

# Story-Driven Development

with Cucumber

**Sean Cribbs**



# who am i

- Freelance Web Consultant
- Radiant Lead Dev
- Ruby, Javascript, Erlang
- Open-source contributor  
[github.com/seancribbs](https://github.com/seancribbs)





**basho**

developer advocate

**miscommunication**

# abstract

what's important

who said what

**miscommunication**

**=**

**waste**

wrong

incorrectly

unnecessarily

“Agile”

# user stories

# Test-Driven Development

# Story-Driven Development

stay lean  
create value

minimum to satisfy

make, protect, save  
money

pop the  
“why” stack

who are the  
stakeholders?

improves  
communication

bridge the  
crevasse of doom

# living functional spec

stories = tests

# Cucumber



<http://cukes.info/>

# business-readable DSL

a Ruby library

# integration tests

Feature: Standard Signup

In order to begin using the application

As a new user

I want to create an account

Scenario: Signup with valid email/password combination

Given I do not have an account

When I signup with email and password

Then I should be logged in

And my profile details should be filled in

Feature: Standard Signup

In order to begin using the application

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\$ cucumber

Feature: Standard Signup

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And my profile details should be filled in

1 scenario (1 undefined)

4 steps (4 undefined)

0m0.754s

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

```
Given /^I do not have an account$/ do
  pending
end
```

```
When /^I signup with email and password$/ do
  pending
end
```

```
Then /^I should be logged in$/ do
  pending
end
```

```
Then /^my profile details should be filled in$/ do
  pending
end
```

```
Given /^I do not have an account$/ do
  User.count.should == 0
end
```

Feature: Standard Signup

In order to begin using the application

As a new user

I want to create an account

Scenario: Signup with valid email/password combination

Given I do not have an account

uninitialized constant User (NameError)

./features/step\_definitions/signup\_steps.rb:2:in `/^I do not have an account\$/'

features/signup.feature:7:in `Given I do not have an account'

When I signup with email and password

Then I should be logged in

And my profile details should be filled in

Failing Scenarios:

cucumber features/signup.feature:6 # Scenario: Signup with valid email/password combination

1 scenario (1 failed)

4 steps (1 failed, 3 undefined)

0m0.136s

```
$ script/generate model User email:string password:string
  exists app/models/
  exists test/unit/
  exists test/fixtures/
  create app/models/user.rb
  create test/unit/user_test.rb
  create test/fixtures/users.yml
  create db/migrate
  create db/migrate/20090912024901_create_users.rb
$ rake db:migrate db:test:prepare
== CreateUsers: migrating =====
-- create_table(:users)
   -> 0.0016s
== CreateUsers: migrated (0.0017s) =====
```

## Feature: Standard Signup

In order to begin using the application

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When I signup with email and password

Then I should be logged in

And my profile details should be filled in

1 scenario (1 undefined)

4 steps (3 undefined, 1 passed)

0m0.136s

rinse and repeat

## Feature: Standard Signup

In order to begin using the application

As a new user

I want to create an account

Scenario: Signup with valid email/password combination

Given I do not have an account

When I signup with email and password

Then I should be logged in

And my profile details should be filled in

1 scenario (1 passed)

4 steps (4 passed)

0m0.138s

```
Before do  
  # do before each scenario  
end
```

```
After do  
  # do after each scenario  
end
```

```
AfterStep do  
  # do after each Given/When/Then/And/But step  
end
```

```
Before("@tagged") do  
  # do before scenarios tagged with @tagged  
end
```

```
# features/support/time.rb
module TimeHelpers
  def set_zone(zone_name)
    Time.zone = zone_name
  end
end
```

```
World(TimeHelpers)
```

```
# features/step_definitions/user_steps.rb
Given /^I am in the "[^"]*" time zone$/ do |zone|
  set_zone(zone)
end
```

good stories are  
hard to write

start with the  
value proposition

Feature: Name or theme

Feature: Name or theme

**In order to** *make, protect, or save money*

**As a stakeholder**

**I want** *to have some feature*

Feature: School account management

In order to **maximize revenue by offering  
our product to multiple schools at once**

**As the site owner**

**I want to provide individual accounts to each  
school and manage them**

Feature: School account management

In order to maximize revenue by offering  
Schoolbinder to multiple schools at once

As the site owner

I want to provide individual accounts to each  
school and manage them

**Scenario: List accounts**

**Scenario: Create an account**

**Scenario: Revoke an account**

**Scenario: List admin users for accounts**

**Scenario: Change subdomain for account**

Feature: School account management

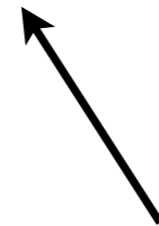
*In order to maximize revenue by offering  
Schoolbinder to multiple schools at once*

*As the site owner*

*I want to provide individual accounts to each  
school and manage them*

Scenario: List accounts

**Then I should see a list of accounts**



Feature: School account management

In order to maximize revenue by offering  
Schoolbinder to multiple schools at once

As the site owner

I want to provide individual accounts to each  
school and manage them

Scenario: List accounts

**When I go to the accounts page**

Then I should see a list of accounts

Feature: School account management

In order to maximize revenue by offering  
Schoolbinder to multiple schools at once

As the site owner

I want to provide individual accounts to each  
school and manage them

Scenario: List accounts

**Given I am logged in as the site owner**

When I go to the accounts page

Then I should see a list of accounts

descriptive > imperative

intention > implementation

# descriptive

When I create a new account for "ms218"

# imperative

When I follow "New account"

And I fill in "Name" with "ms218"

And I submit the form

descriptive stories  
are flexible

strike balance  
too implicit = vague

avoid conjunctive  
statements

# conjunctive

When I change my name to "Sean" and my password to "foobar"

# independent

When I change my name to "Sean"

And I change my password to "foobar"

strive for  
single passes

```
# conflated scenarios, multiple passes
Scenario: Bulk comment on short term goals
  Given I have set all short-term goals for "ELA > Writing >
Organization" for class "601"
  When I follow "Edit" for long-term goal "Organization"
  And I follow "Comment" for short-term goal "Coherence"
  Then I should see all students that pertain to this short-term goal
  And I should see the standard comment box and "Post new comment"
button
  When I type in the comment box
  And I follow "Post"
  Then I should see that my comment was posted

# single scenario, single pass
Scenario: Bulk comment on short term goals
  Given I have set all short-term goals for "ELA > Writing >
Organization" for class "601"
  When post a comment for short-term goal "Coherence"
  Then I should see that my comment was posted
  And all students in class "601" should receive my comment
```

stay terse  
cover corner cases

## Background:

Given an account for subdomain "ms217"

And these administrators for subdomain "ms217":

email	name
<u>joe@ms217.edu</u>	Joe Smith
<u>jane@ms217.edu</u>	Jane Doe

And this welcome message for subdomain "ms217":

""""

**Welcome back, students!**

**- The principal**

""""

**Scenario Outline:** Successful authentication with email

Given a <type> named "<first name> <last name>" with email <email> and password "<password>"

And I am on the login screen

When I login with "<email>" and "<password>"

Then I should be logged in

**Examples:**

type	email	first name	last name	password
student	<u>joe@school.edu</u>	Joe	Smith	testing123
teacher	<u>jane@school.edu</u>	Jane	Brown	testing456
staff	<u>mark@school.edu</u>	Mark	White	testing789
admin	<u>paul@school.edu</u>	Paul	Greene	testing098

<self:promotion>

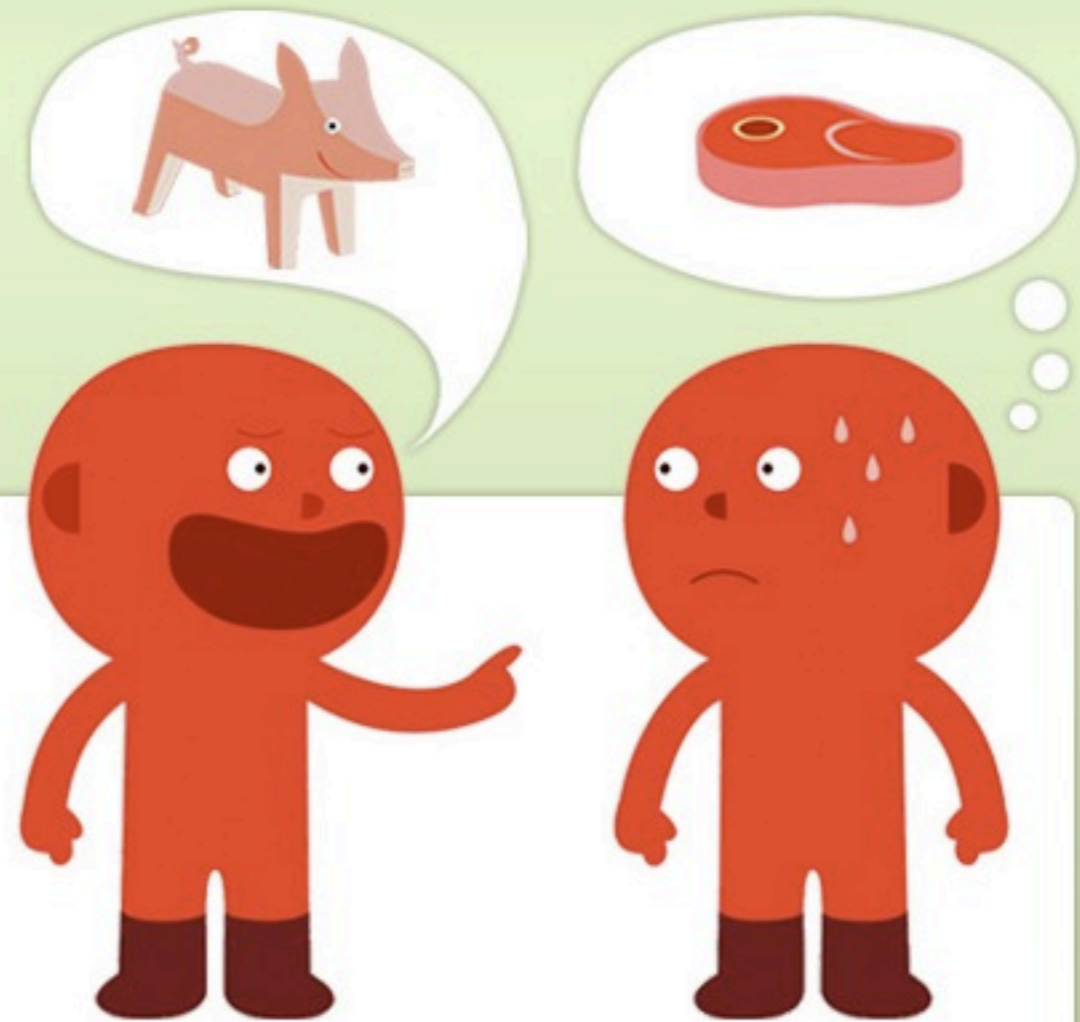
# Lowdown

Get your stories straight.

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## Lost in translation?

Keep your software project on track by using **Lowdown** to help developers, designers, project managers and owners all focus on satisfying stakeholders.



## Spec

Create, edit and discuss feature stories using a fun and helpful interface.

## Estimate

Attach hourly estimates to individual scenarios to understand the full cost of each feature.

## Prioritize

Plan and schedule out the next release or iteration based on a real bottom line with easy drag-and-drop.

</self:promotion>

questions?