

The Secret of “Full Stack” Testing with Cucumber & Webrat

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Behavior

Stories

Cucumber!

Webbrat & Factory Girl

Guest Stories

- As a guest I should be able to e-mail the camp director
- As a guest I should be able to register for an account
- As a guest I should be able to see a list of speakers and their bios
- As a guest I should be able to see a list of sessions
- As a guest I should be able to signup for a session

User Stories

- As a user I should be able to suggest a track
- As a user I should be able to suggest a session for a track
- As a user I should be able to present a session for a track
- As a user I should be able to edit my presentation's details
- As a user I should be able to see a list of sessions I'm attending

As a guest ISBAT e-mail the camp director

Feature: Guest interaction

In order to interact with guests

As a camp director

I want guests to be able to e-mail me easily

Scenario: As a guest I should be able to e-mail the camp director

Given I am a guest

When I am on the homepage

Then I should see "E-mail the camp director"

And I should see a link to "mailto:campdirector@example.com"

Terminal Output

```
$> cucumber features/guest_interaction.feature
Feature: Guest interaction
  In order to interact with guests
  As a camp director
  I want guests to be able to e-mail me easily

Scenario: As a guest I should be able to e-mail the camp director # features/guest_interaction.feature:6
  Given I am a guest # features/guest_interaction.feature:7
  When I am on the homepage # features/step_definitions/webrat_steps.rb:11
  Then I should see "E-mail the camp director" # features/step_definitions/webrat_steps.rb:123
  And I should see a link to "mailto:campdirector@example.com" # features/guest_interaction.feature:10

1 scenario (1 undefined)
4 steps (2 skipped, 2 undefined)
0m0.005s
```

You can implement step definitions for undefined steps with these snippets:

```
Given /^I am a guest$/ do
  pending
end

Then /^I should see a link to "([^"]*)"$/ do |arg1|
  pending
end
```

Step Definitions

```
Given /^I am a guest$/ do
  # Nothing for now
end
```

```
Then /^I should see a link to "([^"]*)"$/ do |href|
  # RSpec Matchers
  response.should have_selector("a", :href => href)
end
```

Paths

```
def path_to(page_name)
  case page_name

  when /the home\s?page/
    '/'
  when /the new user page/
    new_user_path
end
```

As a guest ISBAT register for an account

Scenario: A guest registering for an account

Given I am a guest

And I am on the home page

When I follow "Register"

Then I should be on the new user page

Given I fill in "E-Mail" with "clayton@integrumtech.com"

And I fill in "Name" with "Clayton"

And I fill in "Bio" with "Rails developer @integrum"

And I fill in "Website" with "http://claytonlz.com"

And I fill in "Password" with "bdd000cucumber"

And I fill in "Password Confirmation" with "bdd000cucumber"

When I press "Register"

Then I should be on the homepage

And I should see "Welcome Back, Clayton"

Does it Pass?

```
$> cucumber features/account_registration.feature
Scenario: A guest registering for an account
  Given I am a guest
  And I am on the home page
  When I follow "Register"
  Then I should be on the new user page
  Given I fill in "E-Mail" with "clayton@integrumtech.com"
  And I fill in "Name" with "Clayton"
  And I fill in "Bio" with "Rails developer @integrum"
  And I fill in "Website" with "http://claytonlz.com"
  And I fill in "Password" with "bdd000cucumber"
  And I fill in "Password Confirmation" with "bdd000cucumber"
  When I press "Register"
  Then I should be on the homepage
  And I should see "Welcome Back, Clayton"
```

```
1 scenario (1 passed)
13 steps (13 passed)
0m0.509s
```

As a guest I should be able to see a list of speakers and their bios

Scenario: Presenter List

Given the following presenters:

Name	Bio	Website
Clayton	Rails dev @integrum	http://claytonlz.com
Chris	Scrum @integrum	

And I am on the homepage

When I follow "Presenters"

Then I should see "Clayton"

And I should see "Rails dev @integrum"

And I should see "<http://claytonlz.com>"

Then I should see "Chris"

And I should see "Scrum @integrum"

Step Transformations

```
Given /^the following presenters:$/ do |table|
  table.each do |attrs|
    user = Factory.create(:user, attrs)
    user.conference_sessions.create(:title => "Just for ¶
testing", :approved => true)
  end
end
```

```
Transform /^table:Name,Bio,Website$/ do |table|
  table.hashes.map do |hash|
    { :name => hash[:Name], :bio => hash[:Bio], :website => ¶
hash[:Website]}
  end
end
```

As a guest I should be able to see a list of sessions

Scenario: Approved Sessions

Given the following presentations:

Presenter	Title	Start Time	Approval Status
Clayton	Cucumber Rules	Nov 7, 2009 13:40	true

Given I am a guest

And I am on the home page

When I follow "Sessions"

Then I should see that "Clayton" is presenting "Cucumber Rules" on "Nov 7, 2009 13:40"

Scenario: Approved and Unapproved Sessions

Given the following presentations:

Presenter	Title	Start Time	Approval Status
Clayton	Cucumber Rules	Nov 7, 2009 13:40	true
Joe	Testing Sucks	Nov 7, 2009 13:40	false

Given I am a guest

And I am on the home page

When I follow "Sessions"

Then I should see that "Clayton" is presenting "Cucumber Rules" on "Nov 7, 2009 13:40"

And I should not see that "Joe" is presenting "Testing Sucks" on "Nov 7, 2009 13:40"

As a guest I should be able to see a list of sessions

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And I should not see that "Joe" is presenting "Testing Sucks" on "Nov 7, 2009 13:40"

As a guest I should be able to see a list of sessions

```
Given /^the following presentations:$/ do |table|
  table.each do |presentations|
    presentations[:presenter].sessions << presentations[:session]
    presentations[:presenter].save
  end
end
```

```
Then /^I should see that "([^"]*)" is presenting "([^"]*)" on ¶
    "([^"]*)"$/ do |name, title, date|
  response.should have_selector("h2", title)
  response.should have_selector("p.byline", name)
  response.should have_selector("p.date", date)
end
```

```
Then /^I should not see that "([^"]*)" is presenting "([^"]*)" on ¶
    "([^"]*)"$/ do |name, title, date|
  pending
end
```

```
Transform /^table:Presenter,Title,Start Time,Approval Status$/ do |table|
  table.hashes.map do |hash|
    presenter = Factory.create(:user, {:name => hash[:Presenter]})
    session = Factory.create(:session, {:title => hash[:Title],
                                         :start_time => hash["Start Time"],
                                         :approved => hash["Approval Status"]
                                       })
    {:presenter => presenter, :session => session}
  end
end
```

As a guest I should be able to signup for a session

Scenario: Guest signing up for a session

Given the following sessions:

Presenter	Title	Start Time	Approval Status
Clayton	Cucumber Rules	Nov 7, 2009 13:40	true

And I am a guest

And I am on the home page

When I follow "Sessions"

And I follow "Signup for Cucumber Rules"

Then I should see "You must be logged in to access this page"

When I follow "Register Now"

And I fill out the registration form

When I press "Register"

Then I should see "Signup for Cucumber Rules"

When I press "Sign Me Up!"

Then I should see "You've been signed up for Cucumber Rules"

And the presentation "Cucumber Rules" should have "1" attendee

Nested Steps

And I fill out the registration form



```
Then /^I fill out the registration form$/ do
  Given "I fill in \"E-Mail\" with \"clayton@integrumtech.com\""
  Given "I fill in \"Name\" with \"Clayton\""
  Given "I fill in \"Bio\" with \"Rails developer @integrum\""
  Given "I fill in \"Website\" with \"http://claytonlz.com\""
  Given "I fill in \"Password\" with \"bdd000cucumber\""
  Given "I fill in \"Password Confirmation\" with \"bdd000cucumber\""
end
```

Tags & Hooks

```
@wip
```

```
Scenario: Twitter Integration
```

```
  Given context
```

```
  When event
```

```
  Then outcome
```

```
Before("@expensive") do
```

```
  MyExpensiveMethod.time_consuming
```

```
end
```

```
@expensive
```

```
Scenario: Decrypt Secret Data
```

```
  Given context
```

```
  When event
```

```
  Then outcome
```

```
After("@littered") do
```

```
  Cleaner.cleanup
```

```
end
```

Code Coverage

Desert Code Camp C0 Coverage Information - RCov

File Filter: Code Coverage Threshold:

NAME	TOTAL LINES	LINES OF CODE	TOTAL COVERAGE	CODE COVERAGE
app/controllers/application_controller.rb	48	38	87.50%	
app/controllers/registrations_controller.rb	24	20	79.17%	
app/controllers/sessions_controller.rb	9	7	77.78%	
app/controllers/user_sessions_controller.rb	24	21	45.83%	
app/controllers/users_controller.rb	40	34	57.50%	
app/helpers/layout_helper.rb	22	15	77.27%	
TOTAL	218	180	77.98%	

Anti-Patterns

- Deeply Nested Steps
- Conjunction Steps
- Feature-Coupled Steps
- Default Step Names