

```

1 require 'sequel'
2
3 # Model representing user record and its related actions
4 class User < Sequel::Model
5   plugin :validation_helpers
6   # Validates user fields
7   # Regex from https://digitalfortress.tech/tricks/top-15-commonly-used-regex/
8   def validate
9     super
10    validates_presence [:email, :password, :user_type], message: 'Field cannot be
11      empty'
12    validates_format /^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,6}$/, :email,
13      message: 'Email is not valid'
14    validates_format /^(?=.*[0-9])(?=.*[A-Za-z0-9])(?=.*[A-Z])(?=.*[a-z])^.{8,}$/ ,
15      :password, message: 'Must be at least 8 characters long and contain a lowercase,
16        uppercase letter and a number'
17    validates_includes [0, 1, 2], :user_type, message: 'User type is non-existing'
18    validates_unique(:email, message: 'This email is already take')
19  end
20
21  # Checks if the user exists and then checks if the password is correct
22  # @param email
23  # @param password
24  # @return boolean true if the credentials are correct
25  def self.login(email, password)
26    user = where(email: email).single_record
27    return nil if user.nil?
28    return user if self[email: email][:password] == password
29    nil
30  end
31
32  # Checks if user exists and creates a new one if not
33  # @param details_hash hash with all fields in the model
34  # @return new instance of the user (might be nil if validation fails)
35  def self.register(details_hash)
36    user = User.new(details_hash)
37    user.save if user.valid?
38    user
39  end
40
41  # Returns all user information for a given user_type
42  # @param user_type An integer representation of the user's role
43  def self.retrieve_users(user_type)
44    User.where(user_type: user_type).all
45  end
46 end
47

```

Listing A /workspace/project/models/user.rb

```
1 require 'sinatra'
2 require_relative '../helpers/authenticated'
3
4 get '/' do
5   authenticated
6   redirect '/temp-user-page'
7 end
8
9 get '/login' do
10  redirect '/temp-user-page' if session[:user]
11  session[:is_valid] = true if session[:is_valid].nil?
12  @is_valid = session[:is_valid]
13  erb :login
14 end
15
16 post '/login' do
17   @email = params['email']
18   @password = params['pass']
19
20   user = User.login(@email, @password)
21
22   if user.nil?
23     session[:is_valid] = false
24   else
25     # Setting user id to access logged in user later
26     session[:user] = user.id
27     session[:is_valid] = nil
28     redirect '/temp-user-page'
29   end
30   redirect '/login'
31 end
32
33 get '/temp-user-page' do
34   redirect '/login' unless session[:user]
35   "You are logged in! Id: #{session[:user]}"
36 end
37
38 get '/logout' do
39   redirect '/login' unless session[:user]
40   session.clear
41   'You have been logged out successfully'
42 end
43
```

Listing B /workspace/project/controllers/login.rb

```

1 require "sinatra"
2
3 def authenticated
4   redirect "/login" unless session[:user].nil?
5 end

```

Listing C /workspace/project/helpers/authenticated.rb

```

1 <body>
2 <%= erb :"common/nav" %>
3 <div class="containerSmall">
4   <div class="contentSmall">
5     <h1 class="text-center pb-3">Welcome!</h1>
6     <p class="text-center pb-3">Please Log In</p>
7
8     <% unless @is_valid %>
9       <p>Email or password is incorrect or does not exist</p>
10    <% end %>
11
12    <form method="post">
13      <div class="mb-3">
14        <label for="email" class="form-label">Email address</label>
15        <input type="email" class="form-control" name="email" required>
16
17      </div>
18      <div class="mb-3">
19        <label for="pass" class="form-label">Password</label>
20        <input type="password" class="form-control" name="pass" required>
21
22      </div>
23      <button type="submit" class="btn btn-primary btnC">Login</button>
24      <br/>
25      <a href="registration" class="text-decoration-underline text-decoration-none">Do not have account
26        Join us.</a>
27    </form>
28  </div>
29 </div>
30 <%= erb :"common/footer" %>
31 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.bundle.min.js"
32   integrity="sha384-b5kHyXgcpbZJ0/tY9U17kGkff1S0CWuKcCD3818YkeH8z8QjE0GmW1gYU5S9FOnJ0"
33   crossorigin="anonymous"></script>
34 </body>
35

```

Listing D /workspace/project/views/login.erb