Exemplar code:

By – Group 34

```ruby
1 require "sinatra"
2 require "sqlite3"
3 post "/create_account" do
4   @users = User.new
5   #reading in user input for creating an account.
6   @username_field = params["username"]
7   @email_field = params["email"]
8   @institution_field = params["institution"]
9   @password_field = params["password"]
10
11  #submit the form if the fields are not empty and the username is not already taken.
12  @form_was_submitted = !@username_field.empty? && !@email_field.empty? && !@institution_field.empty? && !@password_field.empty?
13    && (DB[:users].where(username: @username_field)).count == 0
14
```

Listing A – project/controller/create_account.rb

```ruby
15  @submission_error = nil
16  @username_validation_error = nil
17  @username_error = nil
18  @email_error = nil
19  @institution_error = nil
20  @password_error = nil
21
22  @users.load(params)
23
24  if @form_was_submitted
25    #sanitise the values by removing whitespace
26    @username_field.strip!
27    @email_field.strip!
28    @institution_field.strip!
29    @password_field.strip!
30    @users.save_changes
31    redirect "/login"
32  else
33    # now proceed to validation
34    @username_error = "Please enter a value for username" if @username_field.empty?
35    #If there is at least one entry of the usernamed typed in the database then return the error
36    @username_validation_error = "Sorry, This username is not available" if (DB[:users].where(username: @username_field)).count >0
37    @email_error = "Please enter a value for email" if @email_field.empty?
38    @institution_error = "Please enter a value for institution" if @institution_field.empty?
39    @password_error = "Please enter a value for password" if @password_field.empty?
40  end
41
42  erb :create_account
43
44 end
```

Listing B – project/controller/create_account.rb

```ruby
post "/login" do
  @users = User.new
  @users.load(params)
  @error = nil

  #if the entry is valid and it exists in the database then redirect the user to the home page
  #otherwise return appropriate errors
  if @users.valid?
    if @users.exist?
      session[:logged_in] = true
      redirect "/"
    else
      @error = "Username/Password combination incorrect"
    end
  else
    @error = "Please correct the information below"
  end

  erb :login
end
```

Listing C – project/controller/login.rb

```ruby
1  class User < Sequel::Model
2
3    def load(params)
4      self.id =  params.fetch("id", "").strip
5      self.username =  params.fetch("username", "").strip
6      self.email =  params.fetch("email", "").strip
7      self.user_type =  params.fetch("user_type", "").strip
8      self.institution =  params.fetch("institution", "").strip
9      self.password =  params.fetch("password", "").strip
10   end
11
12   def validate
13     super
14     errors.add("username", "cannot be empty") if username.empty?
15     errors.add("password", "cannot be empty") if password.empty?
16   end
17
18   def exist?
19     other_user = User.first(username: username)
20     !other_user.nil? && other_user.password == password
21   end
22 end
```

Listing D – project/models/user.rb

```
1  require_relative "../spec_helper"
2
3  describe "Create Post Page" do
4    it "checks if a post is created" do
5      visit "/create_post"
6      fill_in "title", with: "Test26_Title"
7      fill_in "topic", with: "Test26_Topic"
8      fill_in "institution", with: "Test26_Institution"
9      fill_in "link", with: "Test26_Link"
10     click_button "Submit"
11
12     visit "/viewer"
13     expect(page).to have_content "Test26_Title"
14     expect(page).to have_content "Test26_Topic"
15     expect(page).to have_content "Test26_Institution"
16     expect(page).to have_content "Test26_Link"
17     DB.from("posts").delete
18     session.clear
19   end
```

Listing E – project/spec /end_to_end_test/create_post_spec.rb

```
21      <div id="create_account_area">
22        <form id ="form1" method="post" action="/create_account">
23
24          <p>
25            *Username: <br />
26            <input type="text" name="username" value="<%= h @username_field %>"/>
27            <% if @username_error %>
28              <br /><strong class="error"><%= @username_error %></strong>
29            <% end %>
30            <% if @username_validation_error %>
31              <br /><strong class="error"><%= @username_validation_error %></strong>
32            <% end %>
33          </p>
34
35          <!-- set the default user_type to poster for every account created -->
36          <p>
37            <input type="hidden" name="user_type" value="poster" />
38          </p>
39
40          <p>
41            *Email: <br />
42            <input type="text" name="email" />
43            <% if @email_error %>
44              <br /><strong class="error"><%= @email_error %></strong>
45          <% end %>
46          </p>
```

Listing F – project/views /create_account.erb