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**Formative Assignment 2**

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| Module Name | Application Implementation (Agile Project Management) |
| Course Name | Bachelor of Technology in Software Engineering |
| Assignment Title | Phase Test Plan 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 Plan for 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\_A2.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. Introduction: Provide an overview of the project and its objectives.
2. Test Scope: Define the scope of testing, including the specific functionalities and features to be tested.
3. Test Strategy: Describe the overall approach and strategy for testing the community portal.
4. Test Environment: Specify the hardware, software, and testing tools required for the testing process.
5. \*Test Schedule: Create a schedule that outlines the timeline for different testing activities.
6. \*Test Cases: Develop a set of test cases that cover different scenarios and functionalities of the community portal.
7. \*Test Data: Identify the test data required for executing the test cases.
8. \*Test Execution: Explain how the test cases will be executed, including the test environment setup and execution process.
9. Defect Reporting: Define the process for reporting and tracking defects encountered during testing.
10. Risk Assessment: Identify potential risks and mitigation strategies for the testing process.
11. Resource Allocation: Determine the resources needed for testing, including the number of testers and their roles.
12. Test Deliverables: Specify the expected deliverables from the testing process, such as test reports and documentation.
13. Approval: Include a section for approval and review of the testing plan.

*\* Items e – h (above) / 5 – 8 (in the template below) will be covered in Assignment 3*

## Evidence to exhibit

* Phase Test Plan

Example Template:

1. Introduction
   1. Project Overview
   2. Objectives
2. Test Scope
3. Test Strategy
4. Test Environment
   1. Hardware
   2. Software
   3. Testing Tools
5. \*Test Schedule
6. \*Test Cases
7. \*Test Data
8. \*Test Execution
   1. Test Environment Setup
   2. Test Execution Process
9. Defect Reporting
10. Risk Assessment
11. Resource Allocation
12. Test Deliverables
13. Approval

Task Wise Solutions:

1. **Introduction**

**1.1. Project Overview**

ABC Jobs Pte Ltd has approached you as a website developer to develop a community portal for software developers. The scope of the project is to design, develop, implement, and document a data-driven website using the Spring Boot and React frameworks. The portal will be similar to Linkedin.com and will allow users to register, search for other users, view public profiles, log in, retrieve forgotten passwords, and update their profile information. **1.2. Objectives**

The objective of this testing plan is to ensure that the Community Portal meets the requirements specified by ABC Jobs Pte Ltd and functions as intended. This includes verifying that all functionalities for both software programmers and administrators are working correctly.

1. **Test Scope**

The scope of testing for the Community Portal includes the following functionalities and features:

* User registration, including confirmation email and thank you page.
* User search, including search by first name, last name, company name, city, and country.
* Public profile viewing
* User login and password retrieval
* Profile management, including updating profile information.
* Administrator functions, including user data administration and bulk email invitations.

1. **Test Strategy**

The overall approach and strategy for testing the Community Portal will include a combination of manual and automated testing methods. Manual testing will be conducted by a team of testers to verify that the website meets the specified requirements and functions as intended. Automated testing will be used to conduct regression tests to ensure the new changes do not break existing functionality.

1. **Test Environment**

**4.1. Hardware**

The hardware required for testing the Community Portal includes a server for hosting the website and test environment, as well as computers for the testers to access the website. The planned server test environment will be an Intel Core i7-8700K system with 48GB of RAM and a 512GB NVMe SSD. It isn’t truly necessary to have an environment as powerful as this, but this server has been tested and used to handle big server deployments and has proven great experience and reliability in those departments.

**4.2. Software**

The software required for testing the Community Portal includes the Spring Boot, React Frameworks and MySQL that are defined in the project documentation. The planned test environment for the project will be on a Hyper-V Virtual Machine or a Docker Container.

**4.3. Testing Tools**

The testing tools required for testing the Community Portal include a test management tool for tracking test cases and results, as well as automated testing tools for conducting regression tests. The planned testing tools to be used for the project include Google Chrome’s Lighthouse for performance testing, Java’s Junit testing for performing unit tests and React’s Developer Tools for debugging.

1. **Defect Reporting**

Defect reporting is an important part of the software development process. It involves identifying, documenting, and tracking any issues or bugs that are found during the testing phase of the project. For the community portal project, a defect reporting system will be put in place to ensure that all defects are properly documented and tracked. This system will include a standardized defect reporting form that will be used by all team members to report any issues they encounter. The form will include fields for the defect description, steps to reproduce, severity, priority, and status. All reported defects will be reviewed by the project manager and assigned to the appropriate team member for resolution.

1. **Risk Assessment**

Risk assessment is the process of identifying potential risks that could impact the success of the project and developing strategies to mitigate those risks. For the community portal project, a risk assessment will be conducted at the beginning of the project and updated regularly throughout the project lifecycle. Some potential risks that will be considered include delays in project delivery, technical issues with the chosen technologies, and changes in project requirements. Strategies to mitigate these risks may include developing contingency plans, allocating additional resources, and closely monitoring project progress.

1. **Resource Allocation**

Resource allocation involves assigning resources such as personnel, equipment, and budget to specific tasks or activities within the project. For the community portal project, resource allocation will be carefully planned and managed to ensure that all tasks are completed on time and within budget. The project manager will work closely with team members to determine their availability and skill sets and assign tasks accordingly. Regular meetings will be held to review progress and adjust resource allocation as needed.

1. **Test Deliverables**

Test deliverables are the outputs produced during the testing phase of the project. These may include test plans, test cases, test scripts, and test results. For the community portal project, test deliverables will be carefully planned and documented to ensure that all aspects of the system are thoroughly tested. The test plan will outline the testing approach, objectives, and schedule. Test cases will be developed to cover all functional requirements of the system, and test scripts will be written to automate testing where possible. Test results will be documented and reviewed by the project team to identify any defects or issues.

1. **Approval**

Approval is the process of obtaining formal sign-off from stakeholders on key project deliverables or decisions. For the community portal project, approval will be sought at various stages of the project lifecycle, including at the end of each major phase such as design, development, and testing. The approval process will involve presenting deliverables or decisions to stakeholders for review and feedback. Any feedback or concerns raised by stakeholders will be addressed before final approval is granted.