Project Report

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| --- | --- |
| Project Title | Plan, Schedule, Test Community Portal |
| Qualification Name (NICF) | Advanced Certificate in Software Applications (Development and Deployment) |
| Product Name | NICF-Capstone Project using Java |
| Module Name (NICF) | NICF-Capstone Project using Java |

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| --- | --- | --- | --- |
| Student name | | Assessor name | |
| Wildan Luqmanul Hakim | |  | |
| Date issued | Completion date | | Submitted on |
| 29 September 2022 | 21 October 2022 | | 21October 2022 |
|  | |  | |
| Project title | Student Registration Form Development | | |

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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: 21 October 2022 |

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Project Background

This project is made for summative assessment in the 7 Capstone Project-Web Development module, this project is entitled Plan, "Schedule, Test Community Portal" with the qualification name "Advanced Certificate in Software Applications (Development and Deployment)". This project is a continuation of the previous modules.

'ABC Jobs Pte Ltd' has approached you as a website developer to test their software developer community portal. The purpose of this project is to test the community portal website that has been created, some of the tests include 3 tests, schedule test, phase test and of course the results of the test.

Project Objective

**Project Outcomes & Deliverables**

You should perform all the tasks in the Project Task List and prepare the following  
during the project:

* Briefly explain different types of testing which you will undertake
* Test Schedule Document
* Phase test plan
* Execute test scripts and verify the results
* Prepare a Project Report as per pre-defined template
* Prepare a Project Presentation as per pre-defined template
* Prepare a Testing Document

**Scope of the Project:**

* Features to be tested:  
  1. Registration  
  2. Login  
  3. Logout  
  4. Reset password  
  5. Search user  
  6. Post job  
  7. Apply job

8. Posting thread  
9. Comment thread

* Features which will not to be tested:  
  1. Send messages

Tools & platform used

1. Project Libre

ProjectLibre is the leading open source alternative to MS Project. It is a free downloadable project management software that is compatible with several versions of Project

1. Microsoft Word

Microsoft word is a word processing software application primarily used for creating documents in different formats

1. Microsoft Power Point

Microsoft PowerPoint is a program that is included in the Microsoft Office suite. It is used to make presentations for personal and professional purposes.

Project Requirements Specifications

Define the community portal functional features at high level.

**Software Programmers**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Page Name/ Function Name** | **Description** | **SQL** |
| 1 | Registration | This page is used for users to register to create an account so they can login to the website | Insert into tb\_users (email, enabled, password) values (?, ?, ?);  Insert into tb\_user\_profile (city, country, first\_name, id\_job, last\_name, id\_user) values (?, ?, ?, ?, ?, ?); |
| 2 | Login user | This page is used by users to enter the website with an account that was previously registered | Select \* from tb\_users where email = “emailuser@email.com” and password = "passworduser"; |
| 3 | Forgot password | This page is used by the user to reset their password if the user forgets the password | Select \* from tb\_users where email = “email@email.com”; |
| 4 | Search user | This page is used by the user to search for other users | "SELECT \* FROM tb\_user\_profile AS UP LEFT JOIN tb\_jobs AS J ON UP.id\_job = J.id\_job WHERE UP.first\_name LIKE '%' :keyword '%' OR UP.last\_name LIKE '%' :keyword '%' OR UP.country LIKE '%' :keyword '%' OR UP.city LIKE '%' :keyword '%' OR J.company\_name LIKE '%' :keyword '%';" |
| 5 | Update/Edit profile page | this page is used to change the profile of the user | UPDATE tb\_user\_profile SET first\_name=”Wildan” WHERE id\_user = 1; |
| 6 | Change password | This page is used by the user if the user wants to change the account password | UPDATE tb\_users SET password=“newpassworduser” WHERE id\_user = 1; |
| 7 | Posting Thread | This page is used by users to create post threads as a place to share, ask questions, or others | INSERT INTO tb\_thread (title, content) value (?,?)  INSERT INTO tb\_thread\_tags (id\_thread, first\_tag, second\_tag) value (?,?,?) |
| 8 | Comment Thread | Used to comment on other user's thread posts or our thread posts | INSERT INTO tb\_comment (id\_thread, id\_profile, comment) value (?,?,?) |
| 9 | Apply job | This page is used by the user to apply for a job if the user does not have a job | INSERT INTO tb\_apply\_job (id\_profile, id\_job, status) value (?,?,?) |

**Admin**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Page Name/ Function Name** | **Description** | **SQL** |
| 1 | Login admin | This page is used by the admin to enter the website as administrator | Select \* from tb\_admin where email = “helpabcjobs@gmail.com” and password = “admin123”; |
| 2 | Dashboard | This page is used by admins to manage users and jobs such as adding, changing or deleting users and jobs, and send bulk emails. | Select \* from tb\_users;  Select \* from tb\_user\_profile;  Select \* from tb\_jobs; |
| 3 | Add user | This page is used by admin to add new user | Insert into tb\_users (email, enabled, password) values (?, ?, ?);  Insert into tb\_user\_profile (city, country, first\_name, id\_job, last\_name, id\_user) values (?, ?, ?, ?, ?, ?); |
| 4 | Edit user | This page is used by admin to edit data user | UPDATE tb\_user\_profile SET first\_name=”Barry” WHERE id\_user = 1; |
| 5 | Delete user | This page is used by admin to delete user | DELETE FROM tb\_users  WHERE id\_user = 1; |
| 6 | Posting jobs | This page is used by admins to post or add new jobs to the website | Insert into tb\_jobs (job\_level, job\_time, job\_name, job\_description, company\_name) values (?, ?, ?, ?, ?); |
| 7 | Accept user for job | This page is used by the admin to accept or reject job applications from users | Update tb\_user\_profile SET id\_job = 1 WHERE id\_user = 1; |

Test methods chosen for testing ABC Jobs Community Portal are:

1. Unit testing

Unit testing is one of the levels of software testing that helps to test individual units of source code to determine whether they are usable. A unit is the smallest software component that usually performs a single cohesive function: it is small, so defects identified during unit testing are easy to discover and fix.

1. UAT testing

User Acceptance Testing (UAT) is a process to check whether the system accepts a user's requirements. It's performed at a time when actual users use the system.

1. Cross-browser testing

Cross-browser testing in quality assurance is a type of testing that helps to verify if your web application or web app works across different browsers and degrades gracefully.

Task 1

Task Statement:

1. Write a brief requirement specification for the Community Portal.
2. Include it as part of the Project Report

Solution:

1. Functional Requirements

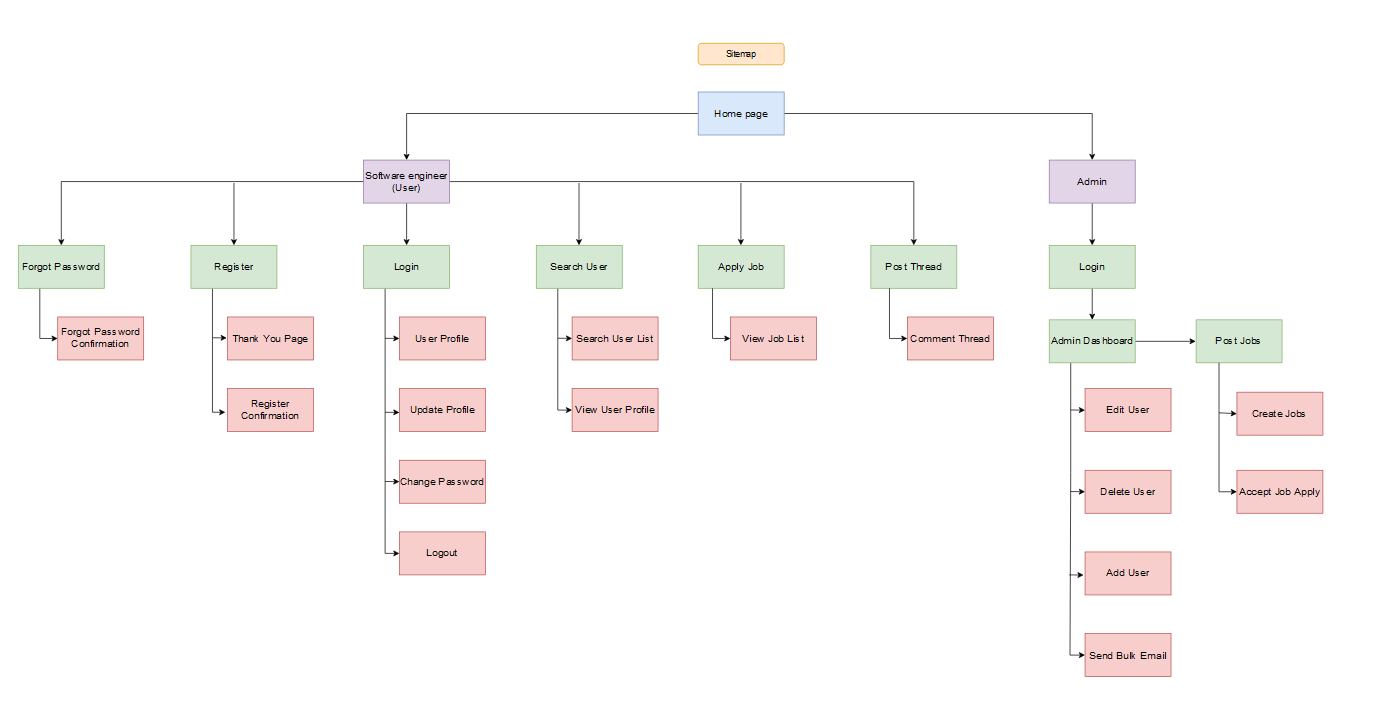
Public module

|  |  |  |  |
| --- | --- | --- | --- |
| No | Web Page/ Process | Requirements | Page Functions (create, edit, view, delete) |
| 1 | Register | User can register an account on register page | Create |
| 2 | Login | User can enter the login page using the account that has been registered | View |
| 3 | Forgot Password | The user can request a password reset if the user forgets the account password | View & edit |
| 4 | Logout | The user has the option to log out of the website. | View |
| 5 | Search Users | The user can look for other users. | View |
| 6 | Update Profile | The user can make changes to their profile. | Edit |
| 7 | User Profile | User can see the profile details of other users | View |
| 8 | Thread | User can view and post threads to start an experience, ask questions or share experiences | Create & view |
| 9 | Comment Thread | User can comment on their own thread or other user threads | Create |
| 10 | Apply Job | User can apply for jobs to companies on the website | View & edit |

Private module

|  |  |  |  |
| --- | --- | --- | --- |
| No | Web Page/ Process | Requirements | Page Functions (create, edit, view, delete) |
| 1 | Login admin | Used by the admin to enter the website as administrator | View |
| 2 | Dashboard | Used by admins to manage users and jobs such as adding, changing or deleting users and jobs, and send bulk emails. | View, edit, create, delete |
| 3 | Posting jobs | Used by admins to post or add new jobs to the website | Create |
| 4 | Accept user for job | Used by the admin to accept or reject job applications from users | View & edit |
| 5 | Send bulk email | Used by admin for send bulk email to all the user on the website | Create |

Sitemap



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 aspect | Secure users data from cyber attack |
| 4 | Database backup and recovery | To protect the database from data loss and to rebuild the database after data loss. |
| 5 | Compatibility | Defines how one system in the same environment can coexist with another. |
| 6 | **Localization** | Defines how well a system or one of its components fits into the context of the local market. |
| 7 | Scalability | Determines the maximum workloads at which the system will still meet performance requirements. |

1. Technical Requirements

Hardware

Minimum:  
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.

Recommended:  
Processor : Intel Core i5 or equivalent

Memory : 8 GB or higher

Graphic Accelerators : nVidia or ATI with support of OpenGL 1.5 or higher.

System Integration

* JDBC and ODBC connector

Software

* Ngrok
* Lamdatest
* Eclipse Enterprise Edition
* MySQL
* Apache Tomcat
* MySQL Workbench
* Project Libre
* Mozilla Firefox
* Google Chrome

Task 2

Task Statement:

1. Briefly explain different types of testing, how they will help to create a better  
   system.
2. Include it as part of Project Presentation.

Solution:

1. Unit Testing

* Help developers in writing better code
* Help developers in detecting bugs earlier.
* It makes refactoring the code easier.

1. Integration Testing

* Helps in the identification of module integration issues
* Increases test coverage and reliability
* helps to ensure that the integrated modules work properly before moving on to system testing of the entire application

1. User Acceptance Testing

* Keeping the cost of ongoing maintenance as low as possible
* Improve end-user satisfaction
* Improving the robustness and usability of software

1. Cross Browser Testing

* **Reducing repetitive tasks**
* **increased consistency and replicability**
* **Access to information about tests or testing is made simple.**

Task 3

Task Statement:

1. Propose relevant tests suitable for the Project Scenario
2. Include it as part of Project Presentation

Solution:

Functional testing:

1. Unit testing
2. User acceptance testing (UAT)

Non-Functional testing:

1. Cross browser testing
2. Task 4

Task Statement

1. Write briefly on optimal scheduling times for different tests
2. Prepare a schedule for execution of tests
3. Include it as part of Project Presentation.

Solution

1. Scheduling
2. Weighting (1 ~ 3)

* 1 – Simple
* 2 – Medium
* 3 – Complex

1. Functional points (1 ~ 5)

* 1 ~ 2 – If rarely used
* 3 ~ 4 – Often used
* 5 – Most often used

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | **Web page** | **Weighting** | **Functional Points (FP)** | **Total** |
| 1 | Registration | 3 | 2 | 6 |
| 2 | Login | 2 | 5 | 10 |
| 3 | Logout | 1 | 2 | 2 |
| 4 | Forgot Password | 1 | 1 | 1 |
| 5 | Search Users | 2 | 4 | 8 |
| 6 | Update user profile | 1 | 2 | 2 |
| 7 | View user profile | 2 | 5 | 10 |
| 8 | Posting Thread | 2 | 3 | 6 |
| 9 | Comment Thread | 3 | 5 | 15 |
| 10 | Send bulk email | 2 | 2 | 4 |
| 11 | Apply Job | 3 | 3 | 9 |
|  | Total functional points | | | 73 |
|  | Estimated person hour/ FP | | | 2 |
|  | Total hours needed | | | 146 |
|  | Total days needed (8h/day) | | | 18.25 |

1. Test schedule

|  |  |  |
| --- | --- | --- |
| Test Schedule ID: | TSCH01 |  |
| Product ID / Name: | ABC Jobs |  |
| Product Version or Build: | 0.0.1 |  |
| Present Owner: | Wildan Luqmanul Hakim | Software Engineer |
| Created On: | 30 September 2022 |  |
| Review On: | 05 October 2022 |  |
| Review By: | Dani Crowther | QA Manager |
| Review Comments: | Great, nice work |  |
| Current Version: | 1.0 |  |
| Change Details: | Profile Detail |  |
| Current Status: | Complete |  |
| Signing Off Authority: | Wildan Luqmanul Hakim | Software Engineer |

1. Task 5

Task Statement

1. Develop a Phase Test Plan for testing the application.
2. Include it as part of Project Report.

Solution

Goal

The purpose of this test is to identify and quantify any problems or issues with the web application.

Objectives

Validate and verify system functionality works according to requirements.

**Features to be tested**

1. Registration
2. Login
3. Logout
4. Reset password
5. Search users
6. Post thread
7. Comment thread
8. Post job
9. Apply job

**Features Not to Be Tested**

1. Send messages

**Approach**

1. Unit Testing
2. Cross Browser Testing
3. User Accepting Testing (UAT)

**Suspension Criteria**

Component testing will be suspended under the following conditions:

1. Critical errors found preventing test completion
2. Change

Resumption Criteria

Component testing will resume when the following criteria are met:

1. All issues in suspension criteria have been resolved or mitigated
2. New software build has been redeployed
3. New build with fixed Critical

Exit Criteria (Test Completeness)

Component testing can be considered complete when the following conditions have been met:

1. All High and Medium priority requirements have been tested without Critical or Medium severity defects.

**Test Deliverables**

1. Phase Test plan
2. Test schedules
3. Test scripts
4. Test Results
5. Bugs write-up

**Phase test plan schedule**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Task | Start | End | Person Days | Resource |
| 1 | Prepare Test Plan | 30 Sep 2022 | 5 Oct 2022 | 3 | QA Manager, QA |
| 2 | Define metrics | 6 Oct 2022 | 6 Oct 2022 | 1 | QA Manager, QA |
| 3 | Review plan | 7 Oct 2022 | 7 Oct 2022 | 1 | QA Manager, QA |
| 4 | Prepare Test Scripts | 8 Oct 2022 | 10 Oct 2022 | 2 | QA Manager, QA |
| 5 | Review Test Scripts | 11 Oct 2022 | 11 Oct 2022 | 1 | QA Manager, QA |
| 6 | Set up Test Environment | 12 Oct 2022 | 14 Oct 2022 | 2 | QA Manager, QA |
| 7 | Execute Testing/Record Faults | 15 Oct 2022 | 17 Oct 2022 | 2 | QA Manager, QA |
| 8 | Re-execute Test as Needed | 18 Oct 2022 | 18 Oct 2022 | 1 | QA Manager, QA |
| 9 | Document the test results | 19 Oct 2022 | 19 Oct 2022 | 1 | QA Manager, QA |
| 10 | Review Document | 20 Oct 2022 | 20 Oct 2022 | 1 | QA Manager, QA |

1. Task 6

Task Statement:

1. Execute the tests created, take appropriate screen capture & include it as part of  
   Project Presentation.
2. Present the results of testing and include it as part of Project Presentation

Solution

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 | 1 |
| Check login functionality is run normally | 1 |
| Test the search functionality to search users | 1 |
| TS002-UAT testing | 1. Check that a navigation menu is provided on each page and is consistent. | 3 |
| Non-Functional Testing | TS003-Cross Browser testing | 1. Check that the application is run normally on multiple web browser | 2 |

**Scenario 1: Unit Testing**

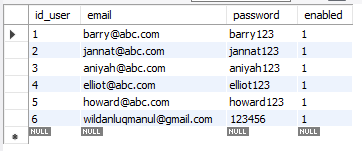
|  |  |
| --- | --- |
| Test Scenario | Ensure that user enters correct data in the registration page |
| TS001 |
| Test Cases | Unit Testing |
| TC001 | Check all the mandatory fields are entered |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Test Step | Test Data | Expected Results | Pass / Fail |
| TC001 | 1. Write the test code 2. Enter all the fields needed 3. Run junit4 | Email = “[tester@abc.com](mailto:tester@abc.com)”  Password= “test123”  First name = Test  Last name = Application  Country = Indonesia  City = Jakarta  Enabled = true | The user information will be saved to the database after successful registration. | Pass |

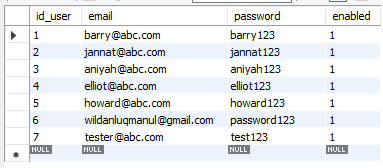
Test script



Database before:



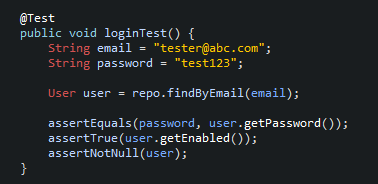
Database after:

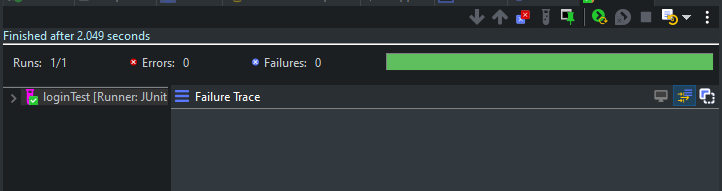


|  |  |
| --- | --- |
| Test Scenario | Check login functionality is run normally |
| TS001 |
| Test Cases | Unit Testing |
| TC001 | Check user after login is not null |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Test Step | Test Data | Expected Results | Pass / Fail |
| TC001 | 1. Write the test code 2. Enter all the fields needed 3. Run junit4 | Email = “[tester@abc.com](mailto:tester@abc.com)”  Password= “test123” | Login was successful, user enabled for login is true, user is not null, and the password is the database password. | Pass |

Test script

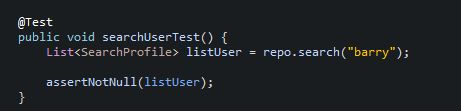


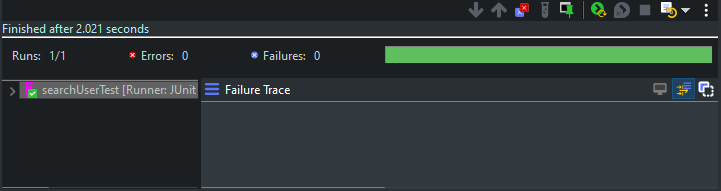


|  |  |
| --- | --- |
| Test Scenario | Test the search functionality to search users |
| TS001 |
| Test Cases | Unit Testing |
| TC001 | Check search users run normally and is not null result |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Test Step | Test Data | Expected Results | Pass / Fail |
| TC001 | 1. Write the test code 2. Enter all the fields needed 3. Run junit4 | Keyword = “barry” | The search is successful, and the outcome is not null. | Pass |

Test script



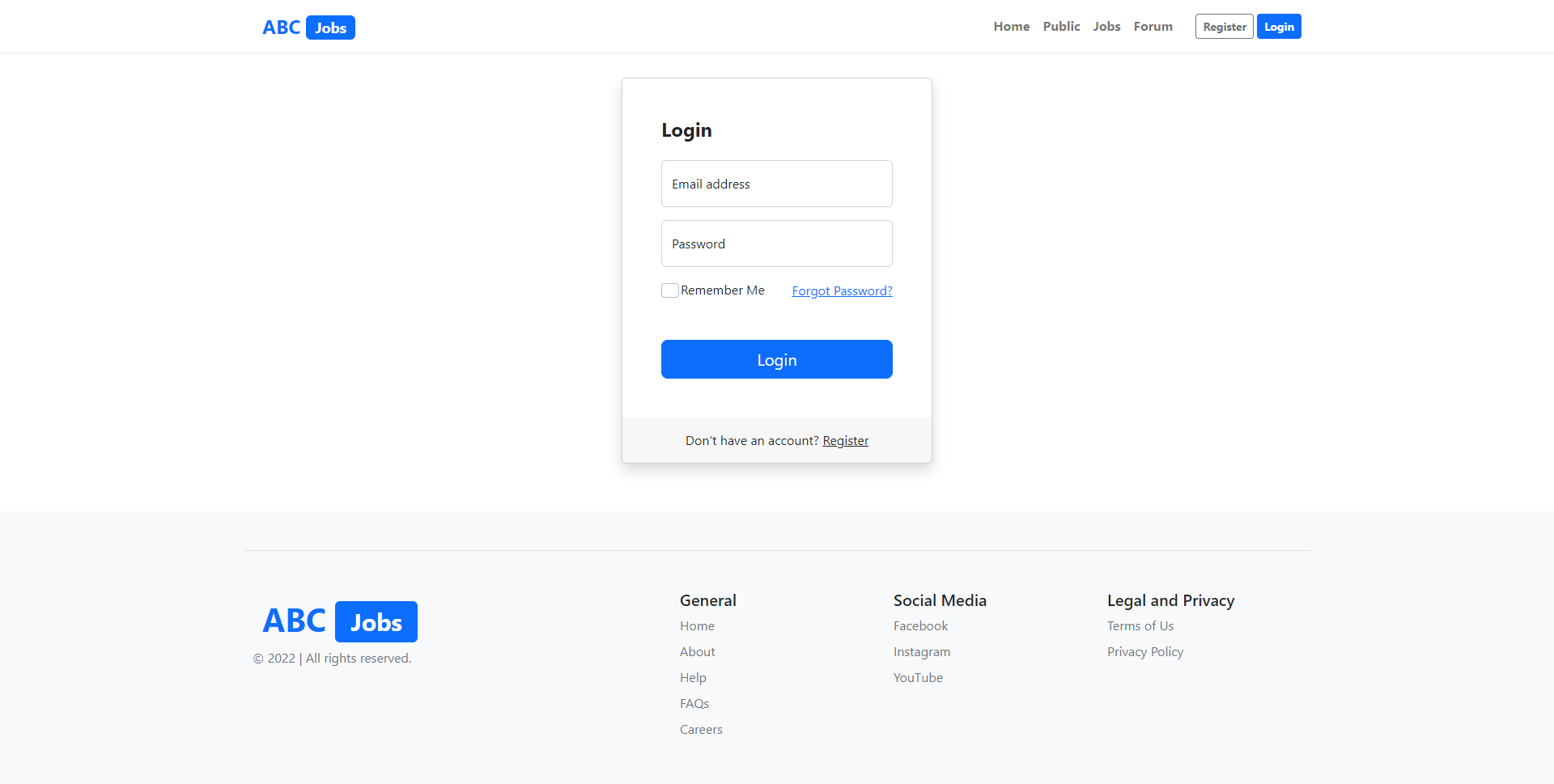
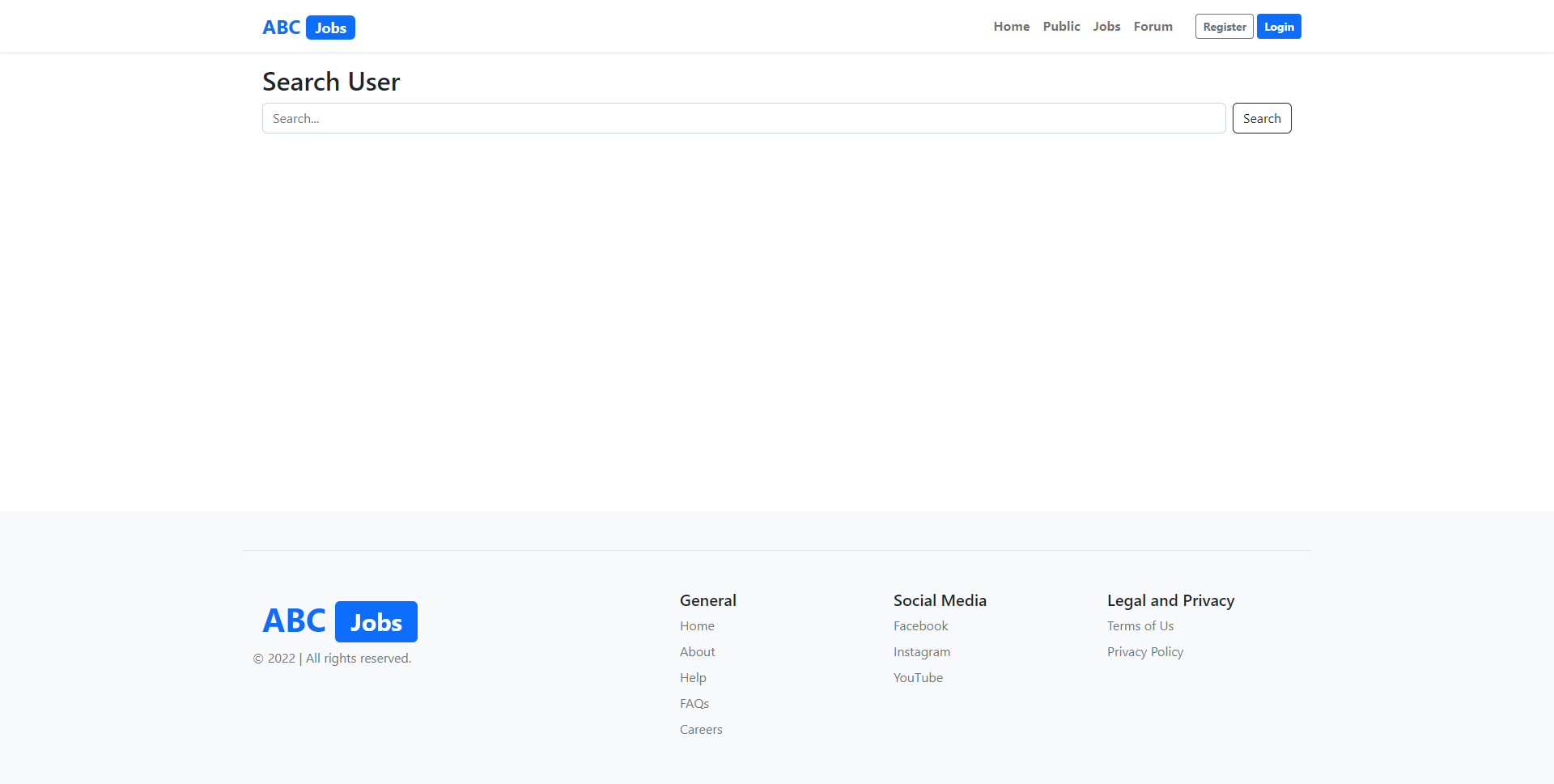


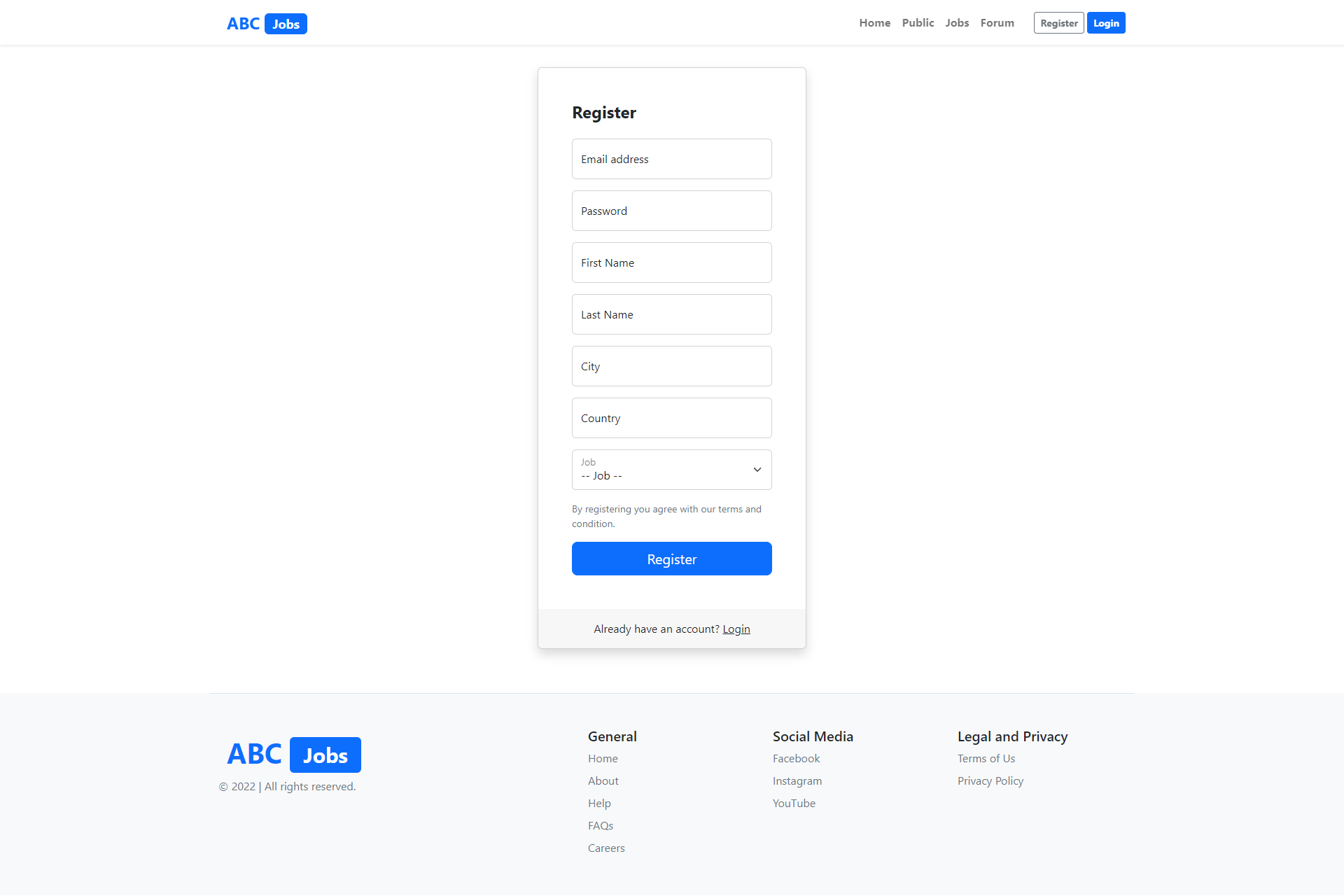
**Scenario 2: User Acceptance (UAT) Testing**

|  |  |
| --- | --- |
| Test Scenario | Check that a navigation menu is provided on each page and is consistent.  Check that user can login  Check that user can use the forgot password functionality |
| TS002 |
| Test Cases | UAT Testing |
| UAT01 | Check each hyperlink menu is loading correct page |
| UAT02 | Verify that user with valid email and password can login successfully |
| UAT03 | User can reset their forgotten password |

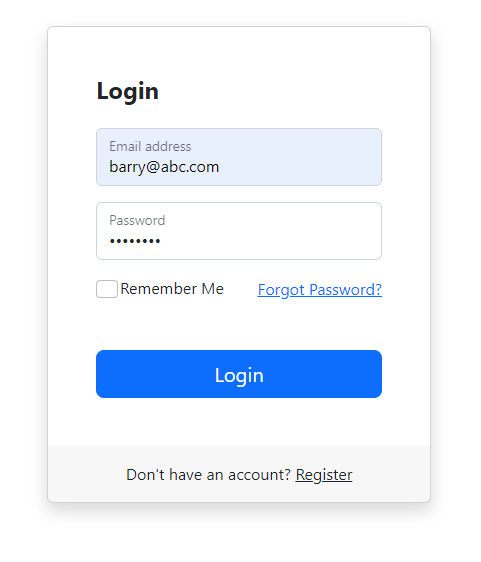
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Test Step | Test Data | Expected Results | Pass / Fail |
| UAT01 | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter 3. Click on all the links provided for test | Click on Login button  Click on Public  Click on register button | Loaded login page  Loaded search user page  Loaded register page | Pass |
| UAT02 | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter 3. Click login link 4. Enter fields and login | Email = “barry@abc.com”  Password = “barry123” | After successfully logging in, the user is directed to their profile. | Pass |
| UAT03 | 1. Go to Google Chrome 2. Type www.abcjobs.com and enter 3. Click login link 4. Click forgot password link 5. Enter email of forgotten password | Email = “wildanluqmanul@gmail.com” | Receive a temporary password via email | Pass |

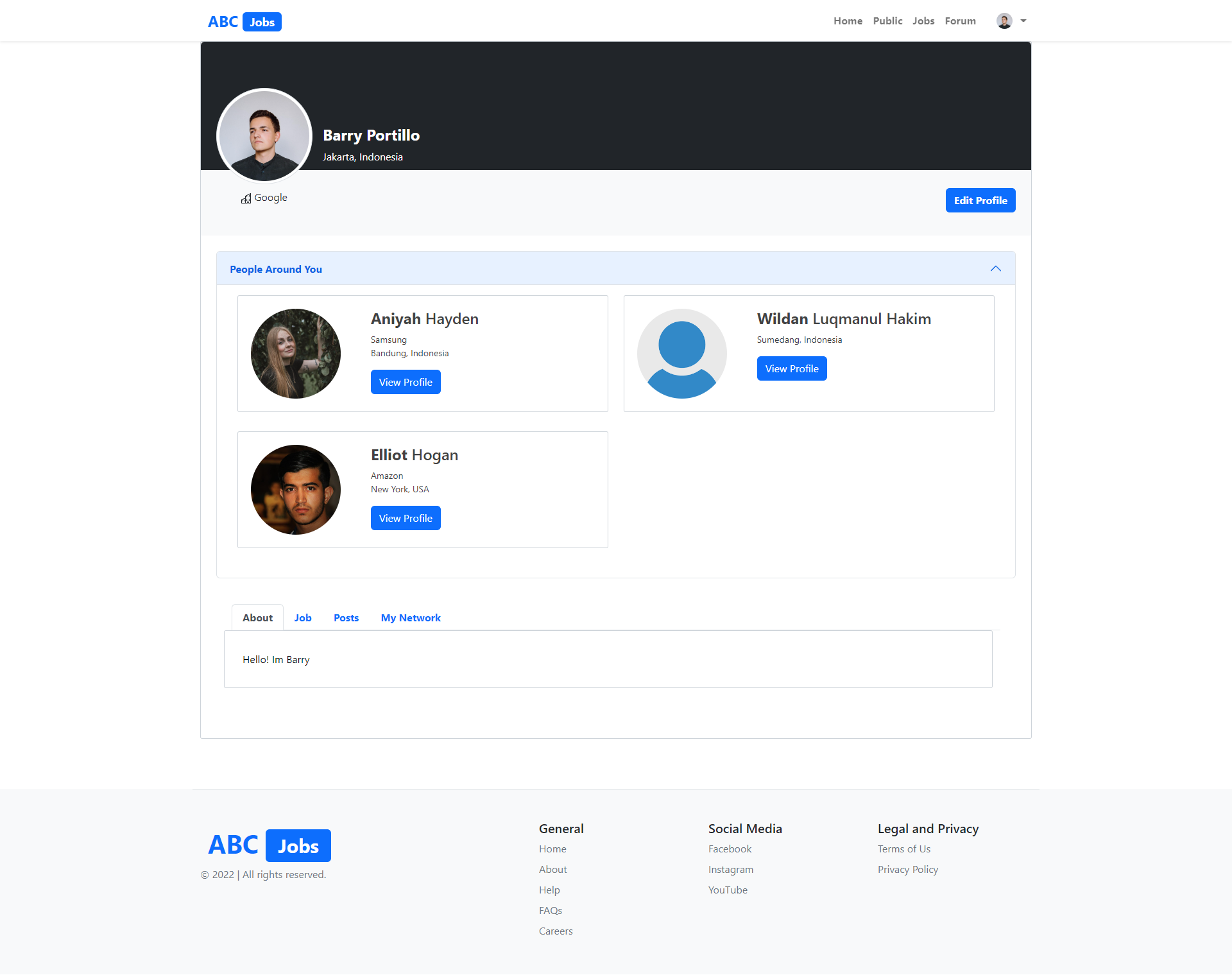
UAT01

**  
  
**

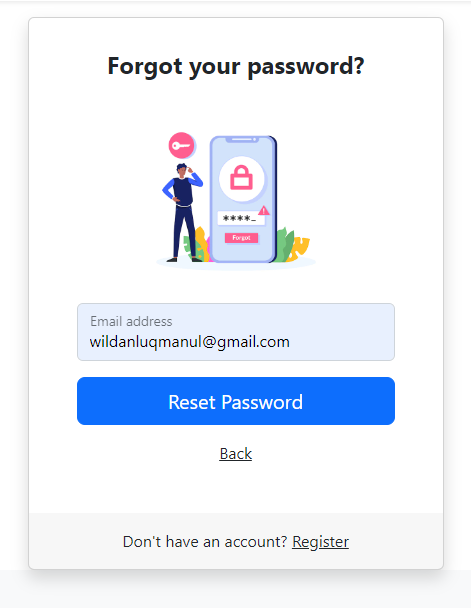
****

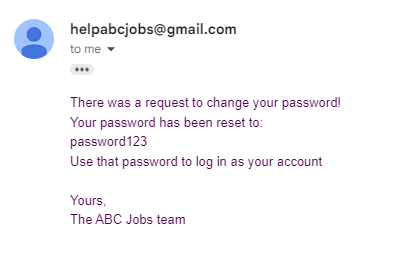
UAT02



****

UAT03

****

****

**Before:**

****

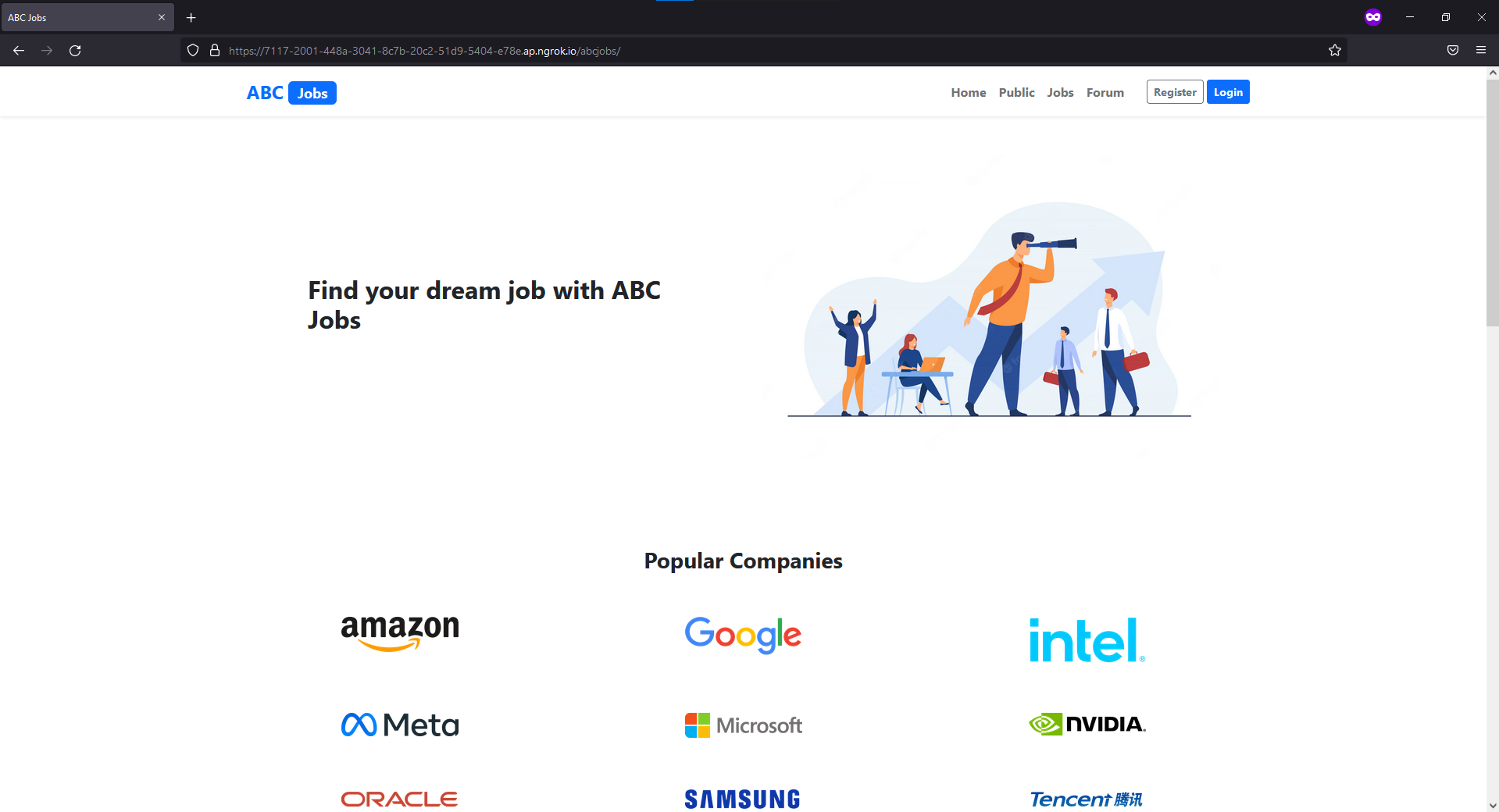
**After:**

****

**Scenario 3: Cross Browser Testing**

|  |  |
| --- | --- |
| Test Scenario | Check that the application is run normally on multiple web browser |
| TS003 |
| Test Cases | UAT Testing |
| CBT01 | Check browser can run on Mozilla Firefox web browser using lamdatest |
| CBT02 | Check browser can run on Google Chrome web browser using lamdatest |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Test Case | Test Data | Expected Results | Pass / Fail |
| CBT01 | Check browser can run on Mozilla Firefox web browser | ABC Jobs Portal website hosted in ngrok software | Run normally as it should | Pass |
| CBT02 | Check browser can run on Google Chrome web browser using lamdatest | ABC Jobs Portal website hosted in ngrok software | Run normally as it should | Pass |

CBT01  


CBT02  
