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**Formative Assignment 3**

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| Module Name | Application Implementation (Agile Project Management) |
| Course Name | Bachelor of Technology in Software Engineering |
| Assignment Title | Test Preparation to test the community portal |

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| Learner Name | Francis Roel L. Abarca – bdse-0922-113 |

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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: 7/18/2023 |

## Purpose of this assignment

To demonstrate your capabilities in the following areas:

* Preparing Test Cases and Scripts to test a software application

## Submission Format

The submission is in the form of an individual written report with examples and illustrations. This should be written in a concise, formal academic style using single spacing and font size 12.You are required to make use of headings, paragraphs, and subsections as appropriate, and all work must be supported with research and referenced using the Harvard referencing system. Please also provide a bibliography using the Harvard referencing system.

## Submission file

Submission File Name format: Cohort Code \_Full Name\_Assignment Number

E.g.: AIM-1222A\_AliceTan\_A3.docx

## Scenario

## You have been approached by ‘ABC Jobs Pte Ltd’ as a website developer to develop a community portal for Software Developers. For this module the scope is to Design, Develop, Implement & Document the data-driven website using the framework Spring boot and react.

The Scope of the Project is to design a Community Portal Similar to Linkedin.com. Users will be able to register in the portal using the Registration Page. Users of the portal can search for other users using various parameters such as First Name, Last Name, Company Name, City & Country. Users will be able to view the Public Profile of users after searching them. The portal allow users to login, request for forgotten password and Update their profile information.

The overview of the project is as below

There are 2 types of users in this Community portal. They are

1. Software Programmer
2. Administrator

Software Programmer should be able to perform following functions in the portal

1. Allow the programmers to register in the portal, show a thank you page & send a registration confirmation email.
2. Search & Find Other Programmers after login and view their profile.
3. Provide Login Page
4. Provide password retrieval functionality.
5. Update their Profile after logging in.

**Following Functionality is part of Database Design & will be enhanced as features as required in the Capstone Project, depending on time availability.**

1. Send Messages to Each Other on the Portal
2. Create Threads & Post Replies to a Thread
3. Post Job Opportunities in the Portal

## Administrator should be able to perform following functions in the portal

## Administer user data.

## Send bulk email inviting programmers to register on the community portal

## The portal consist of the following Key pages (For Reference)

## Community Portal Home Page

## Registration Page

## Registration Confirmation Page (with Registration Confirmation Email)

## Login Page

## Reset Password Page

## Reset Password Confirmation Page

## Update Profile Page

## Search Users Page

## List Search Results

## Public Profile Page

## *Pages for enhancement (depending on time availability)*

## *Send Messages*

## *Read Messages*

## *Post thread in Message Board*

## *List threads in Message Board*

## *Read A Thread*

## *List Job Opportunities & Responses*

## *Post Job Opportunities*

1. *Apply for Jobs*

You will be required to:

Create a testing plan document for the community portal project. The document should include the following sections:

1. Test Metrics: Identify quantitative measures used to estimate the progress, quality, productivity and health of the software testing process
2. Test Schedule: Create a schedule that outlines the timeline for different testing activities.
3. Test Cases: Develop a set of test cases that cover different scenarios and functionalities of the community portal.
4. Test Data: Identify the test data required for executing the test cases.
5. Test Execution: Explain **how** the test cases will be executed, including the test environment setup and execution process.

## Evidence to exhibit

* Test Plan with test cases

Task Wise Solutions:

1. **Test Metrics**

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| **Test Metric** | **Testing Phase** |
| Number of test cases | Test Development Phase |
| Number of Test cases Passed | Test Execution Phase |
| Number of Test cases Executed | Test Execution Phase |
| Number of Test cases Failed | Test Execution Phase |
| Number of Test cases under Investigation | Test Development Phase |
| Number of Test cases Blocked | Test Development Phase/Execution Phase |
| Number of Test cases Re- executed | Regression Phase |
| Number of First run Failures | Test Execution Phase |
| Total Executions | Test Reporting Phase |
| Total Passes and Failures | Test Reporting Phase |
| Test case Execution time | Test Reporting Phase |
| Test Execution time | Test Reporting Phase |

**Defect Rate: Total No of Test = 17**

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| --- | --- |
| % of Test Cases Passed | 17 |
| % of Test Coverage | 17 |
| % of Defects corrected | 0 |
| % of Test Cases Blocked | 0 |
| % of Rework | 0 |
| % of Test Effectiveness | 100% |

1. **Test Schedule**

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| --- | --- | --- | --- | --- |
| No | Test Description | Optimal scheduling Time | Start Date | End Date |
| 1 | Functional Testing | 1 hour | 7/22/2023 | 7/22/2023 |
| 2 | Compatibility Testing | 30 minutes | 7/22/2023 | 7/22/2023 |
| 3 | Performance Testing | 1 hour | 7/22/2023 | 7/22/2023 |
| 4 | Portability Testing | 30 minutes | 7/22/2023 | 7/22/2023 |

1. **Test Cases**

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| **1.  Functional Testing** | | |  |  |  | |
| **Test Id** | **Test Scenario** | **Test Objective** | **Technique** | **Expected Result** | |
| 1 | TS001 | Ensure users can register to the website. | Functional Testing | After registration, the users will be able to log-in to the system and access their information. | |
| 2 | TS002 | Identify when users can Login to the page with non-existing credentials. | Functional Testing | Login will fail and indicate that this user doesn’t exist. | |
| 3 | TS003 | Ensure users can post. | Functional Testing | User should be able to see their post on their profile and dashboard. | |
| 4 | TS004 | Ensure users can search what they are looking for. | Functional Testing | User should be able to see the person or company they are searching for. | |
| 5 | TS005 | Ensure users can reset their password. | Functional Testing | User should be able to replace their password as easy as possible. | |

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|  | | **2.  Compatibility Testing** | | |  | |
| **Test Id** | **Test Scenario** | **Test Objective** | **Technique** | **Expected Result** | |
| 6 | TS006 | Identify if the community portal looks good on Google Chrome. | Compatibility Testing | The look of the portal and its user experience should be the same. | |
| 7 | TS007 | Identify if the community portal looks good on Apple Safari. | Compatibility Testing | The look of the portal and its user experience should be the same. | |
| 8 | TS008 | Identify if the community portal looks good on Mozilla Firefox. | Compatibility Testing | The look of the portal and its user experience should be the same. | |
| 9 | TS009 | Identify if the community portal looks good on Microsoft Edge | Compatibility Testing | The look of the portal and its user experience should be the same. | |

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|  | | **3. Performance Testing** | | |  | |
| **Test Id** | **Test Scenario** | **Test Objective** | **Technique** | **Expected Result** | |
| 10 | TS010 | Ensure the homepage loads in less than 10 seconds. | Performance Testing | Homepage loads in less than 10 seconds. | |
| 11 | TS011 | Ensure the Login page loads less than 10 seconds. | Performance Testing | Login page loads in less than 10 seconds. | |
| 12 | TS012 | Ensure the Dashboard loads in less than 15 seconds. | Performance Testing | Dashboard loads in less than 15 seconds. | |
| 13 | TS013 | Ensure the Profile loads in less than 10 seconds. | Performance Testing | Profile loads in less than 10 seconds. | |

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|  | | 4**.  Portability Testing** | | | | |
| **Test Id** | **Test Scenario** | | **Test Objective** | **Technique** | **Expected Result** |
| 14 | TS014 | | Check if the website is still usable on an iPhone 14 Pro Max device. | Portability Testing | Portal maintains the same feature-set of the desktop on the iPhone 14 Pro Max device. |
| 15 | TS015 | | Check if the website is still usable on a 12.9in iPad Pro device. | Portability Testing | Portal maintains the same feature-set of the desktop on the 12.9in iPad Pro device. |
| 16 | TS016 | | Check if the website is still usable on the 2020 iPhone SE device. | Portability Testing | Portal maintains the same feature-set of the desktop on the 2016 iPhone SE device. |
| 17 | TS017 | | Check if the website is still usable on a 2019 iPad mini device. | Portability Testing | Portal maintains the same feature-set of the desktop on the 2019 iPad mini device. |

1. **Test Data**

Test Cases : Functional Testing

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| **Scenario ID** | **Test Case ID** | **Test Case** | **Preconditions** | **Test Step** | **Test Data** | **Expected Results** | **Actual Results** | **Pass / Fail** |
| TS001 | 1 | Ensure users can register to the website. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open ABC Jobs 2. Click on Register 3. Enter Test Data 4. Click Register | First Name: Tristin  Last Name: Rodriguez  Username: tristinr27  Email: [tristinr27@gmail.com](mailto:tristinr27@gmail.com)  Password: tristinr27 | After registration, the users will be able to log-in to the system and access their information. | User successfully logs-in to the portal. | Pass |
| TS002 | 2 | Identify when users can Login to the page with non-existing credentials. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open ABC Jobs 2. Click on Login 3. Enter Test Data 4. Click Login | Email: [adam27@gmail.com](mailto:adam27@gmail.com)  Password: ppasdr27 | Login will fail and indicate that this user doesn’t exist. | Login page doesn’t log the user in. | Pass |
| TS003 | 3 | Ensure users can post. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open ABC Jobs  2. Sign In  3. On the dashboard inside the post box, enter Test Data.  4. Click Post | Post: This is a test. | User should be able to see their post on their profile and dashboard. | User sees their post on the dashboard. | Pass |
| TS004 | 4 | Ensure users can search what they are looking for. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open ABC Jobs  2. Sign in  3. Click on Search  4. Insert Test Data  5. Click Search | Search Data: Tristin | User should be able to see the person or company they are searching for. | Page properly shows the query they were looking for. | Pass |
| TS005 | 5 | Ensure users can reset their password. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open ABC Jobs.  2. Click on Login  3. Click on “Forgot my Password?”  4. Enter the Test Data.  5. Click Reset  6. Check your Email provider.  7. Click on the link sent to your email.  8. Enter test data for password.  9. Click Reset. | Email: [tristinr27@gmail.com](mailto:tristinr27@gmail.com)  Password: lillybb71 | User should be able to replace their password as easy as possible. | User’s credentials has its password successfully reset. | Pass |

Test Cases : Compatibility Testing

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Scenario ID** | **Test Case ID** | **Test Case** | **Preconditions** | **Test Step** | **Test Data** | **Expected Results** | **Actual Results** | **Pass / Fail** |
| TS006 | 6 | Identify if the community portal looks good on Google Chrome. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Google Chrome  2. Open the ABC Jobs Portal | Address: localhost:8080 | The look of the portal and its user experience should be the same. | Look and feel is maintained on Google Chrome. | Pass |
| TS007 | 7 | Identify if the community portal looks good on Apple Safari. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Safari  2. Open the ABC Jobs Portal | Address: localhost:8080 | The look of the portal and its user experience should be the same. | Look and feel is maintained on Apple Safari. | Pass |
| TS008 | 8 | Identify if the community portal looks good on Mozilla Firefox. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Mozilla Firefox  2. Open the ABC Jobs Portal | Address: localhost:8080 | The look of the portal and its user experience should be the same. | Look and feel is maintained on Mozilla Firefox. | Pass |
| TS009 | 9 | Identify if the community portal looks good on Microsoft Edge | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Microsoft Edge  2. Open the ABC Jobs Portal | Address: localhost:8080 | The look of the portal and its user experience should be the same. | Look and feel is maintained on Microsoft Edge. | Pass |

Test Cases : Performance Efficiency

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Scenario ID** | **Test Case ID** | **Test Case** | **Preconditions** | **Test Step** | **Test Data** | **Expected Results** | **Actual Results** | **Pass / Fail** |
| TS010 | 10 | Ensure the homepage loads in less than 10 seconds. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Press F12 on the keyboard.  4. Click on Network  5. Refresh the page. | Address: localhost:8080  Tool Required: Google Chrome Developer Tool | Homepage loads in less than 10 seconds. | Homepage loaded in <10 seconds. | Pass |
| TS011 | 11 | Ensure the Login page loads less than 10 seconds. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Click on Login Page.  4. Press F12 on the keyboard.  5. Click on Network  6. Refresh the page. | Address: localhost:8080  Tool Required: Google Chrome Developer Tool | Login page loads in less than 10 seconds. | Login page loaded in <10 seconds. | Pass |
| TS012 | 12 | Ensure the Dashboard loads in less than 15 seconds. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Login to the site with the Test Data.  4. Press F12 on the keyboard.  5. Click on Network  6. Refresh the page. | Address: localhost:8080  Email: [tristinr27@gmail.com](mailto:tristinr27@gmail.com)  Password: lillybb71  Tool Required: Google Chrome Developer Tool | Dashboard loads in less than 15 seconds. | Dashboard page loaded in <15 seconds. | Pass |
| TS013 | 13 | Ensure the Profile loads in less than 10 seconds. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Login to the site with the Test Data.  4. Click on Profile.  5. Press F12 on the keyboard.  6. Click on Network  7. Refresh the page. | Address: localhost:8080  Email: [tristinr27@gmail.com](mailto:tristinr27@gmail.com)  Password: lillybb71  Tool Required: Google Chrome Developer Tool | Profile loads in less than 10 seconds. | Profile page loaded in <10 seconds. | Pass |

Test Cases : Portability

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Scenario ID** | **Test Case ID** | **Test Case** | **Preconditions** | **Test Step** | **Test Data** | **Expected Results** | **Actual Results** | **Pass / Fail** |
| TS014 | 14 | Check if the website is still usable on an iPhone 14 Pro Max device. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPhone 14 Pro Max.  7. Click on Safari.  8. Click Start. | Address: abcjobs.yeems214.xyz  Tools Required:  Cloudflared  Cloudflare Zero Trust account  A Domain | Portal maintains the same feature-set of the desktop on the iPhone 14 Pro Max device. | Portal maintains the same look and feel. | Pass |
| TS015 | 15 | Check if the website is still usable on a 12.9in iPad Pro device. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPad Pro 12.9  7. Click on Safari.  8. Click Start. | Address: abcjobs.yeems214.xyz  Tools Required:  Cloudflared  Cloudflare Zero Trust account  A Domain | Portal maintains the same feature-set of the desktop on the 12.9in iPad Pro device. | Portal maintains the same look and feel. | Pass |
| TS016 | 16 | Check if the website is still usable on the 2020 iPhone SE device. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPhone SE (2020).  7. Click on Safari.  8. Click Start. | Address: abcjobs.yeems214.xyz  Tools Required:  Cloudflared  Cloudflare Zero Trust account  A Domain | Portal maintains the same feature-set of the desktop on the 2016 iPhone SE device. | Portal maintains the same look and feel. | Pass |
| TS017 | 17 | Check if the website is still usable on a 2019 iPad mini device. | Implementation of the ABC Jobs portal is complete with all the sites and navigation links running on the server. | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPad Mini 2019  7. Click on Safari.  8. Click Start. | Address: abcjobs.yeems214.xyz  Tools Required:  Cloudflared  Cloudflare Zero Trust account  A Domain | Portal maintains the same feature-set of the desktop on the 2019 iPad mini device. | Portal maintains the same look and feel. | Pass |

**5. Test Execution**

Test Cases : Functional Testing

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| **Scenario ID** | **Test Environment** | **Execution Process** |
| TS001 | Address: localhost:8080  Browser: Google Chrome | 1. Open ABC Jobs 2. Click on Register 3. Enter Test Data 4. Click Register |
| TS002 | Address: localhost:8080  Browser: Google Chrome | 1. Open ABC Jobs 2. Click on Login 3. Enter Test Data 4. Click Login |
| TS003 | Address: localhost:8080  Browser: Google Chrome | 1. Open ABC Jobs  2. Sign In  3. On the dashboard inside the post box, enter Test Data.  4. Click Post |
| TS004 | Address: localhost:8080  Browser: Google Chrome | 1. Open ABC Jobs  2. Sign in  3. Click on Search  4. Insert Test Data  5. Click Search |
| TS005 | Address: localhost:8080  Browser: Google Chrome | 1. Open ABC Jobs.  2. Click on Login  3. Click on “Forgot my Password?”  4. Enter the Test Data.  5. Click Reset  6. Check your Email provider.  7. Click on the link sent to your email.  8. Enter test data for password.  9. Click Reset. |

Test Cases : Compatibility Testing

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| --- | --- | --- |
| **Scenario ID** | **Test Environment** | **Execution Process** |
| TS006 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome | 1. Open Google Chrome  2. Open the ABC Jobs Portal |
| TS007 | Address: abcjobs.yeems214.xyz  Browser: Apple Safari | 1. Open Safari  2. Open the ABC Jobs Portal |
| TS008 | Address: abcjobs.yeems214.xyz  Browser: Mozilla Firefox | 1. Open Mozilla Firefox  2. Open the ABC Jobs Portal |
| TS009 | Address: abcjobs.yeems214.xyz  Browser: Microsoft Edge | 1. Open Microsoft Edge  2. Open the ABC Jobs Portal |

Test Cases : Performance Efficiency

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| --- | --- | --- |
| **Scenario ID** | **Test Environment** | **Execution Process** |
| TS010 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Press F12 on the keyboard.  4. Click on Network  5. Refresh the page. |
| TS011 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Click on Login Page.  4. Press F12 on the keyboard.  5. Click on Network  6. Refresh the page. |
| TS012 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Login to the site with the Test Data.  4. Press F12 on the keyboard.  5. Click on Network  6. Refresh the page. |
| TS013 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome | 1. Open Google Chrome  2. Open ABC Jobs Portal.  3. Login to the site with the Test Data.  4. Click on Profile.  5. Press F12 on the keyboard.  6. Click on Network  7. Refresh the page. |

Test Cases : Portability

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| --- | --- | --- |
| **Scenario ID** | **Test Environment** | **Execution Process** |
| TS014 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome  Site: LambdaTest  Device: iPhone 14 Pro Max | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPhone 14 Pro Max.  7. Click on Safari.  8. Click Start. |
| TS015 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome  Site: LambdaTest  Device: iPad Pro 12.9 (2020) | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPad Pro 12.9  7. Click on Safari.  8. Click Start. |
| TS016 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome  Site: LambdaTest  Device: iPhone SE (2020) | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPhone SE (2020).  7. Click on Safari.  8. Click Start. |
| TS017 | Address: abcjobs.yeems214.xyz  Browser: Google Chrome  Site: LambdaTest  Device: iPad mini 2019 | 1. Open Lambdatest  2. Select Real Device  3. Select Browser Testing  4. Enter the test data onto Real Device URL.  5. Select iPhone as the Device Type.  6. Select iPad Mini 2019  7. Click on Safari.  8. Click Start. |