**Project Report**

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| --- | --- |
| **Product Name** | Applied Degree in Software Engineering |
| **Qualification Name (NICF)** | Applied Degree in Software Engineering |
| **Product Name** | Design, develop and test the Community portal website |
| **Module Name (NICF)** | NICF-Application Implementation |

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Name** | | **Assessor name** | |
| Wildan Luqmanul Hakim | | Arvinder Kaur | |
| **Date issued** | **Completion date** | | **Submitted on** |
| 19 August 2022 | 23 August 2022 | | 23 August 2022 |
|  | |  | |
| **Project title** | Design, develop and test the Community portal website | | |

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| --- |
| **Learner declaration** |
| I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.    Student signature : Date : 23 August 2022 |

**AIM Project report**

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10. **Project Background**

ABC Jobs is a website similar to LinkedIn.com, a Community Portal website where the website is designed with an SDLC Model, which in this project uses the waterfall model. In this waterfall it is explained for Unit testing and UAT testing. For scheduling and planning, this application is made in the form of tables and gantt charts using the projectlibre application.

**Project Objectives**

The Scope of the Project is to design a Community Portal Similar to Linkedin.com, a Community Portal website where the website requires a Registration Page, Login Page, See Profile Users and Update User Profile. Users can use the Registration Page to register in the portal. Users of the portal can search for other users using a variety of criteria, including first and last names, companies, cities, and countries. Users will have the ability to read, send, and view messages. This testing is intended to validate and confirm that the system's functionality complies with the client's needs.

1. **Project Scope**

3.1 Features to Be Tested

1. Registration
2. Login
3. Logout
4. Reset Forgotten Password

3.2 Features Not to Be Tested

1. Posting Job
2. Applying Job
3. Send Messages
4. Post Message in Message Board
5. Post Thread in Message Board

3.3 Deliverables

1. Briefly explain different types of testing which you will undertake
2. Test Schedule Document
3. Phase test plan
4. Execute test scripts and verify the results
5. Prepare a Project Report as per pre-defined template
6. Prepare a Project Presentation as per pre-defined template
7. Prepare a Testing Document
8. **Tools and Platform**
9. ProjectLibre
10. Microsoft Power Point
11. Microsoft Word
12. **Task 1 : Project Requirement Specifications (SRS document)**

**Task Statement : Write a brief requirement specification for the Report System**

1. Functional Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| No | Requirements | Web Page / Process | Field detail |
| 1 | Users can register their data on the register page | Registration | Logo, text fields, hyperlink, button, copyright |
| 2 | Users can use their email and password on the login page | Login | Logo, text fields, hyperlink, button, check box |
| 3 | Users can use their email on the forgot password page | Reset Password | Logo, text fields, hyperlink, button |
| 4 | Users can see their profile on the profile page | Profile | Logo, picture, text, hyperlink, button |
| 5 | Users can change their data on update profile page | Update Profile | Logo, text fields, hyperlink, button |
| 6 | Users can search other users on the search page | Search Users | Logo, picture, text, textfield, hyperlink, button |
| 7 | Users can see profile other user on the profile users page | Other Users Profile | Logo, picture, text, hyperlink, button |

1. Non-Functional Requirements

|  |  |  |
| --- | --- | --- |
| No | Requirements | Purpose |
| 1 | Performance | Ensure the application will perform well under the expected workload. |
| 2 | Availability | Provides interesting and useful features for users |
| 3 | Security aspects | Secure users data from cyber attack |
| 4 | Database backup | Store users data into database MySQL |

1. Technical requirements

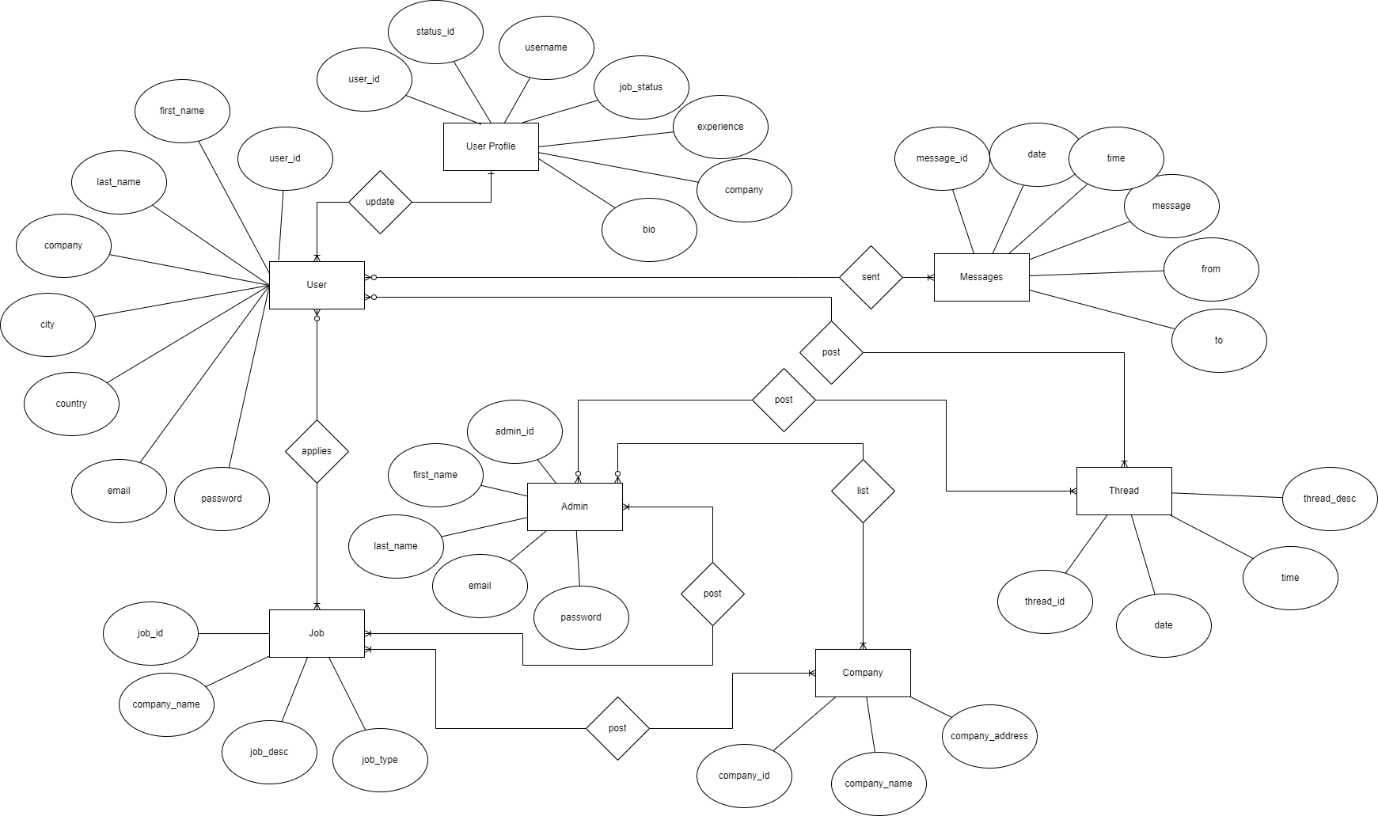
Hardware

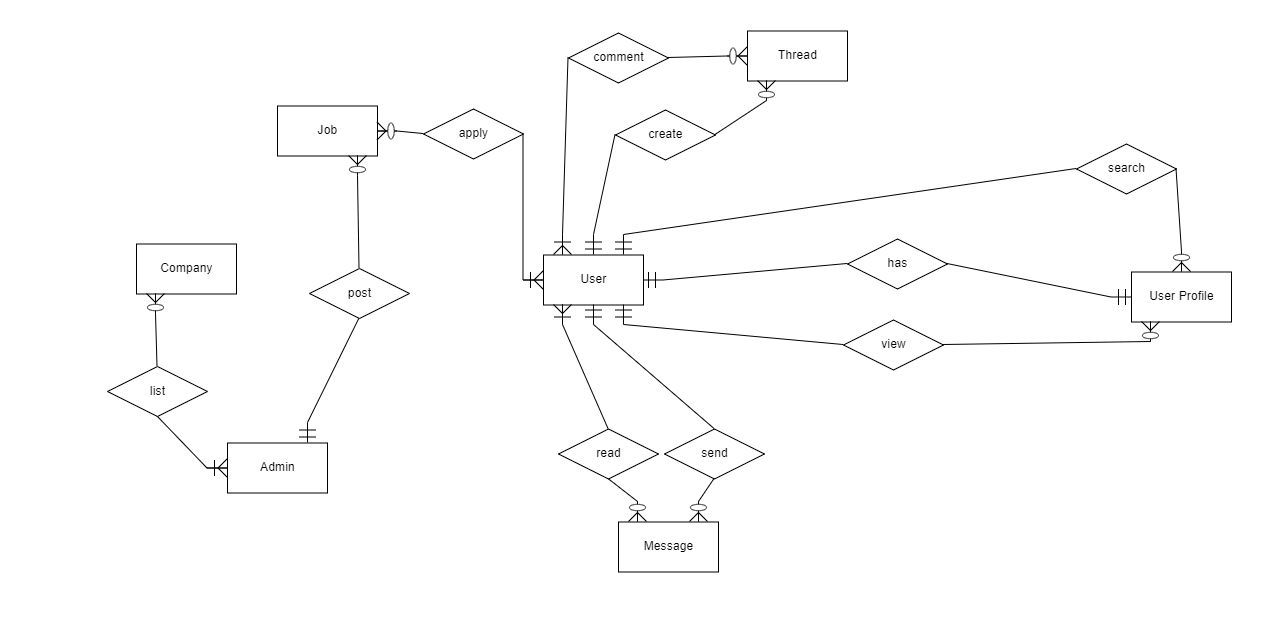
* Processor : Intel Core or Xeon 3GHz (or Dual Core 2GHz) or equal AMD CPU.
* Memory : 4 GB (6 GB recommended).
* Graphic Accelerators : nVidia or ATI with support of OpenGL 1.5 or higher.

Software

* Angular
* Apache
* Google Chrome
* Node JS
* Visual Studio Code
* MySQL
* Phpmyadmin
* ProjectLibre
* XAMPP

Database

ERD Diagram for ABC Job Portal  
****

Conceptual Design for ABC Job Portal  


Logical Design for ABC Job Portal  


1. **Task 2 : SDLC**

**Task Statement : Justify the chosen SDLC methodology with pro and cons**

In this project I use the sdlc waterfall method, the waterfall method is one of the classic life cycles in software development. This method describes a fairly systematic and sequential approach to software development, starting from:

User requirement specifications

Planning

Modeling

Construction

Handover of the system to the user

As well as system maintenance

**Advantages of the Waterfall Method**

1. Clear workflow

By using this type of SDLC model, it has a clear and scalable set of system workflows.

1. Good documentation results

Waterfall is a very methodical approach, where every information will be recorded properly and distributed to each team member quickly and accurately.

1. Can save cost

The next advantage is of course in terms of resources and costs incurred by a company using this model.

1. Used for large-scale software development

This method is considered very suitable for running large-scale application development that involves a lot of human resources and complex work procedures.

**Disadvantages of the Waterfall Method**

1. Requires a solid team

To use this SDLC model, of course, requires the support of every existing stakeholder.

1. Still lack of flexibility

All teams are required to work according to the directions and instructions that have been set at the beginning.

1. Can't see the system picture clearly

With the waterfall model, customers cannot see a clear picture of the system. In contrast to the agile model which can be seen well even though it is still in the development process.

1. Takes longer time

The process of working using the waterfall is quite long when compared to other SDLC models.

1. **Testing approaches to achieve the goal,**
   1. Unit testing

Unit testing is a type of software testing in which individual units or components of software are tested. The goal is to ensure that each unit of software code works as expected.

* 1. UAT testing

This testing is a type of testing performed by the end user or client to verify or accept the software system before moving the software application to the production environment. This testing will be carried out by the client or end user.

1. **Testing Criteria** 
   1. Entry criteria

In entry criteria Every requirement that need to be prepare before start the testing.

* 1. Exit Criteria

Every requirement that need to be prepare before stop the testing.

* 1. Suspension Criteria

Suspension criteria is few specification individual test that we can be skip or suspens while doing the testing and can be continue in the next time

* 1. Resumption Criteria

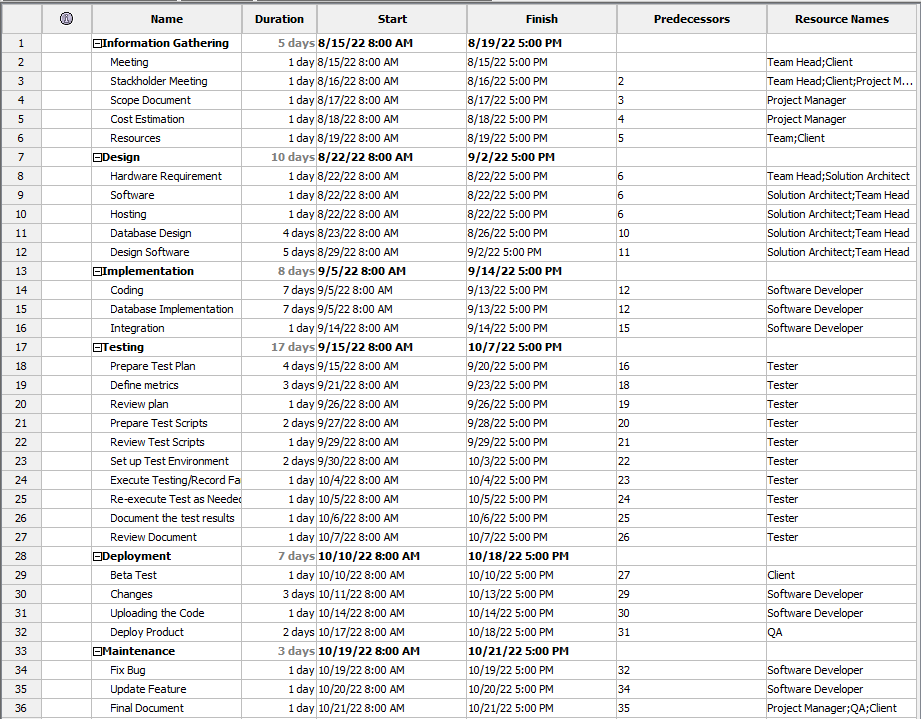
In this criteria all the suspend things will continue to be testing

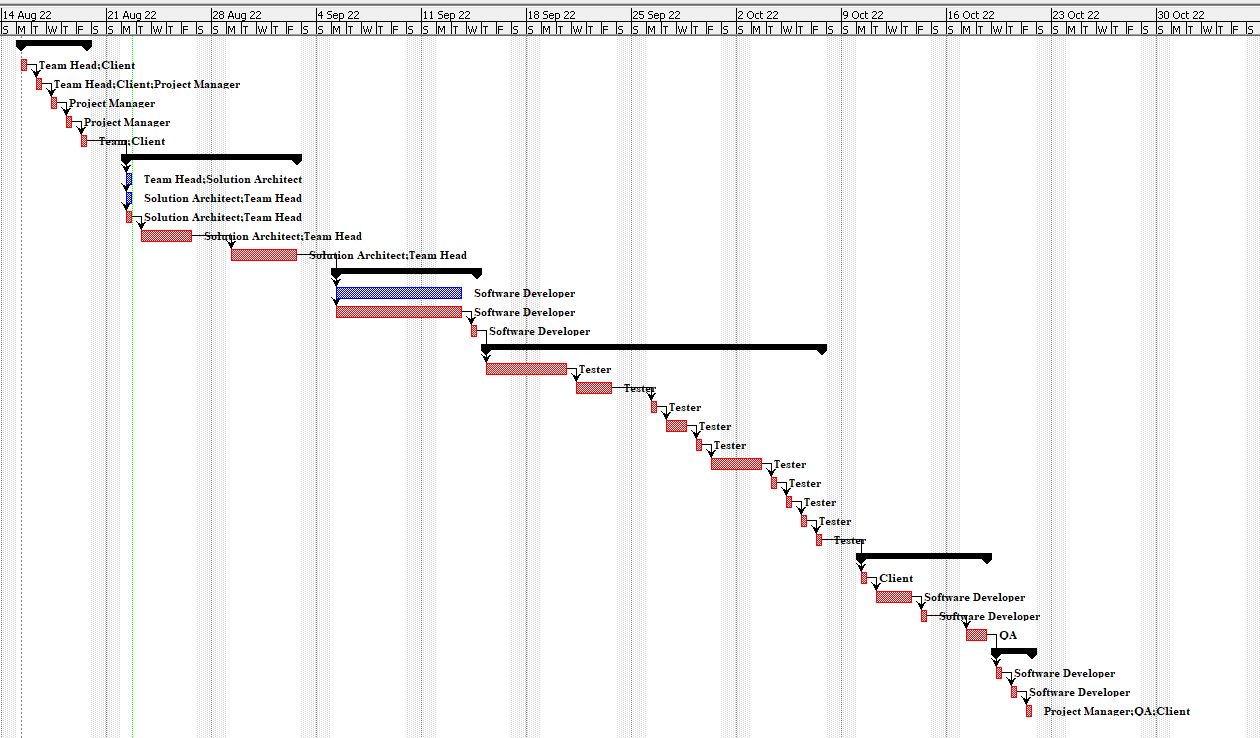
* 1. Test Metrics

A quantitative metric for estimating the progress and quality of a software testing process.

**f. Test Deliverables**

1. Test Plan
2. Test schedules
3. Test scripts
4. **Task 3 : Project Plan**

Gantt Table  


Gantt Chart  


1. **Task 4 : Testing methods**

**Task Statement : Explain the benefits of 3 testing methods under functional and non-functional category**

Functional Testing:

* Unit testing : Help fix bugs early in the software development cycle and save costs..
* Integration testing : Test the automation of the combination of existing components, as well as dependencies between each other.
* System testing : Checking the program against specifications

Non-functional testing:

* Performance testing : Knowing the behavior or performance of a system when faced with various situations so as to avoid system failure.
* Security testing : Find system vulnerabilities that might result in information loss.
* Usability testing : Knowing the user experience of product design on the website or software.

1. **Task 5 : Optimal Scheduling**

**Task Statement : Identify appropriate method to compute the testing schedule duration and prepare the test schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| **Web page** | **Weighting** | **Functional Points (FP)** | **Total** |
| Registration | 3 | 5 | 15 |
| Login | 1 | 3 | 3 |
| Reset Password | 1 | 1 | 1 |
| Profile | 3 | 3 | 9 |
| Update Profile | 3 | 4 | 12 |
| Search Users | 3 | 3 | 9 |
| See Profile Other Users | 3 | 4 | 12 |
| Log Out | 1 | 1 | 1 |
|  |  | Total functional points | 62 |
|  |  | Estimated person hour per FP | 1 |
|  |  | Total hours needed | 62 |
|  |  | Total days needed (8 Hours) | 7.75 |

Test Schedule :

|  |  |  |  |
| --- | --- | --- | --- |
| Test Schedule ID : | TSCH01 |  |  |
| Product ID / Name : | ABC Jobs |  |  |
| Product Version or Build : | 0.0.0.1 |  |  |
| Present Owner : | Wildan Luqmanul Hakim | Software Engineer |  |
| Created On : | 19 August 2022 |  |  |
| Review On : | 21 August 2022 |  |  |
| Review By : | Dani Crowther | QA Manager |  |
| Review Comments : | Great |  |  |
| Current Version : | 1.0.0 |  |  |
| Change Details : |  |  |  |
| Current Status : | Complete |  |  |
| Signing Off Authority : | Wildan Luqmanul Hakim | Software Engineer |  |

1. **Task 6: Phase Test Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Task | Start | End | Person Days | Resource |
| 1 | Prepare Test Plan | 9/15/22 8:00 AM | 9/20/22 5:00 PM | 4 Days | Tester |
| 2 | Define metrics | 9/21/22 8:00 AM | 9/23/22 5:00 PM |  | Tester |
| 3 | Review plan | 9/26/22 8:00 AM | 9/26/22 5:00 PM |  | Tester |
| 4 | Prepare Test Scripts | 9/27/22 8:00 AM | 9/28/22 5:00 PM |  | Tester |
| 5 | Review Test Scripts | 9/29/22 8:00 AM | 9/29/22 5:00 PM |  | Tester |
| 6 | Set up Test Environment | 9/30/22 8:00 AM | 10/3/22 5:00 PM |  | Tester |
| 7 | Execute Testing/Record Faults | 10/4/22 8:00 AM | 10/4/22 5:00 PM |  | Tester |
| 8 | Re-execute Test as Needed | 10/5/22 8:00 AM | 10/5/22 5:00 PM |  | Tester |
| 9 | Document the test results | 10/6/22 8:00 AM | 10/6/22 5:00 PM |  | Tester |
| 10 | Review Document | 10/7/22 8:00 AM | 10/7/22 5:00 PM |  | Tester |

1. **Task 7 : UNIT and UAT Test Scripts**

**Task Statement : Prepare the test scripts with use case, scenario, test description, pre-conditions, test data, and expected output**

Test Scenario :

|  |  |  |  |
| --- | --- | --- | --- |
| Requirements | Test Scenario ID | Test Scenario | Number of test cases |
| Functional Testing | TS001-Unit testing | Ensure that user enters correct data in the registration page | 3 |
| TS002-UAT testing | Check that a navigation menu is provided on each page and is consistent. | 3 |

Scenario 1 : Unit Testing

|  |  |
| --- | --- |
| Test Scenario | Ensure that user enters correct data in the registration page |
| TS001 |
| Test Cases | Unit Testing |
| TC001 | Check all the mandatory fields are entered |
| TC002 | Check the email-address validation working correctly |
| TC003 | Check post submission loading of thank you page |

Test Cases :

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario ID | Test Case ID | Test Case | Preconditions | Test Step | Test Data | Expected Results | Actual Results | Pass / Fail |
| TS001 | TC001 | Test Case 1 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Type www.abcjobs.com. 2. Click “Sign up” in website home page linked to registration page. 3. Enter all the fields. 4. Click submit. | First Name = Wildan  Last Name = Luqmanul Hakim  Company = Google  City = Sumedang  Country = Indonesia  Email = [wildan@email.com](mailto:wildan@email.com)  Password = Password123 | User should land to login page | As expected | Pass |
| First Name = Wildan  Last Name = Luqmanul Hakim  Company = Google  City = Sumedang  Country = Indonesia  Email =  Password = | It will Display error message “Please enter your email”  It will Display error message “Please enter the password” | As expected | Pass |
| TS001 | TC001 | Test case 2 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Enter URL 2. Click on Login page 3. Enter all details 4. Enter submit button | Email=[wildan@email.com](mailto:wildan@email.com)  Password =password123 | Rest details | As expected | Pass |
| TS001 | TC002 | Test case 3 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Type www.abcjobs.com.  2. Click “Log In” in website home page linked to registration page.  3. Enter all the fields.  4. Click submit. | Email=wildan@email  Password =password123 | It will display error message “Enter valid email” | As expected | Pass |
| TS001 | TC003 | Test case 4 | The user should have URL of website and opened a homepage of the abcjobs.com | 1. Type www.abcjobs.com.  2. Click “Sign up” in website home page linked to registration page.  3. Enter all the fields.  4. Click submit. | First Name = Wildan  Last Name = Luqmanul Hakim  Company = Google  City = Sumedang  Country = Indonesia  Email = [wildan@email.com](mailto:wildan@email.com)  Password = Password123 | User should land to thank you page | As expected | Pass |

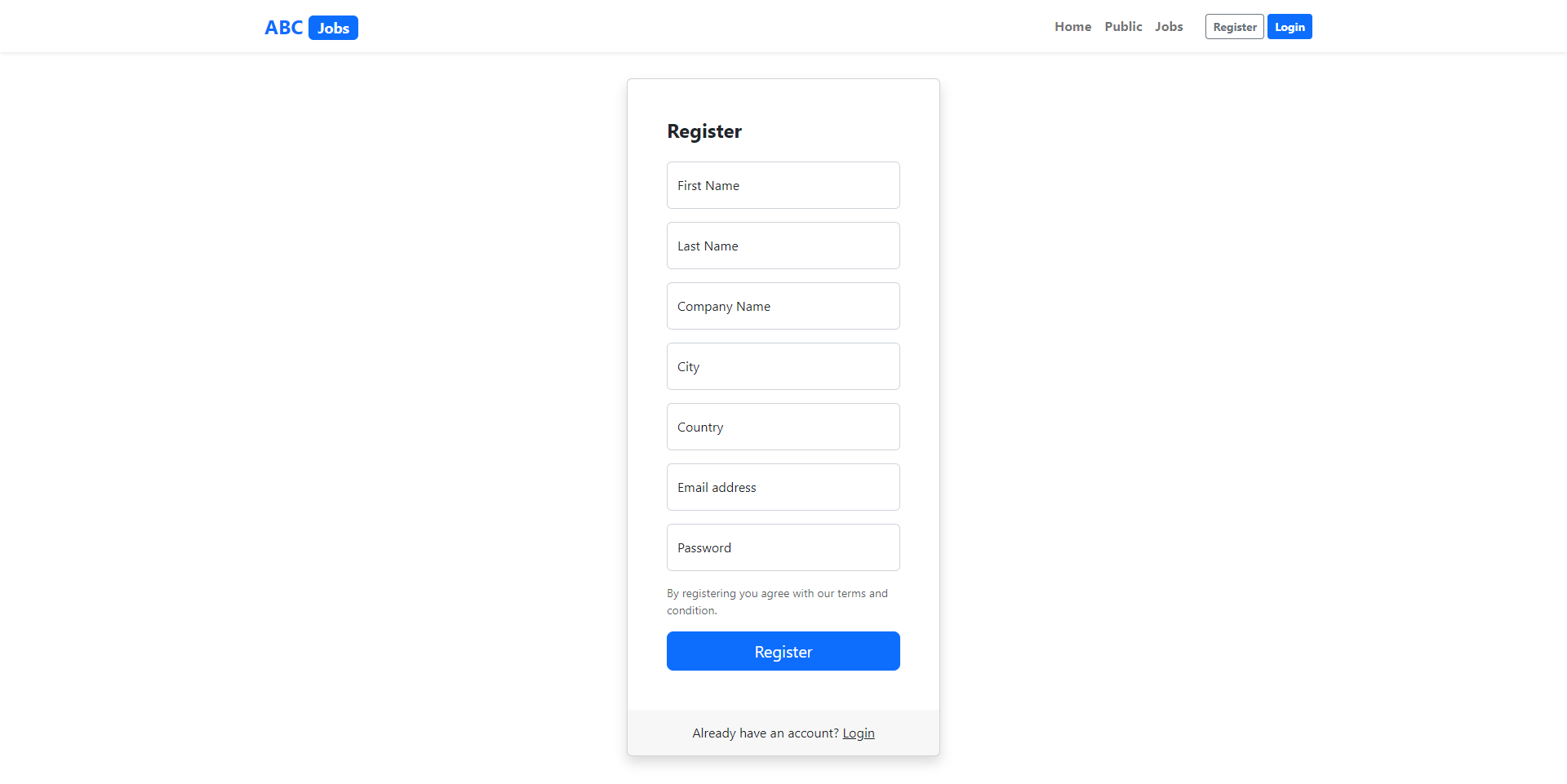
Scenario 2 : UAT Testing

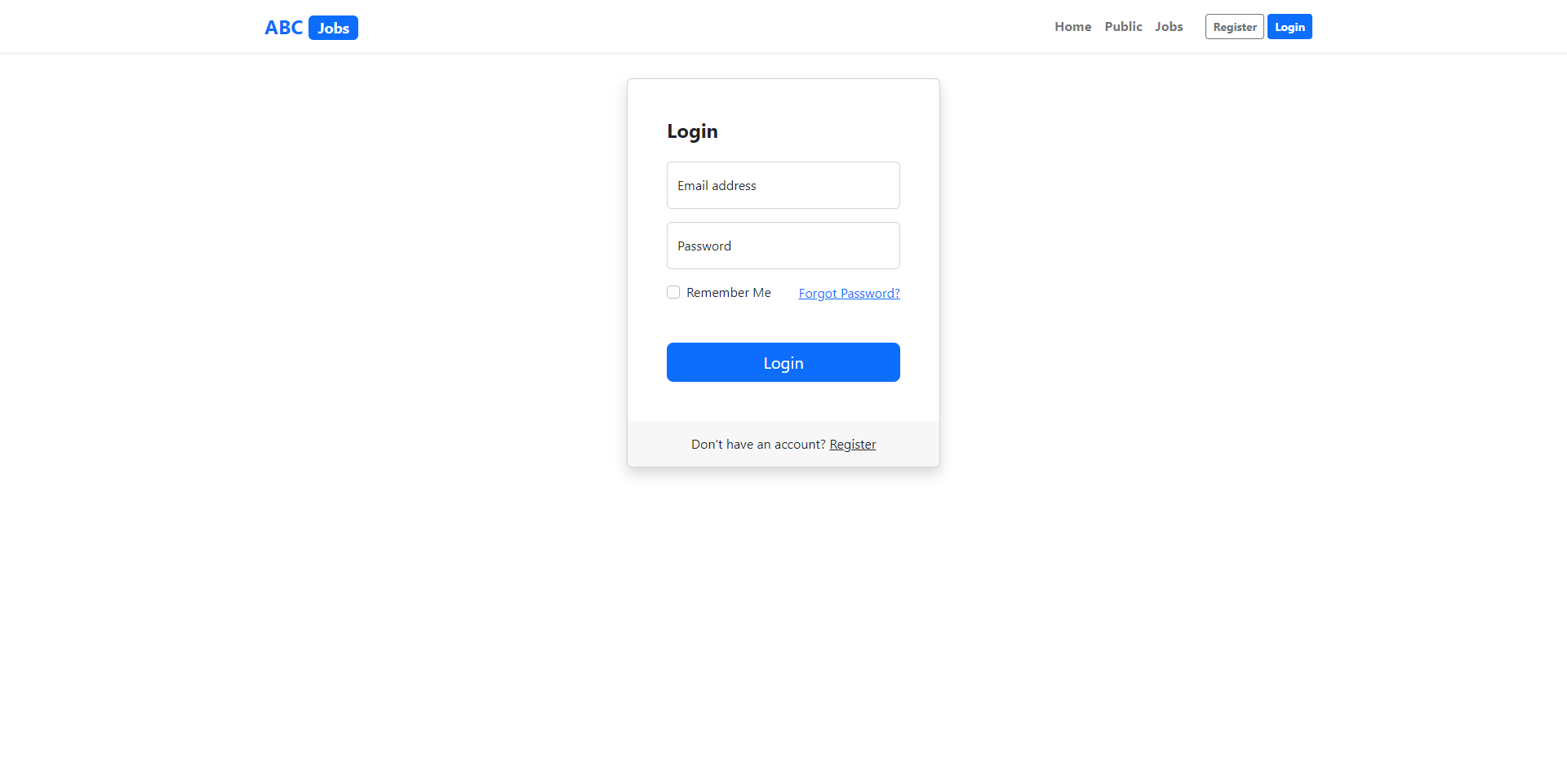
|  |  |
| --- | --- |
| Test Scenario | Check that a navigation menu is provided on each page and is consistent. |
| TS002 |
| Test Cases | UAT Testing |
| UAT01 | Check each hyperlink menu is loading correct page |
| UAT02 | Sign-in to community portal with the account that has been created |
| UAT03 | Reset the password |

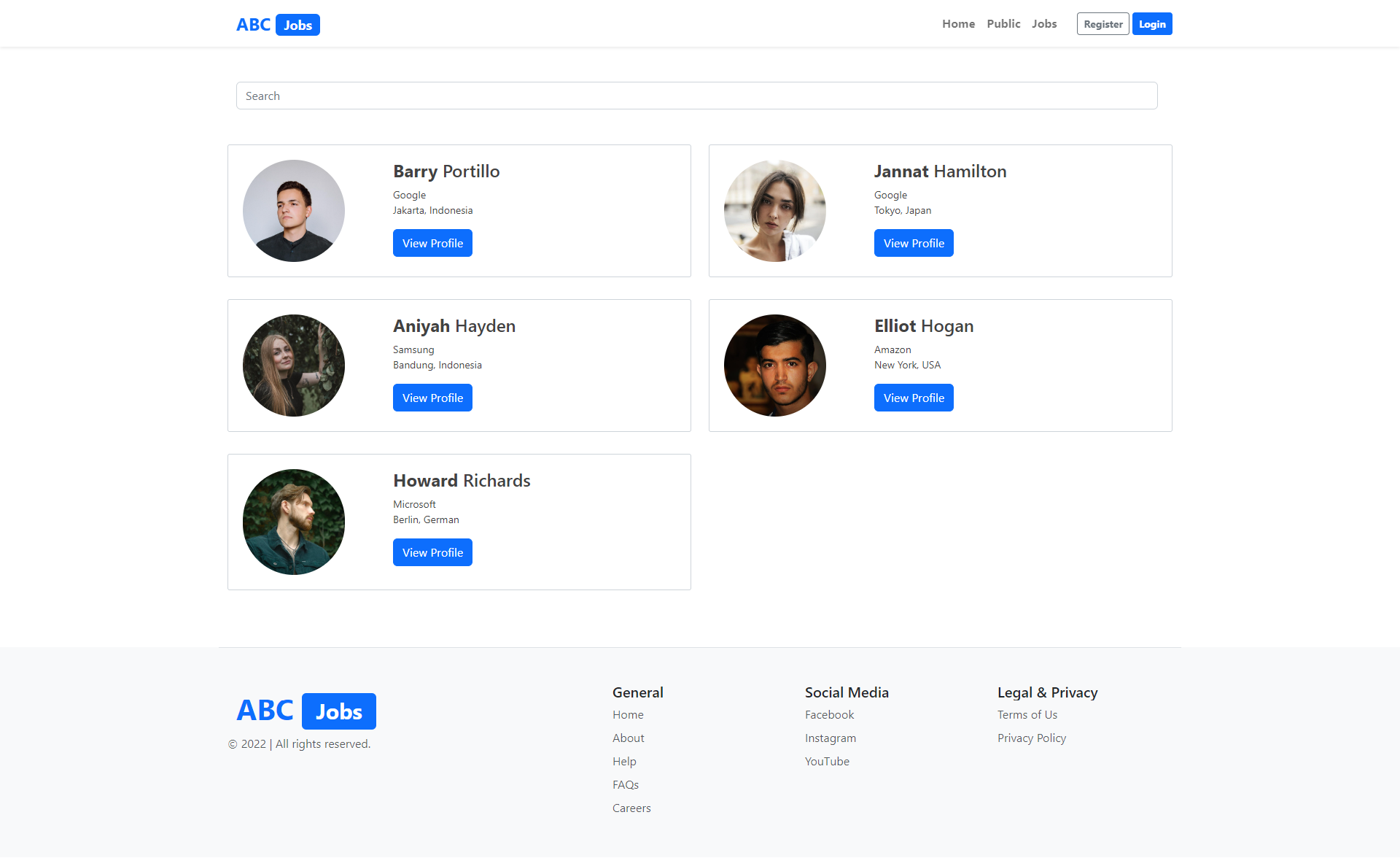
Test cases:

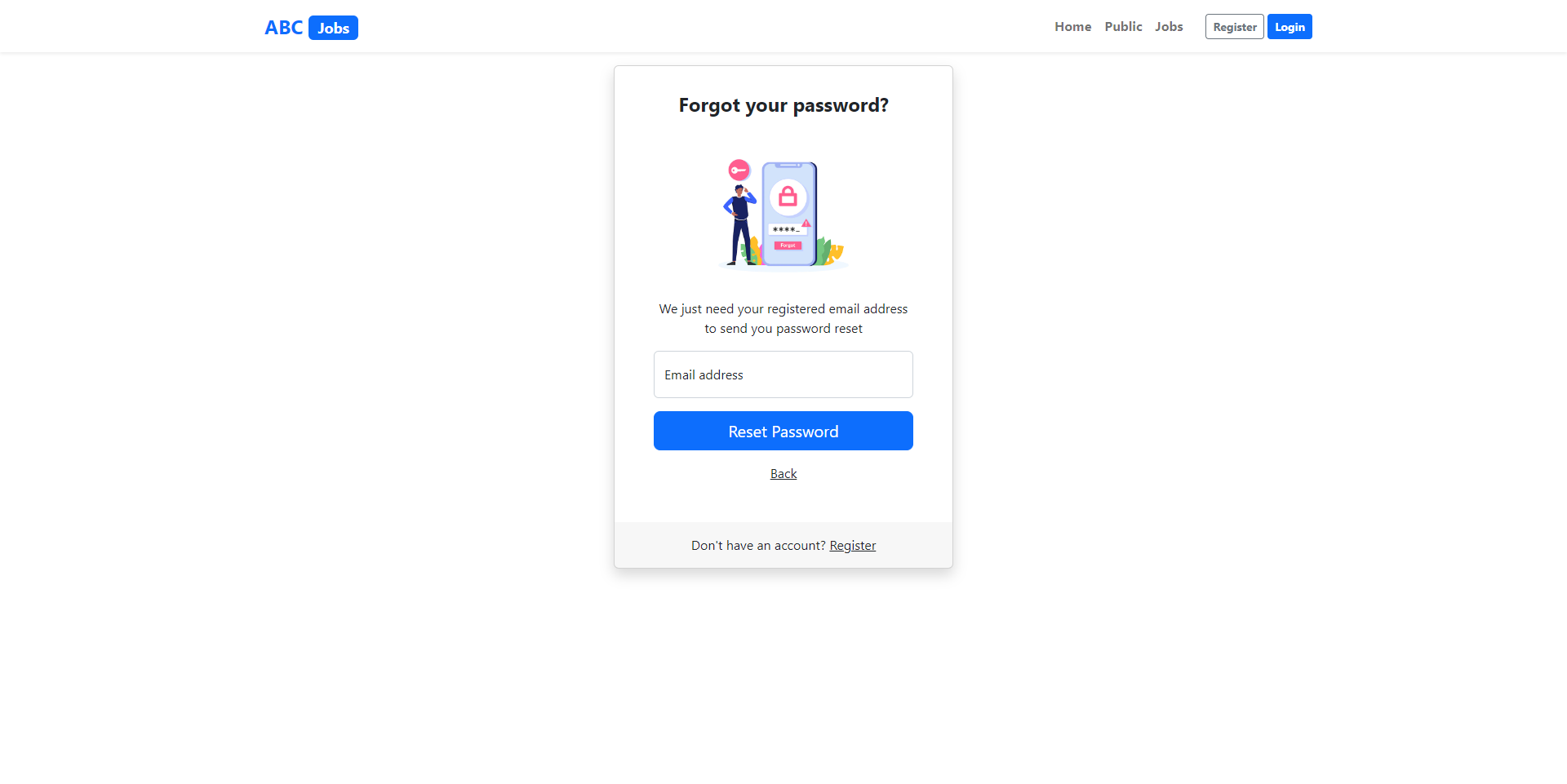
|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario ID | Test Case ID | Test Case | Preconditions | Test Step | Test Data | Expected Results | Actual Results | Pass / Fail |
| TS002 | UATC01 | Check each hyperlink menu is loading correct page | The website is configured to Microsoft Edge by Apache Tomcat Server. | 1. Go to Google Chrome. 2. Type www.abcjobs.com and enter. | Click on Register link  Click on Login link  Click on Public link  Click on Reset password link | Loaded registration page  Loaded Login page  Loaded Search Profile page  Loaded Reset Password page | As expected | Pass |
| TS002 | UATC02 | Log-in to community portal with the account that has been created | The website is configured to Browser by Apache Tomcat Server. | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter. 3. User will landing on Home Page 4. Click Log-in button | registered username and password | User will be redirect to user profile page | As expected | Pass |
| TS002 | UATC03 | Reset the password | The website is configured to Browser by Apache Tomcat Server. | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter. 3. User will landing on Home Page 4. Click Log-in button 5. Click Forget Password button | Registered email address | User will be redirect to Forget Password Confirmation page | As expected | Pass |

UATC01

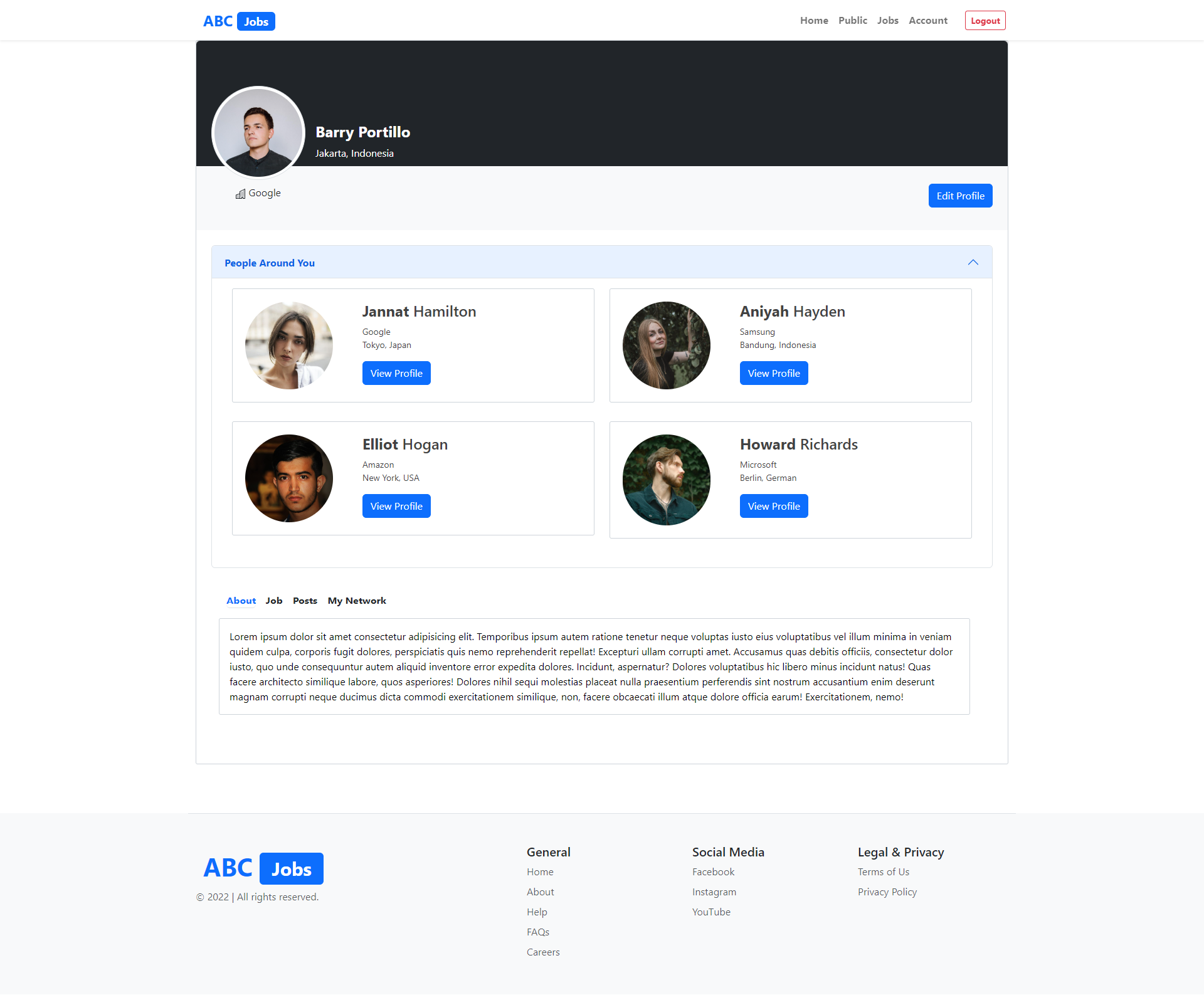








UATC02



UATC03

