller spec.rb:110
 9) UsersController PUT #update with invalid params returns a success response (i.e. to display the 'edit' template)
    # Add a hash of attributes valid for your model
    # ./spec/controllers/users controller spec.rb:118
```

Fazendo apenas teste dos models

Configurações adicionais:

```
config.generators do |g|
  g.test_framework :rspec,
  :view_specs => false,
  :controller_specs => false,
  :helper_specs => false,
  :routing_specs => false,
  :request_specs => false
end
```

config/application.rb

```
require_relative 'boot'
require "rails"
# Pick the frameworks you want:
require "active_model/railtie"
require "active_job/railtie"
require "active record/railtie"
require "active storage/engine"
require "action_controller/railtie"
require "action_mailer/railtie"
require "action_view/railtie"
require "action cable/engine"
require "sprockets/railtie"
# require "rails/test_unit/railtie"
# Require the gems listed in Gemfile, including any gems
# you've limited to :test, :development, or :production.
Bundler.require(*Rails.groups)
module RorJpP4
 class Application < Rails::Application
  # Initialize configuration defaults for originally generated Rails version.
  config.load_defaults 5.2
  # Settings in config/environments/* take precedence over those specified here.
  # Application configuration can go into files in config/initializers
  # -- all .rb files in that directory are automatically loaded after loading
  # the framework and any gems in your application.
  # Don't generate system test files.
  config.generators.system_tests = nil
  #Rspec configuration
  config.generators do |g|
   g.test_framework :rspec, :view_specs => false,
             :controller_specs => false,
             :helper_specs => false,
             :routing_specs => false,
             :request_specs => false
  end
 end
end
```

- Dentro da pasta spec apague todas as subpastas.

rails destroy scaffold User

rails g scaffold User name:string email:string

rake db:drop db:create db:migrate

rake spec

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64\/bin\ruby.exe -I'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec-core-3.9.0\/lib';'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec-core-3.9.0\/lib';'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec-core-3.9.0\/lib';'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec-core-3.9.0\/lib';'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec-core-3.9.0\/lib';'C:\Ruby25-x64\/lib\ruby\/gems/2.5.0\/gems\/rspec\ror-gems\/rspec' --pattern 'spec\/**\{,\*\***\}\*_spec.rb'

User
add some examples to (or delete) C:\Sites\/ror-jp-p4\/spec\/models\/user spec.rb
# Not yet implemented
# .\/spec\/models\/user spec.rb:4

Finished in 0.15243 seconds (files took 30.85 seconds to load)
1 example, 0 failures, 1 pending
```

Validações

app/models/user.rb

```
class User < ApplicationRecord validates :name, presence: true validates :email, presence: true end
```

Estrutura básica do Rspec

- context
- it
- Context tem a única finalidade de organizar seus testes.
- It especifica a ação a ser feita/testada

Exemplo:

```
context "Validade de um Usuário" do it "Usuário válido?" do ... teste ... end end
```

expectations/matchers

spec/models/user_spec.rb

```
require 'rails_helper'

RSpec.describe User, type: :model do
    context "Validade de um Usuário" do
    it "Usuário válido?" do
    user = User.new
    user.name = "Jackson"
    user.email = "jackson@gmail.com"
    expect(user.valid?).to be_truthy
    end
    end
end
```

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64/bin/ruby.exe -I'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:\Ruby25-x64/lib/ruby/gems/
2.5.0/gems/rspec-support-3.9.0/lib' 'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/
**{,/***}/*_spec.rb'
User
    Validade de um Usuário
    Usuário válido?
Finished in 0.0466 seconds (files took 38.04 seconds to load)
1 example, 0 failures
```

spec/models/user_spec.rb

```
require 'rails_helper'
RSpec.describe User, type: :model do
context "Validade de um Usuário" do
  it "Usuário válido?" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.valid?).to be_truthy
  end
  it "Usuário inválido?" do
   user = User.new
   user.name = "Jackson"
   user.email = nil
   expect(user.valid?).to be_falsey
  end
 end
end
```

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64/bin/ruby.exe -I'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:\Ruby25-x64/lib/ruby/gems/
2.5.0/gems/rspec-support-3.9.0/lib' 'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/
**{,/*/**}/*_spec.rb'

User
   Validade de um Usuário
        Usuário válido?
        Usuário inválido?
Finished in 0.28428 seconds (files took 29.28 seconds to load)
2 examples, 0 failures
```

spec/models/user_spec.rb

```
require 'rails_helper'
RSpec.describe User, type: :model do
context "Validade de um Usuário" do
 it "Usuário válido?" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.valid?).to be_truthy
 end
 it "Usuário inválido?" do
   user = User.new
   user.name = "Jackson"
   user.email = nil
   expect(user.valid?).to be_falsey
 end
end
context "Títulos válidos" do
 it "Título completo" do
  user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
  expect(user.titulo_completo).to eq("Sr. Jackson - Email: jackson@gmail.com")
 end
end
end
```

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64/bin/ruby.exe -I'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:\Ruby25-x64/lib/ruby/gems/
2.5.0/gems/rspec-support-3.9.0/lib' 'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/
**{,,'***}/*_spec.rb'

User
Validade de um Usuário
Usuário válido?
Usuário inválido?
Títulos válidos
Título completo

Finished in 0.09092 seconds (files took 29.93 seconds to load)
3 examples, 0 failures
```

Links úteis

https://www.relishapp.com http://betterspecs.org/br/

AULA 43 - TESTES COM RAILS - PARTE 2/2

Gemfile

```
source 'https://rubygems.org'
git_source(:github) { |repo| "https://github.com/#{repo}.git" }
ruby '2.5.1'
# Bundle edge Rails instead: gem 'rails', github: 'rails/rails'
gem 'rails', '~> 5.2.3'
# Use mysql as the database for Active Record
gem 'mysql2', '>= 0.4.4', '< 0.6.0'
# Use Puma as the app server
gem 'puma', '~> 3.11'
# Use SCSS for stylesheets
gem 'sass-rails', '~> 5.0'
# Use Uglifier as compressor for JavaScript assets
gem 'uglifier', '>= 1.3.0'
# See https://github.com/rails/execjs#readme for more supported runtimes
gem 'duktape'
# Use CoffeeScript for .coffee assets and views
gem 'coffee-rails', '~> 4.2'
# Turbolinks makes navigating your web application faster. Read more:
https://github.com/turbolinks/turbolinks
gem 'turbolinks', '~> 5'
# Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
gem 'jbuilder', '~> 2.5'
# Use Redis adapter to run Action Cable in production
# gem 'redis', '~> 4.0'
# Use ActiveModel has_secure_password
# gem 'bcrypt', '~> 3.1.7'
# Use ActiveStorage variant
# gem 'mini magick', '~> 4.8'
# Use Capistrano for deployment
# gem 'capistrano-rails', group: :development
# Reduces boot times through caching; required in config/boot.rb
gem 'bootsnap', '>= 1.1.0', require: false
group:development,:test do
 # Call 'byebug' anywhere in the code to stop execution and get a debugger console
 gem 'byebug', platforms: [:mri, :mingw, :x64 mingw]
 gem 'rspec-rails', '~> 3.0'
 gem 'capybara'
end
```

```
group :development do

# Access an interactive console on exception pages or by calling 'console' anywhere in the code.

gem 'web-console', '>= 3.3.0'

end

# Windows does not include zoneinfo files, so bundle the tzinfo-data gem

gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

Configuração Adicional

```
rails_helper.rb
config.include Capybara::DSL
```

spec/rails_helper.rb

```
# This file is copied to spec/ when you run 'rails generate rspec:install'
require 'spec_helper'
ENV['RAILS_ENV'] ||= 'test'
require File.expand_path('../config/environment', __dir__)
# Prevent database truncation if the environment is production
abort("The Rails environment is running in production mode!") if Rails.env.production?
require 'rspec/rails'
# Add additional requires below this line. Rails is not loaded until this point!
# Requires supporting ruby files with custom matchers and macros, etc, in
# spec/support/ and its subdirectories. Files matching `spec/**/*_spec.rb` are
# run as spec files by default. This means that files in spec/support that end
# in _spec.rb will both be required and run as specs, causing the specs to be
# run twice. It is recommended that you do not name files matching this glob to
# end with _spec.rb. You can configure this pattern with the --pattern
# option on the command line or in ~/.rspec, .rspec or `.rspec-local`.
# The following line is provided for convenience purposes. It has the downside
# of increasing the boot-up time by auto-requiring all files in the support
# directory. Alternatively, in the individual `*_spec.rb` files, manually
# require only the support files necessary.
# Dir[Rails.root.join('spec', 'support', '**', '*.rb')].each { |f| require f }
# Checks for pending migrations and applies them before tests are run.
# If you are not using ActiveRecord, you can remove these lines.
```

```
begin
ActiveRecord::Migration.maintain test schema!
rescue ActiveRecord::PendingMigrationError => e
puts e.to_s.strip
exit 1
end
RSpec.configure do |config|
# Remove this line if you're not using ActiveRecord or ActiveRecord fixtures
config.fixture_path = "#{::Rails.root}/spec/fixtures"
 # If you're not using ActiveRecord, or you'd prefer not to run each of your
 # examples within a transaction, remove the following line or assign false
 # instead of true.
config.use_transactional_fixtures = true
 # RSpec Rails can automatically mix in different behaviours to your tests
 # based on their file location, for example enabling you to call 'get' and
 # `post` in specs under `spec/controllers`.
 # You can disable this behaviour by removing the line below, and instead
 # explicitly tag your specs with their type, e.g.:
    RSpec.describe UsersController, :type => :controller do
 #
 #
 #
   end
 # The different available types are documented in the features, such as in
 # https://relishapp.com/rspec/rspec-rails/docs
 config.infer_spec_type_from_file_location!
 # Filter lines from Rails gems in backtraces.
 config.filter rails from backtrace!
 # arbitrary gems may also be filtered via:
 # config.filter_gems_from_backtrace("gem name")
# Capybara
config.include Capybara::DSL
end
```

Configuração Adicional

```
evironments/test.rb

config.allow concurrency = false
```

config/ evironments/test.rb

```
Rails.application.configure do
# Settings specified here will take precedence over those in config/application.rb.
# The test environment is used exclusively to run your application's
# test suite. You never need to work with it otherwise. Remember that
# your test database is "scratch space" for the test suite and is wiped
# and recreated between test runs. Don't rely on the data there!
config.cache classes = true
# Do not eager load code on boot. This avoids loading your whole application
# just for the purpose of running a single test. If you are using a tool that
# preloads Rails for running tests, you may have to set it to true.
config.eager_load = false
# Configure public file server for tests with Cache-Control for performance.
config.public_file_server.enabled = true
config.public file server.headers = {
  'Cache-Control' => "public, max-age=#{1.hour.to i}"
}
# Show full error reports and disable caching.
config.consider_all_requests_local
config.action_controller.perform_caching = false
# Raise exceptions instead of rendering exception templates.
config.action_dispatch.show_exceptions = false
# Disable request forgery protection in test environment.
config.action controller.allow forgery protection = false
# Store uploaded files on the local file system in a temporary directory
config.active_storage.service = :test
config.action_mailer.perform_caching = false
# Tell Action Mailer not to deliver emails to the real world.
# The :test delivery method accumulates sent emails in the
# ActionMailer::Base.deliveries array.
config.action_mailer.delivery_method = :test
# Print deprecation notices to the stderr.
config.active_support.deprecation = :stderr
# Raises error for missing translations
# config.action_view.raise_on_missing_translations = true
config.allow_concurrency = false
end
```

Usando!

require 'capybara/rspec'

spec/models/user_spec.rb

```
require 'rails_helper'
RSpec.describe User, type: :model do
context "Testando a View User" do
 it "Cadastrar um usuário" do
   visit '/users/new'
   within("#form user") do
   fill_in 'Name', with: 'Jackson'
    fill_in 'Email', with: 'jackson@gmail.com'
   end
   click button 'Create User'
   expect(page).to have_content 'User was successfully created.'
 end
 end
context "Validade de um Usuário" do
 it "Usuário válido?" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.valid?).to be_truthy
  end
  it "Usuário inválido?" do
   user = User.new
   user.name = "Jackson"
   user.email = nil
   expect(user.valid?).to be_falsey
 end
 end
context "Títulos válidos" do
 it "Título completo" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.titulo_completo).to eq("Sr. Jackson - Email: jackson@gmail.com")
 end
end
end
```

app/views/users/_form.html.erb

```
<%= form_with(model: user, id: "form_user", local: true) do |form| %>
<% if user.errors.any? %>
 <div id="error explanation">
  <h2><%= pluralize(user.errors.count, "error") %> prohibited this user from being saved:</h2>
  <% user.errors.full_messages.each do |message| %>
   </= message %>
  <% end %>
  </div>
<% end %>
<div class="field">
 <%= form.label :name %>
 <%= form.text_field :name %>
</div>
<div class="field">
 <%= form.label :email %>
 <%= form.text_field :email %>
</div>
<div class="actions">
 <%= form.submit %>
</div>
<% end %>
```

rake spec

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64/bin/ruby.exe -T'C:/Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:/Ruby25-x64/lib/ruby/gems/
2.5.0/gems/rspec-support-3.9.0/lib' 'C:/Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/
**{,/***}/*_spec.rb'

User

Testando a View User
Cadastrar um usuário
Validade de um Usuário
Usuário válido?
Usuário inválido?
Títulos válidos
Títulos válidos
Título completo

Finished in 1.61 seconds (files took 35.29 seconds to load)
4 examples, 0 failures
```

spec/models/user_spec.rb

```
require 'rails_helper'
RSpec.describe User, type: :model do
context "Testando a View User" do
 it "Cadastrar um usuário" do
   users = User.all
   size old = users.size
   visit '/users/new'
   within("#form_user") do
    fill_in 'Name', with: 'Jackson'
    fill_in 'Email', with: 'jackson@gmail.com'
   end
   click_button 'Create User'
   expect(page).to have_content 'User was successfully created.'
   users = User.all
   expect(users.size).to eq(size_old + 1)
 end
 end
 context "Validade de um Usuário" do
 it "Usuário válido?" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.valid?).to be_truthy
  end
 it "Usuário inválido?" do
   user = User.new
   user.name = "Jackson"
   user.email = nil
   expect(user.valid?).to be_falsey
 end
 end
context "Títulos válidos" do
 it "Título completo" do
   user = User.new
   user.name = "Jackson"
   user.email = "jackson@gmail.com"
   expect(user.titulo_completo).to eq("Sr. Jackson - Email: jackson@gmail.com")
 end
end
end
```

```
C:\Sites\ror-jp-p4>rake spec
C:\Ruby25-x64/bin/ruby.exe -I'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/lib';'C:\Ruby25-x64/lib/ruby/gems/2.5.0/gems/rspec-core-3.9.0/exe/rspec' --pattern 'spec/
**{,/*/**}/*_spec.rb'

User
Testando a View User
Cadastrar um usuário
Validade de um Usuário
Usuário válido?
Usuário inválido?
Títulos válidos
Títulos válidos
Título completo

Finished in 1.35 seconds (files took 33.62 seconds to load)
4 examples, 0 failures
```

AULA 44 - ASSET PIPELINE 1/2

O que é?

Asset Pipeline fornece uma estrutura para concatenar e minificar ou comprimir os assets JavaScript e CSS. Ele também adiciona a capacidade de escrever esses assets em outros idiomas e pré-processadores como CoffeeScript, Sass e ERB.

Organização

- app/assets
- lib/assets
- vendor/assets.

Usando

```
<%= stylesheet_link_tag "application", media: "all" %> <%= javascript_include_tag "application" %>
```

app/views/layouts/application.html.erb

```
<!DOCTYPE html>
<html>
<head>
<title>RorJpP4</title>
<%= csrf_meta_tags %>
<%= csp_meta_tag %>

<%= stylesheet_link_tag 'application', media: 'all', 'data-turbolinks-track': 'reload' %>
<%= javascript_include_tag 'application', 'data-turbolinks-track': 'reload' %>
</head>

<body>
<%= yield %>
</body>
</html>
```

app/asset/javascripts/application.js

```
// This is a manifest file that'll be compiled into application.js, which will include all the files
// listed below.
//
// Any JavaScript/Coffee file within this directory, lib/assets/javascripts, or any plugin's
// vendor/assets/javascripts directory can be referenced here using a relative path.
//
// It's not advisable to add code directly here, but if you do, it'll appear at the bottom of the
// compiled file. JavaScript code in this file should be added after the last require_* statement.
//
// Read Sprockets README (https://github.com/rails/sprockets#sprockets-directives) for details
// about supported directives.
//
//= require rails-ujs
//= require activestorage
//= require_tree .
```

AULA 45 - ASSET PIPELINE 2/2

rails g scaffold Customer name:string address:string

rake db:migrate

Assets para controllers específicos

params[:controller]

app/assets/javascripts/application.js

```
// This is a manifest file that'll be compiled into application.js, which will include all the files
// listed below.
//
// Any JavaScript/Coffee file within this directory, lib/assets/javascripts, or any plugin's
// vendor/assets/javascripts directory can be referenced here using a relative path.
//
// It's not advisable to add code directly here, but if you do, it'll appear at the bottom of the
// compiled file. JavaScript code in this file should be added after the last require_* statement.
//
// Read Sprockets README (https://github.com/rails/sprockets#sprockets-directives) for details
// about supported directives.
//
//= require rails-ujs
//= require activestorage
//= require_tree_.
```

app/assets/stylesheets/application.css

```
/*

* This is a manifest file that'll be compiled into application.css, which will include all the files

* listed below.

*

* Any CSS and SCSS file within this directory, lib/assets/stylesheets, or any plugin's

* vendor/assets/stylesheets directory can be referenced here using a relative path.

*

* You're free to add application-wide styles to this file and they'll appear at the bottom of the

* compiled file so the styles you add here take precedence over styles defined in any other

CSS/SCSS

* files in this directory. Styles in this file should be added after the last require_* statement.

* It is generally better to create a new file per style scope.

* *= require_tree :

*= require_tree :

*= require_self

*/
```

Precompilar Assets Adicionais

Rails.application.config.assets.precompile += %w(search.js)

config/initializers/assets.rb

content_for

app/views/layouts/application.html.erb

```
<!DOCTYPE html>
<html>
<head>
<title>RorJpP4</title>
<%= csrf_meta_tags %>
<%= csp_meta_tag %>

<%= stylesheet_link_tag 'application', media: 'all', 'data-turbolinks-track': 'reload' %>
<%= javascript_include_tag 'application', 'data-turbolinks-track': 'reload' %>
<%= yield :head %>

</head>
<body>
<%= yield %>
</body>
</html>
```

app/views/customers/index.html.erb

```
<% content_for :head do %>
<%= stylesheet link tag params[:controller] %>
<%= javascript_include_tag params[:controller] %>
<% end %>
<%= notice %>
<h1>Customers</h1>
<thead>
 Name
  Address
  </thead>
<% @customers.each do |customer| %>
  <%= customer.address %>
  <%= link_to 'Show', customer %>
  <%= link_to 'Edit', edit_customer_path(customer) %>
  <%= link_to 'Destroy', customer, method: :delete, data: { confirm: 'Are you sure?' } %>
  <% end %>
<br>
<%= link_to 'New Customer', new_customer_path %>
```

app/views/users/index.html.erb

```
<% content_for :head do %>
<%= stylesheet_link_tag params[:controller] %>
<%= javascript_include_tag params[:controller] %>
<% end %>
<%= notice %>
<h1>Users</h1>
<thead>
 Name
  Email
  </thead>
<% @users.each do |user| %>
  <%= user.email %>
  <%= link_to 'Show', user %>
  <%= link_to 'Edit', edit_user_path(user) %>
  <%= link_to 'Destroy', user, method: :delete, data: { confirm: 'Are you sure?' } %>
  <% end %>
<br>
<%= link_to 'New User', new_user_path %>
```

AULA 46 - AJAX

- Copie o arquivo jquery.js para dentro da pasta app/assets/javascripts.

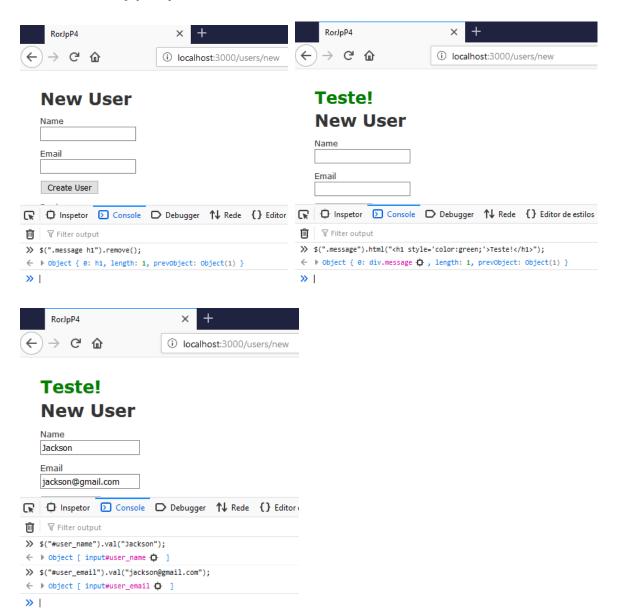
app/assets/javascripts/application.js

```
// This is a manifest file that'll be compiled into application.js, which will include all the files
// listed below.
//
// Any JavaScript/Coffee file within this directory, lib/assets/javascripts, or any plugin's
// vendor/assets/javascripts directory can be referenced here using a relative path.
//
// It's not advisable to add code directly here, but if you do, it'll appear at the bottom of the
// compiled file. JavaScript code in this file should be added after the last require_* statement.
//
// Read Sprockets README (https://github.com/rails/sprockets#sprockets-directives) for details
// about supported directives.
//
//= require jquery
//= require activestorage
//= require activestorage
//= require turbolinks
```

app/views/users/new.html.erb

```
<div class="message">
  <h1 style="color:green;">Teste!</h1>
  </div>
<h1>New User</h1>
<%= render 'form', user: @user %>
<%= link_to 'Back', users_path %>
```

Testes com o jquery



Rails + Ajax

app/views/users/_form.html.erb

```
<%= form_with(model: user, remote: true, id: "form_user", local: true) do |form| %>
<% if user.errors.any? %>
 <div id="error_explanation">
  <h2><%= pluralize(user.errors.count, "error") %> prohibited this user from being saved:</h2>
  <% user.errors.full_messages.each do |message| %>
   <%= message %>
  <% end %>
  </div>
<% end %>
<div class="field">
 <%= form.label :name %>
 <%= form.text_field :name %>
</div>
<div class="field">
 <%= form.label :email %>
 <%= form.text_field :email %>
</div>
<div class="actions">
 <%= form.submit %>
</div>
<% end %>
```

app/controllers/users_controller.rb

```
class UsersController < ApplicationController
before action :set user, only: [:show, :edit, :update, :destroy]
# GET /users
# GET /users.json
def index
 @users = User.all
end
# GET /users/1
# GET /users/1.json
def show
end
# GET /users/new
def new
 @user = User.new
end
# GET /users/1/edit
def edit
end
# POST /users
# POST /users.json
def create
 @user = User.new(user_params)
 respond_to do |format|
   if @user.save
   format.html { redirect_to @user, notice: 'User was successfully created.' }
   format.json { render :show, status: :created, location: @user }
   format.js # views/users/create.js.erb
   else
   format.html { render :new }
   format.json { render json: @user.errors, status: :unprocessable_entity }
   format.js # views/users/create.js.erb
   end
 end
end
# PATCH/PUT /users/1
# PATCH/PUT /users/1.json
def update
 respond_to do |format|
   if @user.update(user_params)
   format.html { redirect_to @user, notice: 'User was successfully updated.' }
   format.json { render :show, status: :ok, location: @user }
```

```
else
   format.html { render :edit }
   format.json { render json: @user.errors, status: :unprocessable_entity }
   end
 end
end
# DELETE /users/1
# DELETE /users/1.json
def destroy
 @user.destroy
 respond_to do |format|
  format.html { redirect_to users_url, notice: 'User was successfully destroyed.' }
  format.json { head :no_content }
 end
end
private
 # Use callbacks to share common setup or constraints between actions.
 def set_user
   @user = User.find(params[:id])
 end
 # Never trust parameters from the scary internet, only allow the white list through.
 def user_params
   params.require(:user).permit(:name, :email)
 end
end
```

app/views/users/create.js.erb

```
var qtdErrors = <%= @user.errors.count %>;

if (qtdErrors > 0) {
    $(".message").html("<h1>Ocorreu um erro!</h1>").css({color: "red"});
} else {
    $(".message").html("<h1>Cadastrado com sucesso!</h1>").css({color: "green"});
    $("#user_name").val("");
    $("#user_email").val("");
}
setTimeout(function(){ $(".message h1").remove() }, 5000);
```

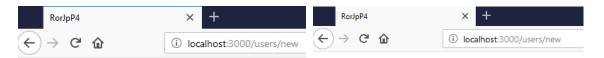


Ocorreu um erro!

New User

Name	
Jackson	
Email	
Create User	
- 1	

<u>Back</u>



New User

Name
Jackson
Email
jackson@gmail.com
Create User
Back

Cadastrado com sucesso! New User

Name	_
Email	
Create User	
Pack	

AULA 47 - NOTIFY.JS + RAILS

https://notifyjs.jpillora.com/

- Baixar notify.js e copiá-lo para a pasta app/assets/javascripts.

config/initializers/assets.rb

```
# Be sure to restart your server when you modify this file.
# Version of your assets, change this if you want to expire all your assets.
Rails.application.config.assets.version = '1.0'
# Add additional assets to the asset load path.
# Rails.application.config.assets.paths << Emoji.images_path
# Add Yarn node_modules folder to the asset load path.
Rails.application.config.assets.paths << Rails.root.join('node_modules')
# Precompile additional assets.
# application.js, application.css, and all non-JS/CSS in the app/assets
# folder are already added.
# Rails.application.config.assets.precompile += %w( admin.js admin.css )
Rails.application.config.assets.precompile += %w( customers.coffee
                            customers.scss
                            users.coffee
                            users.scss
                            jquery.js
                            notify.js)
```

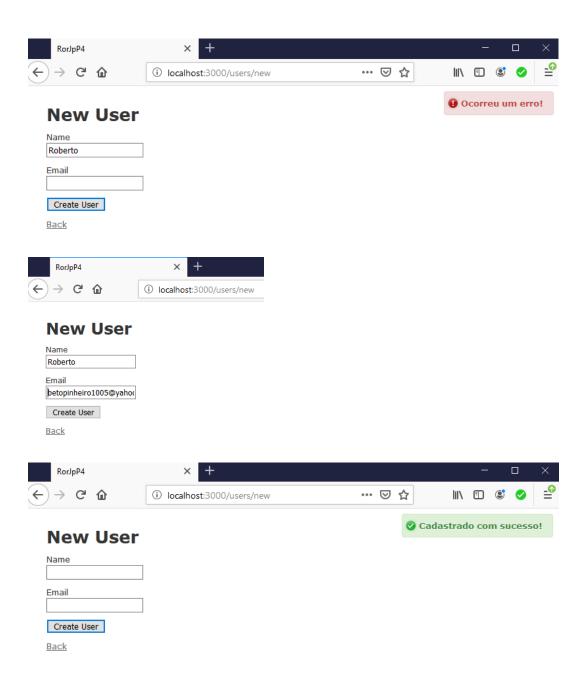
app/views/users/new.html.erb

```
<% content_for :head do %>
  <%= javascript_include_tag 'notify' %>
  <% end %>
  <h1>New User</h1>
  <%= render 'form', user: @user %>
  <%= link_to 'Back', users_path %>
```

app/views/users/create.js.erb

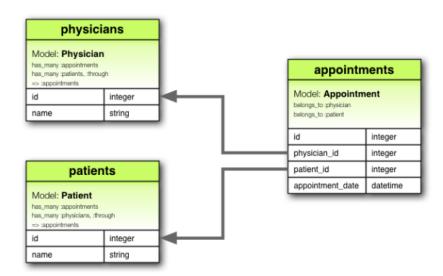
```
var qtdErrors = <%= @user.errors.count %>;

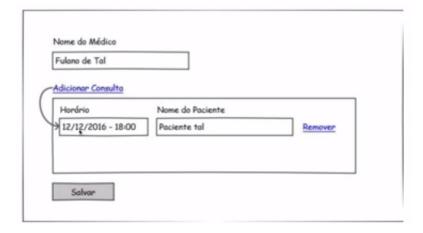
if (qtdErrors > 0) {
    $.notify("Ocorreu um erro!", "error");
} else {
    $.notify("Cadastrado com sucesso!", "success");
    $("#user_name").val("");
    $("#user_email").val("");
}
```



AULA 48 - HAS MANY THROUGH + COCOON GEM

https://guides.rubyonrails.org/association basics.html#the-has-many-through-association





Gerando os scaffolds

rails generate scaffold Physician name:string

rails generate scaffold Appointment physician:references patient:references appointment_date:datetime rails generate scaffold Patient name:string

rake db:migrate

app/models/patient.rb

```
class Patient < ActiveRecord::Base
```

has_many:appointments

has_many:physicians, through::appointments

end

app/models/physician.rb

class Physician < ActiveRecord::Base

has_many :appointments

has_many:patients, through::appointments

end

app/models/appointment.rb

class Appointment < ApplicationRecord

belongs_to:physician belongs_to:patient

end

Nested Attributes

app/models/appointment.rb

```
class Appointment < ApplicationRecord
belongs_to:physician
belongs_to:patient

accepts_nested_attributes_for:patient, reject_if::all_blank, allow_destroy: true
end
```

app/models/physician.rb

```
class Physician < ActiveRecord::Base
has_many :appointments
has_many :patients, through: :appointments

accepts_nested_attributes_for :appointments, reject_if: :all_blank, allow_destroy: true
end
```

Strong Parameters

```
def physician_params
    params.require(:physician).permit(:name, :appointments_attributes => [:id, :appointment_date,
:physician_id, :patient_id, :_destroy, :patient_attributes => [:id, :name]])
end
```

app/controllers/physicians_controller.rb

```
class PhysiciansController < ApplicationController
before_action :set_physician, only: [:show, :edit, :update, :destroy]
# GET /physicians
# GET /physicians.json
def index
 @physicians = Physician.all
end
# GET /physicians/1
# GET /physicians/1.json
def show
end
# GET /physicians/new
def new
  @physician = Physician.new
end
# GET /physicians/1/edit
def edit
end
# POST /physicians
# POST /physicians.json
def create
 @physician = Physician.new(physician_params)
 respond_to do |format|
   if @physician.save
   format.html { redirect to @physician, notice: 'Physician was successfully created.' }
   format.json { render :show, status: :created, location: @physician }
   else
   format.html { render :new }
   format.json { render json: @physician.errors, status: :unprocessable_entity }
   end
 end
end
# PATCH/PUT /physicians/1
```

```
# PATCH/PUT /physicians/1.json
 def update
 respond_to do |format|
   if @physician.update(physician_params)
    format.html { redirect_to @physician, notice: 'Physician was successfully updated.' }
    format.json { render :show, status: :ok, location: @physician }
   else
    format.html { render :edit }
    format.json { render json: @physician.errors, status: :unprocessable_entity }
  end
 end
# DELETE /physicians/1
 # DELETE /physicians/1.json
 def destroy
  @physician.destroy
 respond_to do |format|
  format.html { redirect to physicians url, notice: 'Physician was successfully destroyed.' }
   format.json { head :no_content }
 end
end
 private
 # Use callbacks to share common setup or constraints between actions.
 def set_physician
   @physician = Physician.find(params[:id])
 end
 # Never trust parameters from the scary internet, only allow the white list through.
 def physician_params
   params.require(:physician).permit(:name, :appointments attributes => [:id, :appointment date,
:physician_id, :patient_id, :_destroy, :patient_attributes => [:id, :name]])
 end
end
```

COCOON

https://github.com/nathanvda/cocoon

Gemfile

```
source 'https://rubygems.org'
git_source(:github) { |repo| "https://github.com/#{repo}.git" }
ruby '2.5.1'
gem 'rails', '~> 5.2.3'
# Use mysql as the database for Active Record
gem 'mysql2', '>= 0.4.4', '< 0.6.0'
# Use Puma as the app server
gem 'puma', '~> 3.11'
# Use SCSS for stylesheets
gem 'sass-rails', '~> 5.0'
# Use Uglifier as compressor for JavaScript assets
gem 'uglifier', '>= 1.3.0'
# See https://github.com/rails/execjs#readme for more supported runtimes
gem 'duktape'
# Use CoffeeScript for .coffee assets and views
gem 'coffee-rails', '~> 4.2'
# Turbolinks makes navigating your web application faster. Read more:
https://github.com/turbolinks/turbolinks
gem 'turbolinks', '~> 5'
# Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
gem 'jbuilder', '~> 2.5'
# Use Redis adapter to run Action Cable in production
# gem 'redis', '~> 4.0'
# Use ActiveModel has_secure_password
# gem 'bcrypt', '~> 3.1.7'
# Use ActiveStorage variant
# gem 'mini_magick', '~> 4.8'
# Use Capistrano for deployment
# gem 'capistrano-rails', group: :development
# Reduces boot times through caching; required in config/boot.rb
gem 'bootsnap', '>= 1.1.0', require: false
# Cocoon
gem "cocoon"
group:development,:test do
 # Call 'byebug' anywhere in the code to stop execution and get a debugger console
 gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
```

```
gem 'rspec-rails', '~> 3.0'
gem 'capybara'
end

group :development do
# Access an interactive console on exception pages or by calling 'console' anywhere in the code.
gem 'web-console', '>= 3.3.0'
end

# Windows does not include zoneinfo files, so bundle the tzinfo-data gem
gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

bundle install

Rails 3.1+/Rails 4/Rails 5

Add the following to application.js so it compiles to the asset pipeline:

//= require cocoon

app/assets/javascripts/application.js

```
// This is a manifest file that'll be compiled into application.js, which will include all the files
// listed below.
//
// Any JavaScript/Coffee file within this directory, lib/assets/javascripts, or any plugin's
// vendor/assets/javascripts directory can be referenced here using a relative path.
//
// It's not advisable to add code directly here, but if you do, it'll appear at the bottom of the
// compiled file. JavaScript code in this file should be added after the last require_* statement.
//
// Read Sprockets README (https://github.com/rails/sprockets#sprockets-directives) for details
// about supported directives.
//
//= require jquery
//= require activestorage
//= require turbolinks
//= require cocoon
```

HELPERS

link_to_add_association

This function adds a link to your markup that, when clicked, dynamically adds a new partial form for the given association.

link_to_remove_association

This function will add a link to your markup that, when clicked, dynamically removes the surrounding partial form. This should be placed inside the partial _<association-object-singular>_fields.

FORMULÁRIO PHYSICIAN

```
<%= link_to_add_association 'add appointment', f, :appointments, 'data-association-insertion-node'</pre>
=> "#appointments-patient ol", 'data-association-insertion-method' => "append", :wrap_object =>
Proc. new {|appointment| appointment.build_patient; appointment } %>
<hr/>
<fieldset id="appointments-patient">
     <%= f.fields_for :appointments do |appointment| %>
     <%= render partial: "appointment_fields", locals: { f:appointment } %>
     <% end %>
   <fieldset/>
_appointment_fields.html.erb
<div class="controls">
     <%= f.datetime select :appointment date %>>
     <%= f.fields_for :patient do |appointment_patient| %>
     <%= appointment_patient.text_field :name %>
     <% end %>
   <%= link_to_remove_association "remove", f %>
```

app/views/physicians/_form.html.erb

```
<%= form_for @physician do |f| %>
<% if @physician.errors.any? %>
 <div id="error_explanation">
  <h2><%= pluralize(@physician.errors.count, "error") %> prohibited this physician from being saved:</h2>
   <% @physician.errors.full_messages.each do |message| %>
   <%= message %>
  <% end %>
  </div>
 <% end %>
 <div class="field">
 <%= f.label :name %>
 <%= f.text_field :name %>
 <br><br>>
 <%= link_to_add_association 'add appointment', f,
                :appointments, 'data-association-insertion-node' => "#appointments-patient ol",
                'data-association-insertion-method' => "append",
                :wrap_object => Proc. new {|appointment| appointment.build_patient; appointment },
                class: "btn btn-primary"
 %>
 <hr/>
 <fieldset id="appointments-patient">
    <%= f.fields for :appointments do |appointment| %>
     <%= render partial: "appointment_fields", locals: { f:appointment } %>
    <% end %>
  <fieldset/>
 </div>
<div class="actions">
 <%= f.submit class: "btn btn-success" %>
 </div>
<% end %>
```

app/views/physicians/_appointment_fields.html.erb

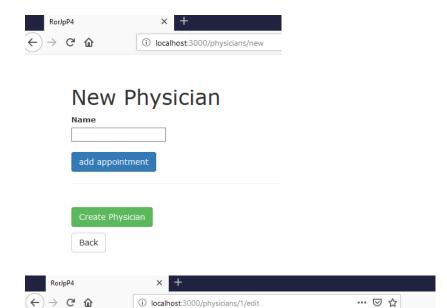
```
        <div class="controls">
        <%= f.datetime_select :appointment_date %>>
        <%= f.fields_for :patient do |appointment_patient| %>
        <%= appointment_patient.text_field :name %>
        <% end %>
        <% end %>
        <%= link_to_remove_association "Remover", f, class: "btn btn-default" %>
        </div>
```

rake db:migrate

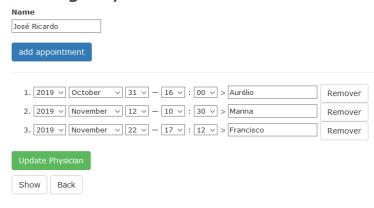
- Baixe e copie o arquivo **bootstrap.css** para a pasta **app/assets/stylesheets**.

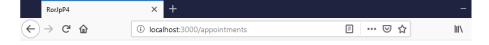
config/initializers/assets.rb

```
# Be sure to restart your server when you modify this file.
# Version of your assets, change this if you want to expire all your assets.
Rails.application.config.assets.version = '1.0'
# Add additional assets to the asset load path.
# Rails.application.config.assets.paths << Emoji.images_path
# Add Yarn node_modules folder to the asset load path.
Rails.application.config.assets.paths << Rails.root.join('node_modules')
# Precompile additional assets.
# application.js, application.css, and all non-JS/CSS in the app/assets
# folder are already added.
# Rails.application.config.assets.precompile += %w( admin.js admin.css )
Rails.application.config.assets.precompile += %w( customers.coffee
                            customers.scss
                            users.coffee
                            users.scss
                            jquery.js
                            notify.js
                            bootstrap.css)
```

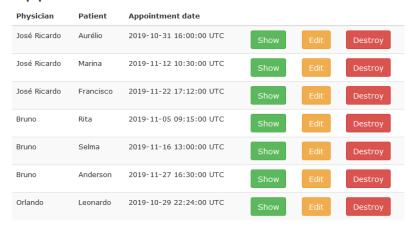


Editing Physician





Appointments



New Appointment

AULA 49 - RAILS ADMIN INTERFACES

RUBY-TOOLBOX

https://www.ruby-toolbox.com/categories/rails admin interfaces

ACTIVE SCAFFOLD

https://github.com/activescaffold/active scaffold

Gemfile

```
source 'https://rubygems.org'
git_source(:github) { |repo| "https://github.com/#{repo}.git" }
ruby '2.5.1'
gem 'rails', '~> 5.2.3'
# Use mysql as the database for Active Record
gem 'mysql2', '>= 0.4.4', '< 0.6.0'
# Use Puma as the app server
gem 'puma', '~> 3.11'
# Use SCSS for stylesheets
gem 'sass-rails', '~> 5.0'
# Use Uglifier as compressor for JavaScript assets
gem 'uglifier', '>= 1.3.0'
# See https://github.com/rails/execjs#readme for more supported runtimes
gem 'duktape'
# Use CoffeeScript for .coffee assets and views
gem 'coffee-rails', '~> 4.2'
# Turbolinks makes navigating your web application faster. Read more:
https://github.com/turbolinks/turbolinks
gem 'turbolinks', '~> 5'
# Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
gem 'ibuilder', '~> 2.5'
# ActiveScaffold
gem 'active_scaffold'
# Use Redis adapter to run Action Cable in production
# gem 'redis', '~> 4.0'
# Use ActiveModel has secure password
# gem 'bcrypt', '~> 3.1.7'
# Use ActiveStorage variant
# gem 'mini magick', '~> 4.8'
```

```
# Use Capistrano for deployment
# gem 'capistrano-rails', group: :development
# Reduces boot times through caching; required in config/boot.rb
gem 'bootsnap', '>= 1.1.0', require: false
# Cocoon
gem "cocoon"
group:development,:test do
 # Call 'byebug' anywhere in the code to stop execution and get a debugger console
 gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
 gem 'rspec-rails', '~> 3.0'
 gem 'capybara'
end
group :development do
# Access an interactive console on exception pages or by calling 'console' anywhere in the code.
gem 'web-console', '>= 3.3.0'
end
# Windows does not include zoneinfo files, so bundle the tzinfo-data gem
gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

bundle install

rake db:create

```
C:\Sites\ror-jp-a49>rake db:create
Created database 'ror-jp-a49_development'
Created database 'ror-jp-a49_test'
```

rails g active_scaffold:install

```
C:\Sites\ror-jp-a49>rails g active_scaffold:install

route concern :active_scaffold, ActiveScaffold::Routing::Basic.new(association: true)

route concern :active_scaffold_association, ActiveScaffold::Routing::Association.new

insert app/assets/javascripts/application.js

insert app/assets/stylesheets/application.css
```

rails g active_scaffold:resource Category name:string

```
C:\Sites\ror-jp-a49>rails g active_scaffold:resource Category name:string
invoke active_record
create db/migrate/20191030134851 create categories.rb
create app/models/category.rb
invoke test_unit
create test/models/category test.rb
create test/fixtures/categories.yml
route resources :categories, concerns: :active_scaffold
invoke active_scaffold:controller
create app/controllers/categories controller.rb
create app/helpers/categories helper.rb
invoke test_unit
create test/controllers/categories controller test.rb
create test/system/categories test.rb
create app/views/categories
```

rake db:migrate

ACTIVE ADMIN

Gemfile

```
source 'https://rubygems.org'
git_source(:github) { |repo| "https://github.com/#{repo}.git" }
ruby '2.5.1'
gem 'rails', '~> 5.2.1'
# Use mysql as the database for Active Record
gem 'mysql2', '>= 0.4.4', '< 0.6.0'
# Use Puma as the app server
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# Use SCSS for stylesheets
gem 'sass-rails', '~> 5.0'
# Use Uglifier as compressor for JavaScript assets
gem 'uglifier', '>= 1.3.0'
# See https://github.com/rails/execjs#readme for more supported runtimes
gem 'duktape'
# Use CoffeeScript for .coffee assets and views
gem 'coffee-rails', '~> 4.2'
# Turbolinks makes navigating your web application faster. Read more:
https://github.com/turbolinks/turbolinks
gem 'turbolinks', '~> 5'
# Build JSON APIs with ease. Read more: https://github.com/rails/jbuilder
gem 'jbuilder', '~> 2.5'
gem 'activeadmin'
gem 'devise'
# Use Redis adapter to run Action Cable in production
# gem 'redis', '~> 4.0'
# Use ActiveModel has secure password
# gem 'bcrypt', '~> 3.1.7'
# Use ActiveStorage variant
# gem 'mini_magick', '~> 4.8'
# Use Capistrano for deployment
# gem 'capistrano-rails', group: :development
# Reduces boot times through caching; required in config/boot.rb
gem 'bootsnap', '>= 1.1.0', require: false
# Cocoon
gem "cocoon"
group: development,: test do
 # Call 'byebug' anywhere in the code to stop execution and get a debugger console
 gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
 gem 'rspec-rails', '~> 3.0'
```

```
gem 'capybara'
end

group :development do

# Access an interactive console on exception pages or by calling 'console' anywhere in the code.
gem 'web-console', '>= 3.3.0'
end

# Windows does not include zoneinfo files, so bundle the tzinfo-data gem
gem 'tzinfo-data', platforms: [:mingw, :mswin, :x64_mingw, :jruby]
```

bundle install
rails g active_admin:install
rake db:migrate

rake db:seed

db/seeds.rb

```
# This file should contain all the record creation needed to seed the database with its default values.
# The data can then be loaded with the rails db:seed command (or created alongside the database with db:setup).
#
# Examples:
#
# movies = Movie.create([{ name: 'Star Wars' }, { name: 'Lord of the Rings' }])
# Character.create(name: 'Luke', movie: movies.first)
AdminUser.create!(email: 'admin@example.com', password: 'password', password_confirmation: 'password') if Rails.env.development?
```

rails generate scaffold Customer name:string address:string

rake db:migrate

rails generate active_admin:resource Customer

Visit http://localhost:3000/admin and log in using:

User: admin@example.com Password: password

