Ruby Test Suite

@ButterflyMX

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Senior Ruby Developer

The First Principle of the Agile Manifesto

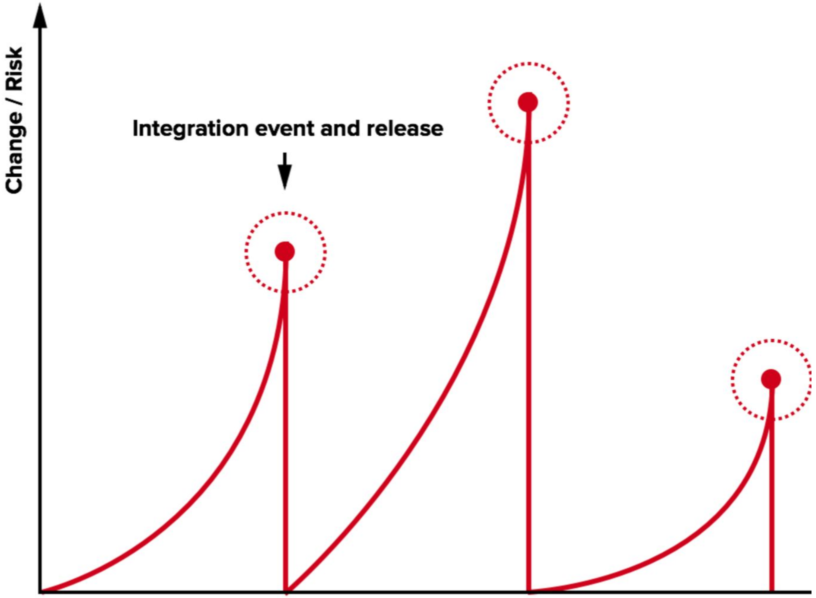
Our highest priority is to satisfy the customer

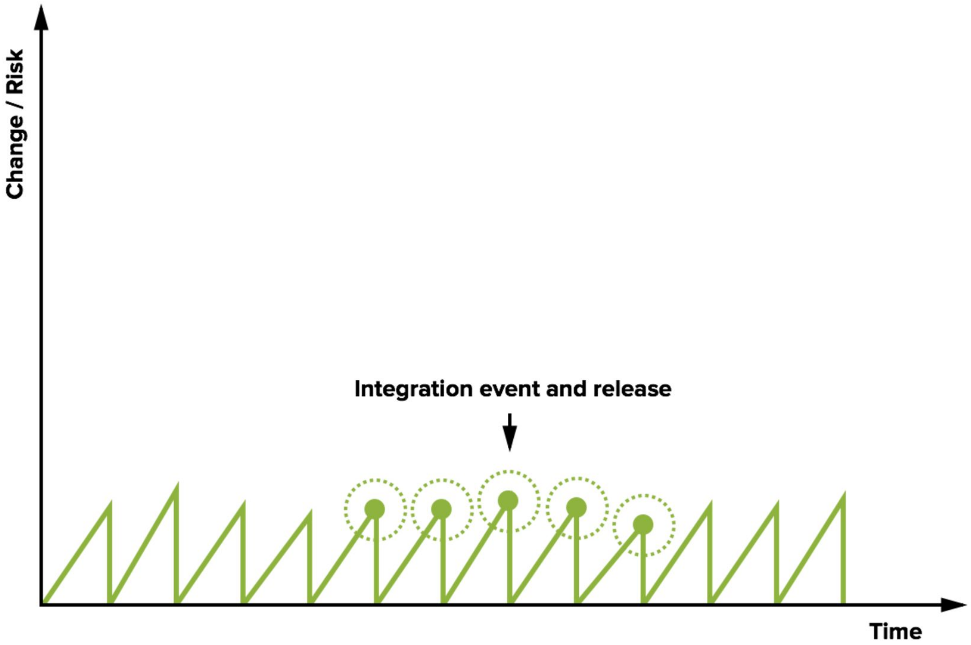
through early and continuous delivery

of valuable software.

http://agilemanifesto.org/principles.html

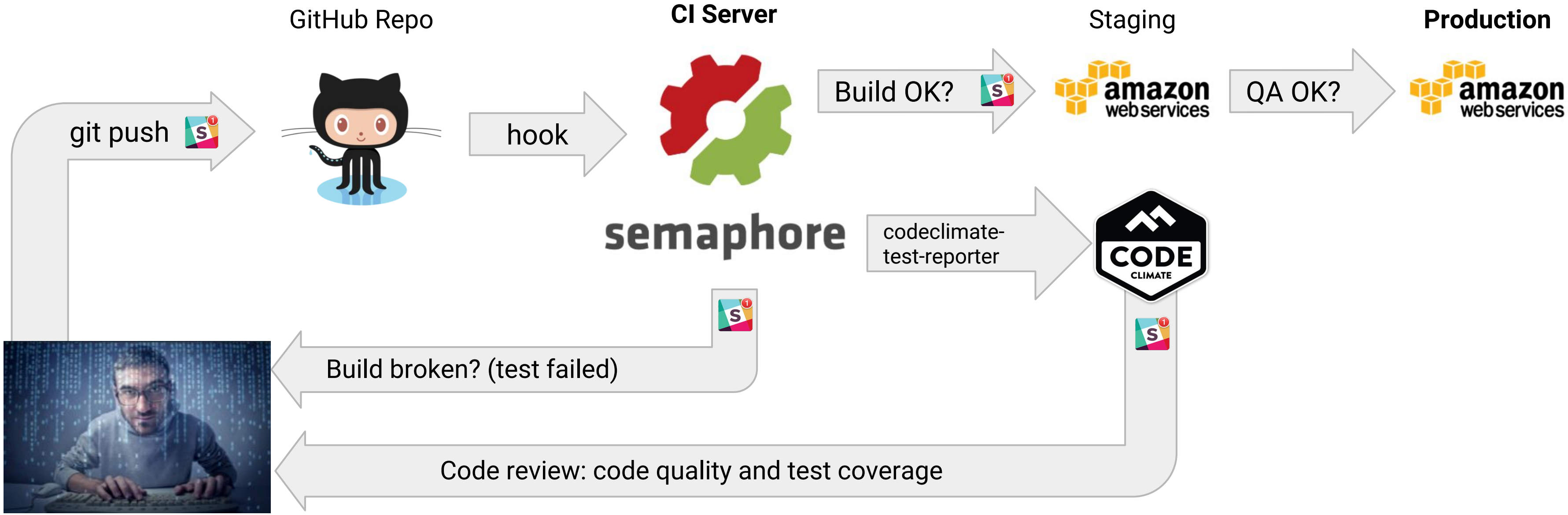
Traditional *Waterfall* vs. Continuous Integration





source: https://semaphoreci.com/community/tutorials/continuous-integration

Continuous Integration @ButterflyMX



GitHub Repo

CI Server

Staging

Production

git push

hook

Build OK?

QA OK?

codeclimate-test-reporter

Build broken? (test failed)

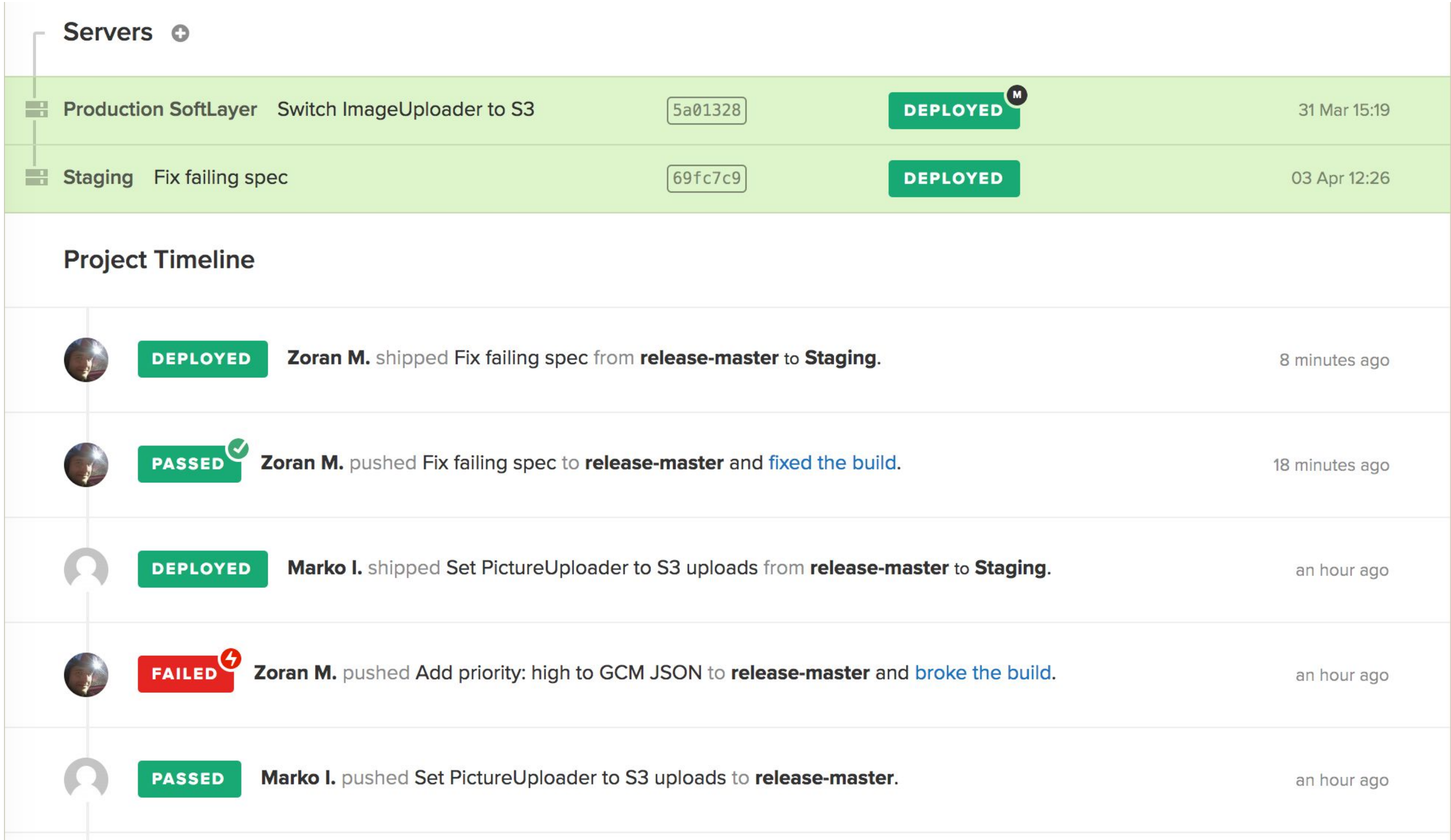
Code review: code quality and test coverage

Continuous Integration & Deployment
CI Server

Continuous Integration & Deployment

CI Server

semaphore



Servers

Production SoftLayer	Switch ImageUploader to S3	5a01328	DEPLOYED	31 Mar 15:19
Staging	Fix failing spec	69fc7c9	DEPLOYED	03 Apr 12:26

Project Timeline

DEPLOYED **Zoran M.** shipped Fix failing spec from **release-master** to **Staging**. 8 minutes ago

PASSED **Zoran M.** pushed Fix failing spec to **release-master** and fixed the build. 18 minutes ago

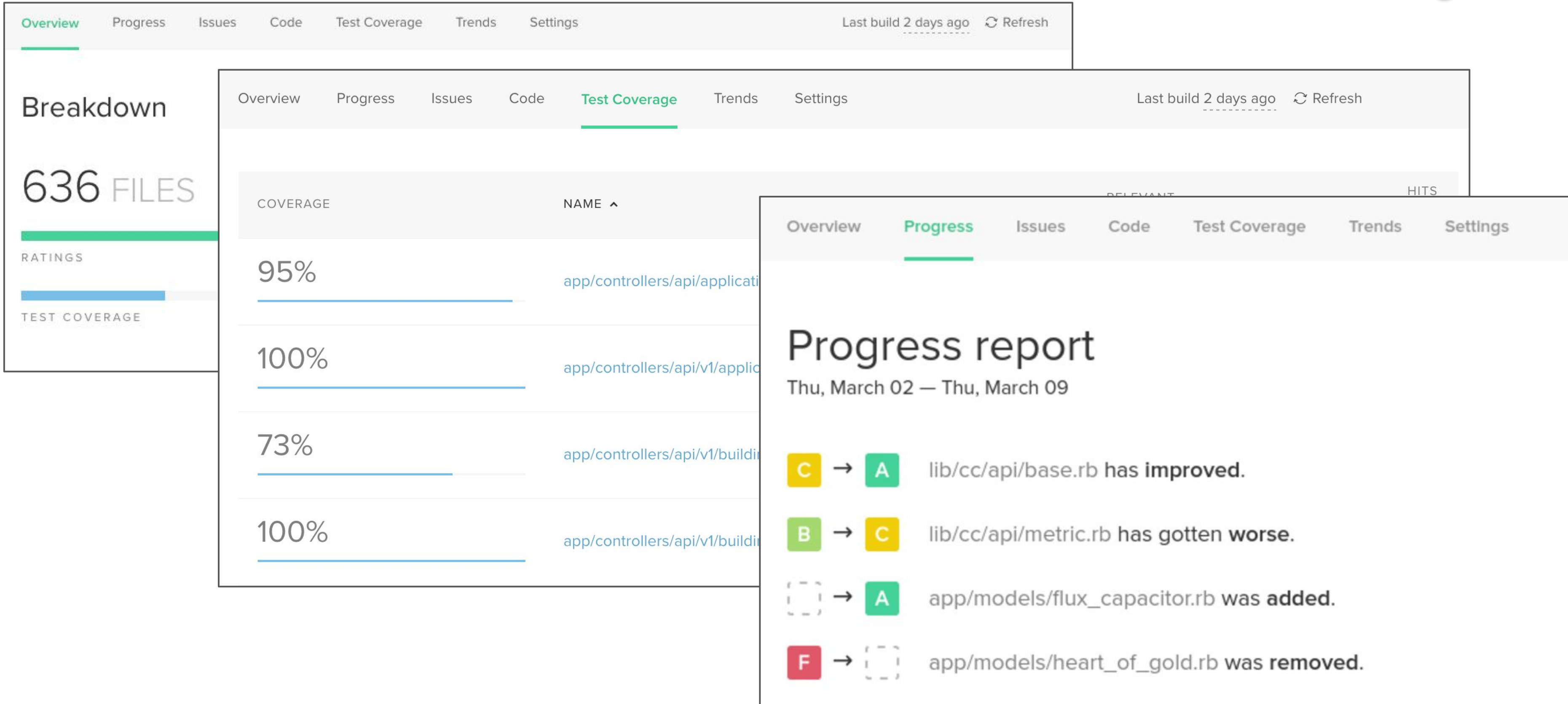
DEPLOYED **Marko I.** shipped Set PictureUploader to S3 uploads from **release-master** to **Staging**. an hour ago

FAILED **Zoran M.** pushed Add priority: high to GCM JSON to **release-master** and broke the build. an hour ago

PASSED **Marko I.** pushed Set PictureUploader to S3 uploads to **release-master**. an hour ago

Continuous Code Quality Check

Continuous Code Quality Check



Breakdown

636 FILES

RATINGS

TEST COVERAGE

COVERAGE	NAME
95%	app/controllers/api/applicati
100%	app/controllers/api/v1/applic
73%	app/controllers/api/v1/buildi
100%	app/controllers/api/v1/buildi

Progress report

Thu, March 02 — Thu, March 09

C → A lib/cc/api/base.rb has **improved**.

B → C lib/cc/api/metric.rb has gotten **worse**.

→ A app/models/flux_capacitor.rb was **added**.

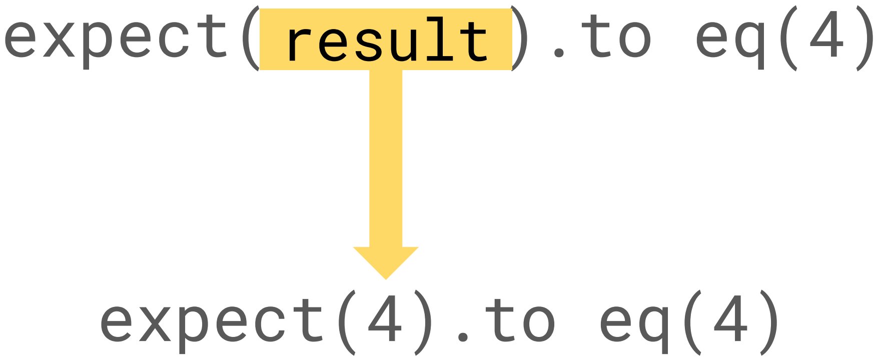
F → app/models/heart_of_gold.rb was **removed**.

RSpec

Behaviour Driven Development for Ruby

RSpec

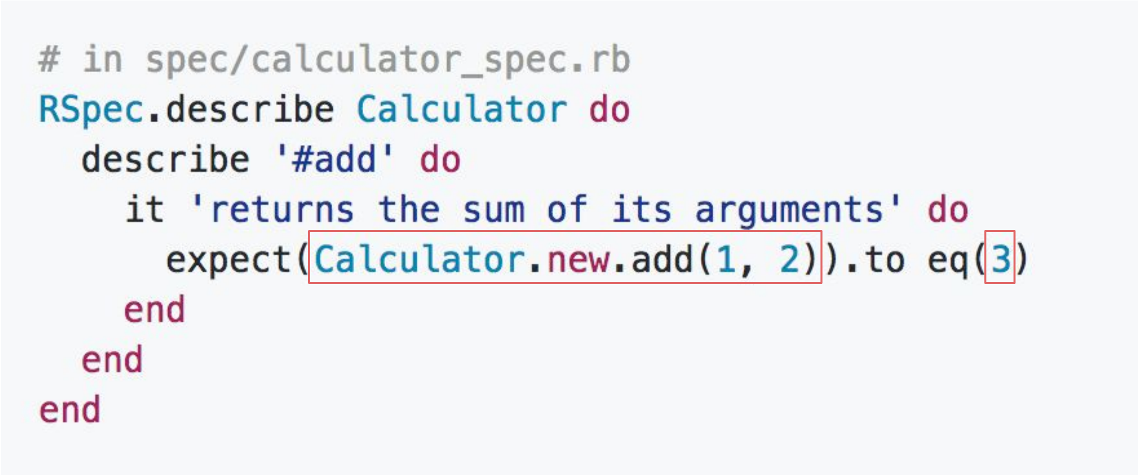
(example | expectation | spec) *expresses desired behaviour*



```
expect( result ).to eq(4)
```

```
expect(4).to eq(4)
```

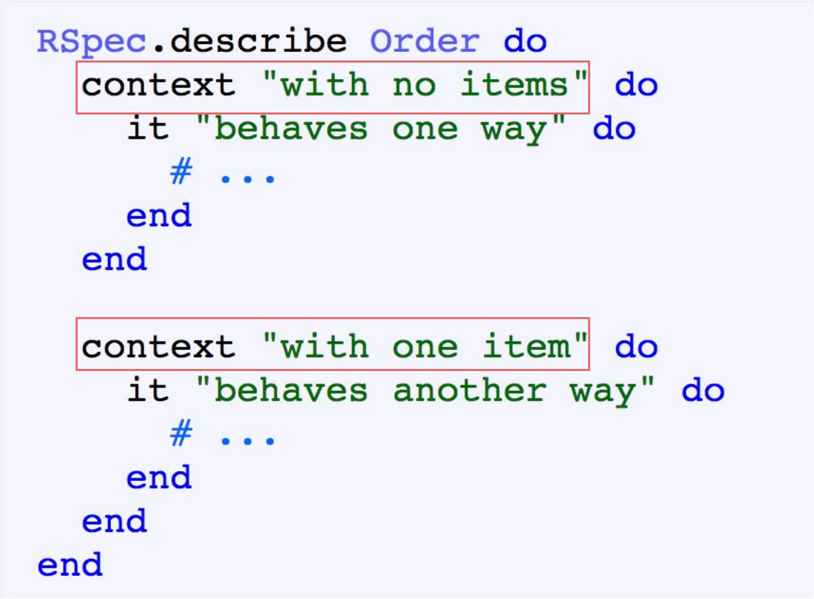
RSpec



```ruby
# in spec/calculator_spec.rb
RSpec.describe Calculator do
  describe '#add' do
    it 'returns the sum of its arguments' do
      expect(Calculator.new.add(1, 2)).to eq(3)
    end
  end
end
```

source: https://github.com/rspec/rspec-core#get-started

RSpec Nested Structures *(describe/context)*



```ruby
RSpec.describe Order do
  context "with no items" do
    it "behaves one way" do
      # ...
    end
  end

  context "with one item" do
    it "behaves another way" do
      # ...
    end
  end
end
```

source: http://rspec.info/documentation/3.5/rspec-core

RSpec

- **rspec-core:** the spec runner, a command line program
- **rspec-expectations:** express expected outcomes of a code example
- **rspec-mocks:** test double framework
  (fake objects to to control the environment in which specs run)
- **rspec-rails:** support for testing Ruby on Rails applications

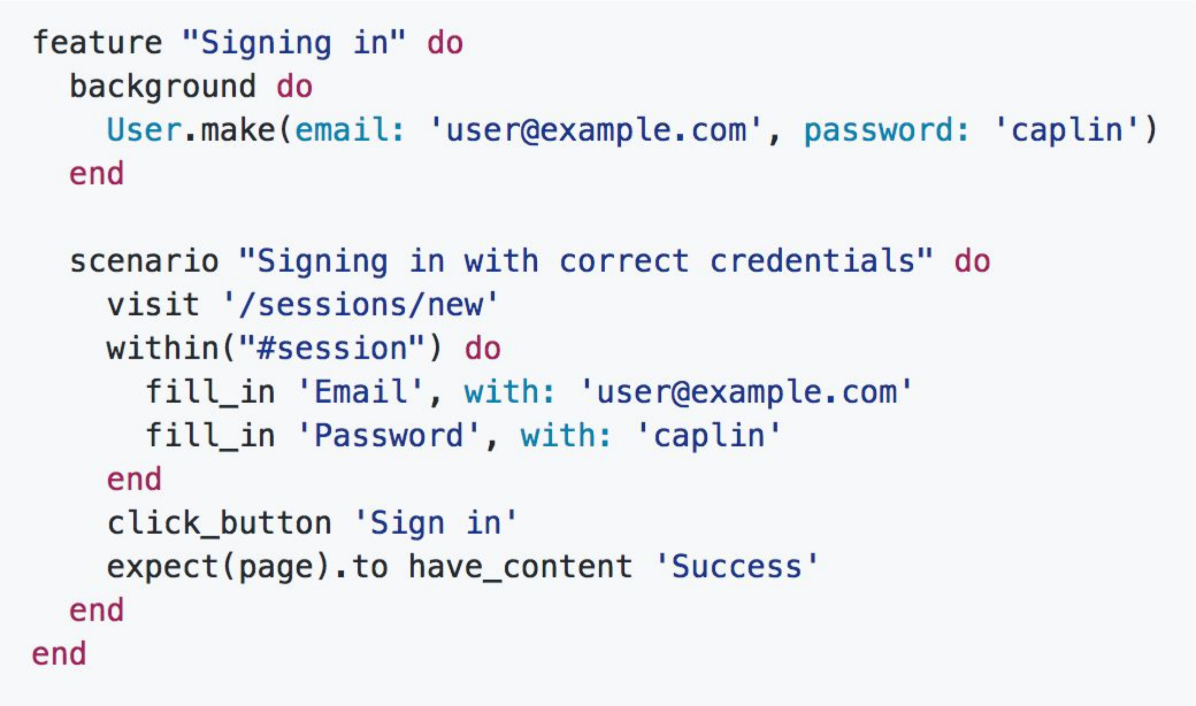
source: http://rspec.info/documentation

Capybara

Acceptance test framework for web applications

simulates how a user interacts with your application

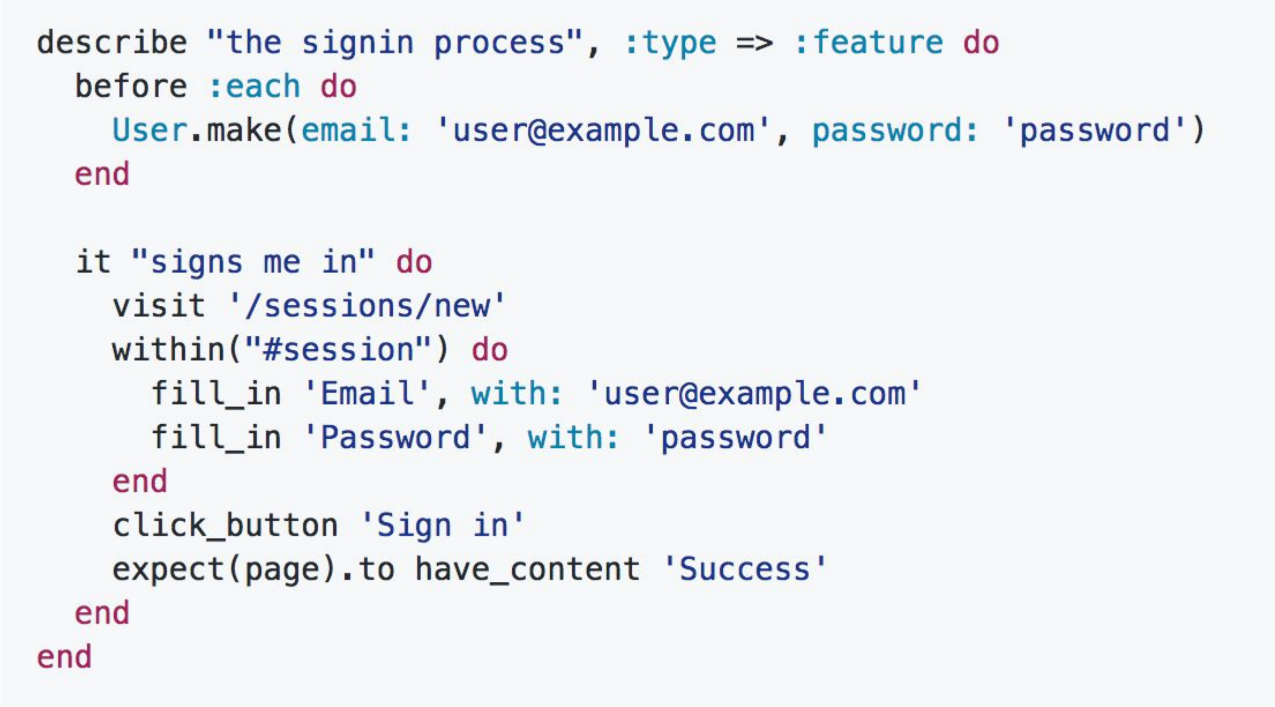
Capybara Acceptance Tests *(features)*



```ruby
feature "Signing in" do
  background do
    User.make(email: 'user@example.com', password: 'caplin')
  end

  scenario "Signing in with correct credentials" do
    visit '/sessions/new'
    within("#session") do
      fill_in 'Email', with: 'user@example.com'
      fill_in 'Password', with: 'caplin'
    end
    click_button 'Sign in'
    expect(page).to have_content 'Success'
  end
end
```

source: https://github.com/teamcapybara/capybara#using-capybara-with-rspec

Capybara with RSpec



```
describe "the signin process", :type => :feature do
  before :each do
    User.make(email: 'user@example.com', password: 'password')
  end

  it "signs me in" do
    visit '/sessions/new'
    within("#session") do
      fill_in 'Email', with: 'user@example.com'
      fill_in 'Password', with: 'password'
    end
    click_button 'Sign in'
    expect(page).to have_content 'Success'
  end
end
```

source: https://github.com/teamcapybara/capybara#using-capybara-with-rspec

Capybara Navigating and Clicking

- `visit('/projects')`
- `click_link('id-of-link')`
- `click_link('Link Text')`
- `click_button('Save')`
- `click_on('Link Text') # clicks on either links or buttons`
- `click_on('Button Value')`

source: http://www.rubydoc.info/github/teamcapybara/capybara

Capybara Interacting with Forms

- **fill_in**('First Name', with: 'John')
- **fill_in**('Password', with: 'Seekrit')
- **fill_in**('Description', with: 'Really Long Text...')
- **choose**('A Radio Button')
- **check**('A Checkbox')
- **uncheck**('A Checkbox')
- **attach_file**('Image', '/path/to/image.jpg')
- **select**('Option', from: 'Select Box')

source: http://www.rubydoc.info/github/teamcapybara/capybara

Capybara Matchers

querying the page for the existence of certain elements

- `page.has_selector?('table tr')`
- `page.has_selector?(:xpath, './/table/tr')`
- `page.has_xpath?('.//table/tr')`
- `page.has_css?('table tr.foo')`
- `page.has_content?('foo')`

source: http://www.rubydoc.info/github/teamcapybara/capybara

Capybara with RSpec's matchers

- `expect(page).to` **`have_selector`**`('table tr')`
- `expect(page).to` **`have_selector`**`(:xpath, './/table/tr')`
- `expect(page).to` **`have_xpath`**`('.//table/tr')`
- `expect(page).to` **`have_css`**`('table tr.foo')`
- `expect(page).to` **`have_content`**`('foo')`

source: http://www.rubydoc.info/github/teamcapybara/capybara

Capybara Finders and Actions

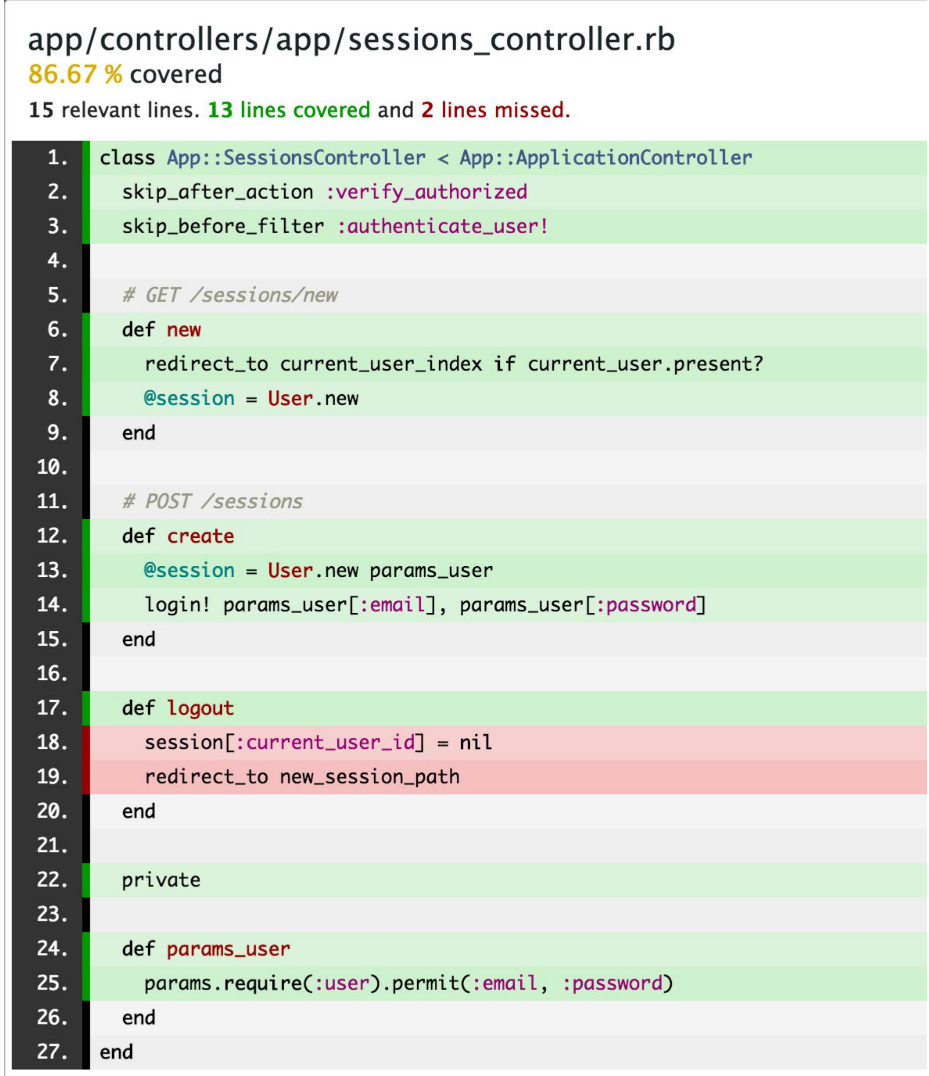
- **find_field**('First Name')**.value**
- **find_field**(id: 'my_field')**.value**
- **find_link**('Hello')**.visible?**

- **find_button**('Send')**.click**
- **find_button**(value: '1234')**.click**

source: http://www.rubydoc.info/github/teamcapybara/capybara

SimpleCov

code coverage analysis tool



app/controllers/app/sessions_controller.rb

86.67 % covered

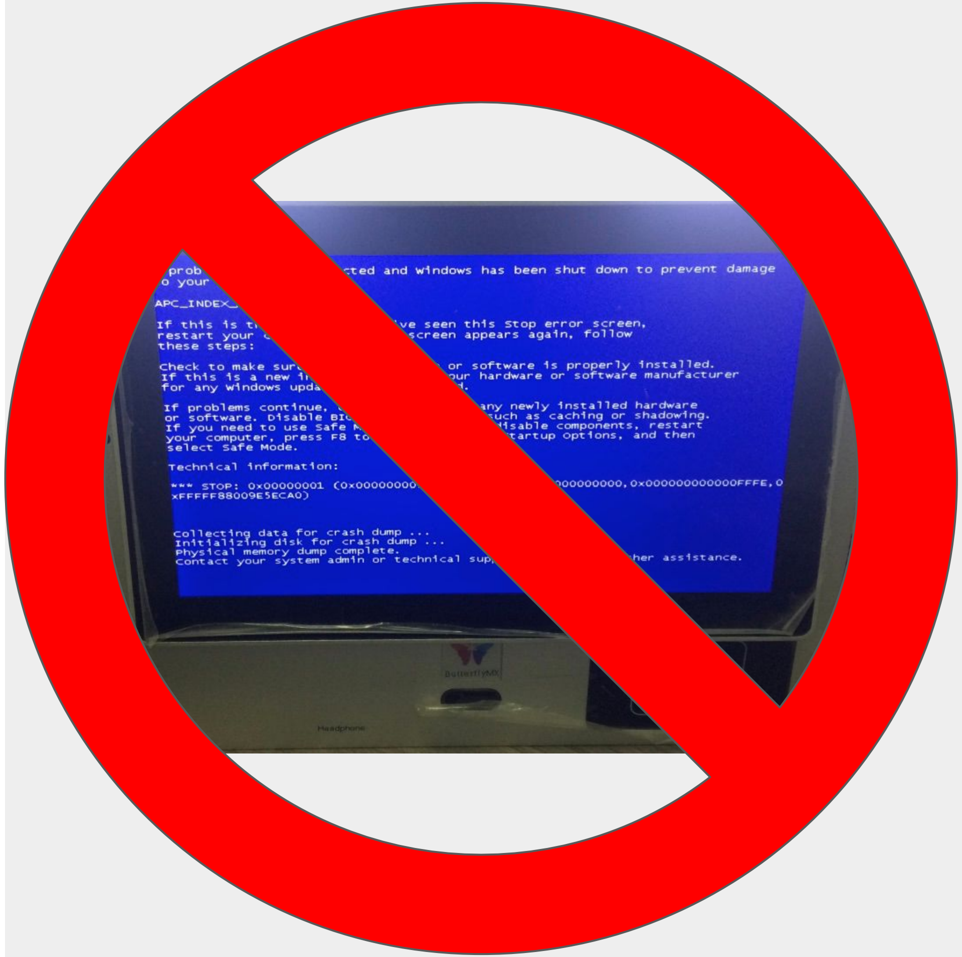
15 relevant lines. 13 lines covered and 2 lines missed.

```
class App::SessionsController < App::ApplicationController
  skip_after_action :verify_authorized
  skip_before_filter :authenticate_user!

  # GET /sessions/new
  def new
    redirect_to current_user_index if current_user.present?
    @session = User.new
  end

  # POST /sessions
  def create
    @session = User.new params_user
    login! params_user[:email], params_user[:password]
  end

  def logout
    session[:current_user_id] = nil
    redirect_to new_session_path
  end

  private

  def params_user
    params.require(:user).permit(:email, :password)
  end
end
```

TEST WITH US

QA Engineer

info@6lix.com



```
 prob           cted and windows has been shut down to prevent damage
o your

APC_INDEX_

If this is t            ve seen this Stop error screen,
restart your            screen appears again, follow
these steps:

Check to make sur            or software is properly installed.
If this is a new i          our hardware or software manufacturer
for any windows upda             d.

If problems continue,             any newly installed hardware
or software. Disable BI            such as caching or shadowing.
If you need to use Safe M          disable components, restart
your computer, press F8 to          tartup options, and then
select Safe Mode.

Technical information:

*** STOP: 0x00000001 (0x00000000             000000000,0x000000000000FFFE,0
xFFFFF88009E5ECA0)


Collecting data for crash dump ...
Initializing disk for crash dump ...
Physical memory dump complete.
Contact your system admin or technical sup            her assistance.
```

TEST WITH US

QA Engineer

info@6lix.com

Responsibilities

- Test web, mobile and desktop (windows)
- Design test protocols
- Liaison with developers
- Automate tests

Thank You