TINF21C, SWE I Praxisprojekt 2022

System Test Plan (STP)

Project: **AAS-Management**

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Version	Date	Author	Comment
0.1	24.04.2023	Mohaddeseh Tibashi, Selvana Ayunda	Created and add executing plann
0.2	25.04.2023	Selvana Ayunda	Added Testschedule

1. Introduction

1.1 Purpose

The AAS Management test plan outlines the strategies, approaches, and methodologies that the QA team will use to verify that the application meets the established requirements of the SRS. It includes testing activities such as unit testing, integration testing, system testing, user acceptance testing, and regression testing, as well as defining the testing environment, tools, resources, and timelines. The test criteria and test cases are based on the SRS requirements to ensure that the application meets the functional and non-functional requirements. The test plan is critical in guiding the testing efforts of the QA team to identify any defects or errors in the application and ensure that it is ready for release.

1.2 Objectives

Application

- meets the System Requirement Specification and System Architecture Specification,
- satisfies the business purpose
- satisfies the testing thresholds laid out in this document

1.3 Abbviation

T: Test

TC: Test Case

QA: Quality Assurance

SRS:System Test Report

2. Funnctional Scope

The testing scope for AAS Management is determined by the functions specified in the System Requirement Specification. This document serves as a guideline for the QA team to ensure that all the required functions are tested thoroughly. The results of the testing activities are documented in the System Test Report, which provides a comprehensive summary of the testing efforts and results. The report serves as a valuable resource for stakeholders to evaluate the quality of the application and determine its readiness for release.

3. **Features**

Req-ID	Functionality	Priority	T ID
<AASM-UC.01>	Allow user to login	A	T001
<AASM-UC.02>	Allow user to logout	A	T002
<AASM-UC.03>	Allow user to edit their profile	B	T003
<AASM-UC.04>	Allow user „Admin “ to add or delete the content	A	T004
<AASM-UC.05>	Allow user “Admin “ to add or delete user and choose the role on admin Dashboard	A	T005
<AASM-UC.06>	Allow user to get notification if Asset dosn’t exist	A	T006
<AASM-UC.07>	Allow user to choose Asset and look at the deteils	A	T007

4. Overall Strategy and Approach

4.1 Testing Strategy

The testing strategy for the AAS Management application involves a comprehensive approach that includes manual and automated testing techniques. The testing will begin with unit testing, followed by integration testing, system testing, user acceptance testing, and regression testing. The testing team will work closely with the development team to ensure that any defects or errors are identified and fixed promptly. The testing will be conducted in a controlled environment that mimics the production environment, and the goal is to ensure that the application meets all the established requirements, is free from defects and errors, and is ready for release to end-users.

4.2 System Testing Entrance Criteria

The System Testing Entrance Criteria for AAS Management consists of a set of prerequisites that need to be fulfilled before the start of the system testing phase. These criteria include the completion of unit and integration testing activities, the availability of a stable build of the application that includes all the required features and functionality, and the approval of the test plan and test cases by relevant stakeholders. Additionally,

any necessary test environment setup and configuration must be completed, all required testing resources must be available, and all defect fixes from previous testing phases must be verified. Meeting these criteria is essential to ensure that the system testing phase can proceed effectively and efficiently and helps to avoid delays and additional costs in the testing process.

4.3 Test Preparation

Test preparation for the AAS Management application involves several steps to ensure that the testing process is effective, efficient, and comprehensive. These steps include:

1. Reviewing the System Requirement Specification to identify the scope of testing and requirements that need to be tested.
2. Developing a test plan that includes testing objectives, approach, scope, schedule, and resource requirements.
3. Identifying and prioritizing test cases based on their relevance, complexity, and impact on the system.
4. Preparing test data and test environment to simulate real-world scenarios and ensure accurate and thorough testing.
5. Identifying and acquiring necessary testing tools and resources to support the testing process, including automation tools, defect tracking tools, and testing environments.
6. Ensuring that the testing team has the necessary skills, expertise, and training to carry out the testing activities effectively.
7. Defining and establishing testing metrics to measure the effectiveness and efficiency of the testing process.
8. Ensuring that all stakeholders are aware of the testing process, its objectives, and expected outcomes.

By following these steps, the testing team can prepare thoroughly for the testing activities and ensure that the application is thoroughly tested, meets all the requirements, and is ready for release.

4.4 Testing Types

4.4.1 Usabily Testing

Usability testing is an important aspect of testing for the AAS Management application that focuses on the ease of use and user-friendliness of the application. It involves defining the objectives and goals of the usability testing, identifying representative end-

users, developing usability testing scenarios, determining the methodology to be used, conducting usability testing sessions, analyzing the results, implementing necessary changes, and repeating the process to validate the effectiveness of the changes made. By conducting usability testing, the testing team can ensure that the application provides an excellent user experience, meets the needs of its end-users, and is user-friendly.

4.4.2 Functional Testing

Functional testing is a crucial aspect of testing for the AAS Management application as it ensures that the application's functions are working as intended and meet the specified functional requirements. The testing process involves identifying the functional requirements that need to be tested, developing test cases that cover these requirements, executing the test cases, documenting any issues or defects found, validating defect fixes, and repeating the process until all functional requirements have been tested and validated. By conducting thorough functional testing, the testing team can ensure that the AAS Management application is functioning correctly, meets all the specified requirements, and is ready for release.

4.5 Suspension Criteria and Resumption Requirements

Defining Suspension Criteria and Resumption Requirements can improve the efficiency, effectiveness, and organization of the testing process, resulting in higher-quality testing and more reliable testing results.

4.5.1 Suspension Criteria:

- Unresolved critical defects that may cause further defects.
- Unavailability of necessary testing resources such as hardware, software, or personnel.
- Any environmental issues that may affect the accuracy of testing results, such as network or server downtime.

4.5.2 Resumption Requirement

- The resolution of all critical defects identified during the testing process.
- Availability of necessary testing resources.
- Confirmation that the environmental issues that caused the suspension have been resolved.
- Retesting previously failed test cases to ensure that they pass after the suspension.

4.6 Test Data

4.6.1 Test Data Types:

- User profiles
- Transactions
- System configuration
- Security permissions

4.6.2 Test Data Creation:

- User profiles will be created using realistic demographic information and academic history.
- Transactions will be created manually by the testing team to ensure all scenarios are covered.
- System configurations will be set up according to the specified requirements in the System Requirement Specification.
- Security permissions will be set up for different user roles such as guest, advance, and administrators.

4.6.3 Test Data Management:

- All test data will be stored in a secure location with limited access to authorized personnel.
- The test data will be updated as needed to ensure that it remains relevant to the testing activities being performed.
- A tracking system will be used to keep track of all test data and ensure that it is being used correctly during testing.

5. Executing Plan

<AASM-UC.01>

Testcase ID	T001
TC Name	User login
Req-ID	UC01
Description	This test cases verifies that user can log in with correct Email and Password

Step	Action	Expected result
1	Open Frontend	Page loaded

2	Click on log in button	You see the pop-up window
3	Enter valid e-mail address and password.	You can type in text fields
4	Click on the "Login" button.	you see home page you're your email address and logout Butten on top

<AASM-UC.02>

Testcase ID	T002
TC Name	User logout
Req-ID	UC02
Precondition	User is already logged in
Description	This test cases verifies that user can log out successfully

Step	Action	Expected result
1	Click on log out button	Home paged reloaded automatically and you see log in Butten on top

<AASM-UC.03>

Testcase ID	T003
TC Name	Change Email and Password
Req-ID	UC03
Precondition	The user is already logged in, has the current password of the account and the database system is running.
Description	The user wants to use the self-services for e-mail and password change to modify these components of the account.

Step	Action	Expected result
1	Click on Setting	Setting page opened
2	Click on profile	You see your information, but they are inactive
3	Click on edit	You can edit your information

4	Click on save	Your information is saved and text fields are inactive and you see edit button again.

<AASM-UC.04>

Testcase ID	T004
TC Name	Administrate AAS content
Req-ID	UC04
Precondition	User is already as admin logged in on Admin Dashboard
Description	This test cases verifies that admin can add or delete the AAS Content successfully

Step	Action	Expected result
1	Click edit button	You cann see all asset
2	Click add button	You can add asset
3	Click delete button	You can delete asset
4	Click save to save changes	The asset will be uptodate

<AASM-UC.05>

Testcase ID	T005
TC Name	Administrate Accounts
Req-ID	UC05
Precondition	User is already logged in as admin on admin dashboard
Description	This test cases verifies that user can create or delete user successfully

Step	Action	Expected result
1	Click Create Account	You are on Create new account dashboard
2	Enter username, password and choose role	New account is created
3	Click delete icon	You see Pop-Up for confirmation
4	Click delete	The user will be deleted
5	Click close	Confirmation windows will be closed

<AASM-UC.06>

Testcase ID	T006
TC Name	Find asset
Req-ID	UC06
Precondition	Page is allready loaded
Description	This test cases verifies that user can get notification if asset doesn't exist successfully

Step	Action	Expected result
1	Enter asset name in search-field	You see asset while typing
2	Completed enter asset name	You see nothing as result

<AASM-UC.07>

Testcase ID	T007
TC Name	Display asset
Req-ID	UC07
Precondition	Page is allready loaded
Description	This test cases verifies that user can click on asset and get details asset successfully

Step	Action	Expected result
1	Click on asset	On right side, you cann see deteils asset

6. Defect Reporting

6.1 Defect Tracking

GitHub Issues will be to keep trackinng of any of failed tests.

6.2 Defect Reporting and Reports

Defects will be reported by the System Test Manager to the Front End Development Team and Back End Development Team directly via arbitrary communication channel.

6.3 Defect Management Prozess

Defects discovered by testing will be fixed by the respective development team, status reports are delivered in the regularly scheduled meetings.

6.4 Defect severity definitions

used to categorize the severity of defects discovered during testing. In the context of the AAS Management application, defects are classified into three categories: critical, medium, and low.

Critical defects are those that cause catastrophic or severe errors, resulting in major problems and rendering the functionality unavailable to the user. Examples of critical defects include system abends, data corruption, and the inability to post data to the database. Remedying a critical defect may require a high level of effort or the implementation of a complex manual procedure.

Medium defects, on the other hand, do not significantly impair system functionality and can be categorized as medium severity. Examples of medium defects include incorrect form navigation and inconsistent field labels with global terminology. Remedying a medium defect may require a medium level of effort or the implementation of a less complex manual procedure.

Low defects are those that have little to no impact on system functionality and are considered cosmetic. Examples of low defects include repositioning fields on screens and incorrect text font on reports. Remedying a low defect may require a low level of effort or the implementation of a straightforward manual procedure.

By using these severity definitions, the testing team can prioritize defect remediation and ensure that critical defects are addressed first to prevent major problems and ensure the application's functionality is available to the user.

7. Environment

The testing approach for the AAS Management application involves cloning the most recent version of the code from the git repository and running it in a suitable program environment. Front-end testing will be conducted by loading the application in various browsers and testing its functionality with various inputs. The results of the testing will be documented in the System Test Report.

8. Test Schedule and Budget

The AAS Management system testing is scheduled for one week, from May 8, 2023 to May 12, 2023. The System Test Manager will conduct all tests during the first week, while retesting of defects will occur on the last day of system testing. The dates for defect retesting may be modified as necessary to ensure that all defects are retested and closed. While it is ideal to close all defects, it is not necessary as long as the defects are not critical. The primary objective is to minimize the number of open defects.