



Listing A - This is the File Structure for our project

```

def try_login(login_name, password)
  if login_name.nil? or password.nil?
    return false
  end
  login_name = login_name.downcase

  if check_account_exists(login_name) or check_username_exists(login_name)
    if check_username_exists(login_name)
      account_id = get_account_id(get_email_from_username(login_name))
    else
      account_id = get_account_id(login_name)
    end
    unless check_account_enabled(account_id)
      increment_login_attempts(account_id)
      return false
    end
    if get_login_attempts(account_id).to_i > 4
      suspend_user(account_id, "Login Attempts")
      return false
    end
    if check_username_exists(login_name)
      statement = "SELECT password, salt FROM users WHERE username = ?"
    else
      statement = "SELECT password, salt FROM users WHERE email = ?"
    end
    retStatement = @db.execute(statement, login_name)[0]
    if not password or not login_name
      increment_login_attempts(account_id)
      return false
    end
    hash = generate_hash(password, salt=retStatement[1])
    if hash[0] == retStatement[0]
      reset_login_attempts(account_id)
      return true
    end
    increment_login_attempts(account_id)
    return false
  end
  return false
end

```

Listing B - controller.rb - Login

This function tests if the username exists or the email exists based on a string the user posts to the server, if it does then it tries logging in with the password that they provide. There i

Listing C - FILENAME - Commenting

Report

Add bookmark

Edit bookmark

Admin stuff

Search bookmarks

Rating

Create Account

Suspend/unsuspend user
(ascending/descending)
(favourite)
(password check)

Html -
Favourites page

Dashboard

```
1 <head>
2 <title><%= h title %></title>
3 <!-- Required meta tags -->
4 <meta name="description" content="Bookmark application" />
5 <meta charset="utf-8" />
6 <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no" />
7
8 <!-- Bootstrap CSS -->
9 <link rel="stylesheet" href="/css/bootstrap.min.css" />
10
11 <!-- Font Awesome -->
12 <link href="/css/fontawesome/all.min.css" rel="stylesheet" />
13 <!--load all styles -->
14 <link href="/css/fontawesome/brands.min.css" rel="stylesheet" />
15 <!--load all styles -->
16
17 <!-- Stylesheet CSS -->
18 <link rel="stylesheet" href="/css/style.min.css" />
19
20 <% if title == "Reset Password | Acme corp" %>
21 <!-- Password Reset CSS -->
22 <link rel="stylesheet" href="/css/changePassword.css" />
23 <% end %>
24 </head>
25
```

Listing - headinclude.erb - This is an erb that contains what would be in the header of most of our erbs, this is so that there is less code duplication.

Testing

```

1 Feature: register
2
3 Background: Simulating the process of new user registration
4
5 Scenario: Everything correct
6   Given I am on the "register" page
7   When I fill in "password" with "Password1!"
8   When I fill in "passwordConfirm" with "Password1!"
9   When I fill in "username" with "JohnSmith"
10  When I fill in "fname" with "John"
11  When I fill in "lname" with "Smith"
12  When I fill in "email" with "sampleemail@gmail.com"
13  When I pick "1" within "question"
14  When I fill in "answer" with "qwerty"
15  When I press "REGISTER"
16  Then I should see "Successfully created account!"
17
18 Scenario: Email blank
19   Given I am on the "register" page
20   When I fill in "password" with "Password1!"
21   When I fill in "passwordConfirm" with "Password1!"
22   When I fill in "username" with "JohnSmith"
23   When I fill in "fname" with "John"
24   When I fill in "lname" with "Smith"
25   When I pick "1" within "question"
26   When I fill in "answer" with "qwerty"
27   When I fill in "email" with ""
28   When I press "REGISTER"
29   Then I should see "Invalid email format"
30
31
32 Scenario: Email invalid
33   Given I am on the "register" page
34   When I fill in "password" with "Password1!"
35   When I fill in "passwordConfirm" with "Password1!"
36   When I fill in "username" with "JohnSmith"
37   When I fill in "fname" with "John"
38   When I fill in "lname" with "Smith"

```

Listing - FILENAME -features/register.feature Gherkin code for testing the registration process.

```

2
3 #Given steps
4 Given /^(?:I )am on (.+)/ do |page_name|
5   visit path_to(page_name)
6 end
7
8 Given /^(?:I) am logged in?$/ do
9   visit path_to("login")
10   fill_in("email", :with => "smmalinowski@sheffield.ac.uk")
11   fill_in("password", :with => "Password1!")
12   find("button", :text => "LOGIN").click
13 end
14
15 #When steps
16 When /^(?:I) fill in "([\"]*)" with "([\"]*)"$/ do |field, value|
17   fill_in(field, :with => value)
18 end
19
20 When /^(?:I) check "([\"]*)"$/ do |field|
21   check(field)
22 end
23
24 When /^(?:I) pick "([\"]*)" within "([\"]*)"$/ do |value, selector|
25   select_option(selector, value)
26 end
27
28 When /^(?:I) press "([\"]*)" within "([\"]*)"$/ do |button, selector|
29   find(:tag => selector).find(:text => button).click
30 end
31
32 When /^(?:I) press "([\"]*)"$/ do |button|
33   find("button", :text => button).click
34 end
35
36 When /^(?:I) press "([\"]*)" to save?$/ do |button|
37   find("button", :id => button).click
38 end
39
40 When /^(?:I) go to "([\"]*)"$/ do |button|

```

Listing - FILENAME - features/ step_definitions/web_steps.rb - Ruby code for defining the steps to be used by each feature

