REVISION HISTORY

Date	Version	Description	Author
18/03/24	1.0	Document Overview and References	Teymur Mammadov
18/03/24	1.0	System overview	Ilkin Tomuev
18/03/24	1.1	Hardware and Software Preparations	Jeyhun Javadov
18/03/24	1.1	Other Preparations and Precautions	Rashad Musayev
19/03/24	2.0	Test Cases	Rashad Musayev Ilkin Tomuev Jeyhun Javadov Teymur Mammadov

TABLE OF CONTENTS

1   Introduction

1.1   Document Overview

This document is the software test plan of the AMS-software development project. It contains the description of tests.

1.2   References

#	Document Identifier	Document Title
[SRS]	AMS-SRS-1	AMS Software Requirements Specifications

1.3   Conventions

Each test case will be presented in a table format as shown below:

Test ID	<ID of the test>	
Test description	<A brief description of the test>	
Verified Requirement	<ID numbers of requirements that are to be verified with this test.>	Verification method: <I,A,D,T>
Initial conditions	<The state of software before test>	
Tests inputs	<Input data from any test tool, input files name and location, if any >	
Data collection actions	<Recording and post processing of output data, if any >	
Tests outputs	<Output data files, if any>	
Assumptions and constraints	If any, may be limited access to a tool, license …	
Expected results and criteria	<list of expected results>	<special criteria to be met by the result, if any>
Test procedure		
Step number	**Operator actions**	**Expected result and evaluation criteria**
1	<actions listed row by row>	<expectation after each action if any>
2	…	…

2   Tests preparations

This section contains tasks and recommendations before executing tests.

2.1   Hardware preparation

PC should be running.

The workstation should be able to connect to the Internet.

MySQL connector should be added to the IDE as a dependency

SQL server should be up and running.

SQL workbench should be installed and connected.

2.2   Software preparation

The Internet should be connected, SQL servers should be running and connected to the web application. To test the relationship with the database any database tool would be fine

2.3   Other test preparation

Make sure that the workstation is connected to the internet.

2.4   Safety, security, and privacy precautions

Warning: Arranged flights should not be tampered with, as it may cause overfill in the designated airport hangars.

Warning: Preregistered passengers should not be deleted, or new passengers added without supervision to the server as it may cause inefficient distribution of passengers.

Warning: Preregistered passenger types should not be modified without supervision or confirmation of change as it may cause dissatisfaction among customers.

3. Tests descriptions

Test ID	SRS_AMS-TC-001.1	
Test description	Verify that a new passenger can be successfully added/updated in the system.	
Verified Requirement	SRS-AMS-001	T (Test)
Initial conditions	The user is logged into the system and has access to the passenger management functionality.	
Tests inputs	Name: John Passenger Surname: Smith Passenger Luggage count: 2 Year of birth: 1990 Passenger type: Economy	
Data collection actions	N/A	
Tests outputs	Passenger John has been added/updated in the passenger list	
Assumptions and constraints	User has the necessary permissions to add/update a new passenger to the system.	
Expected results and criteria	The passenger John Smith is added/updated in the system	
Test procedure		
Step number	**Operator actions**	**Expected result and evaluation criteria**
1	User opens Passenger Management System page	Page is opened and shows passenger list and management tools
2	User fills the graphs: Name, Surname, Passenger type, Luggage count, Year of Birth	All the graphs are filled
3	User clicks Add/Update User	User successfully added to the list

Test ID	**SRS-AMS-TC-001.2**	
Test description	Verify that a passengers can be successfully removed in the system.	
Verified Requirement	SRS-AMS-001	T (Test)
Initial conditions	The user is logged into the system and has access to the passenger management functionality.	
Tests inputs	N/A	
Data collection actions	N/A	
Tests outputs	Passenger Jhon has been removed from the passenger list	
Assumptions and constraints	User has the necessary permissions to remove a passenger from the system.	
Expected results and criteria	The passenger John Smith is removed in the system	Passenger Jhon Smith should be removed from the database
Test procedure		
Step number	**Operator actions**	**Expected result and evaluation criteria**
1	User opens Passenger Management System page	Page is opened and shows passenger list and management tools
2	User fills the graphs: Name, Surname, Passenger type, Luggage count, Year of Birth	All the graphs are filled

Verification Methods:

• Inspection (I): control or visual verification

- o Control of the physical implementation or the installation of a component. The control verifies that the implementation or the installation of a component is compliant with the requirements of diagrams.
  - o Control of the documentation describing a component. The control verifies that the documentation is compliant with the requirements.
- Analysis (A): verification based upon analytical evidences
  - o Verification of a functionality, performance or technical solution of a component by analyzing the data collected by tests in real conditions, by simulation of real conditions or by a analysis report.
  - o Analysis of test data or of design data is used as appropriate to verify requirements.
  - o The verification is based upon analytical evidences obtained by calculations, like modeling, simulation and forecasting.
  - o Analysis is used when an acceptable level of confidence cannot be established by other methods or if analysis is the most cost-effective solution.
- Demonstration (D): verification of operational characteristics, without quantitative measurement
  - o Verifying a requirement by demonstration implies that the required functionality specified by a requirement is complete.
  - o Demonstration is used when quantitative measurement is not required for verification of the requirements
  - o Demonstration includes the control of the technical solutions specified by the non-functional requirements.
- Test (T): verification of quantitative characteristics with quantitative measurement
  - o Verifying a functionality, performance or technical solution of a component by executing testing scenarios in predefined, controlled and traceable testing conditions.
  - o Tests require the use of special equipment, instrumentation, simulation techniques, or the application of established principles and procedures,
  - o Data produced during tests is used to evaluate quantitative results and compare them with requirements.

Examples of tests methods:

Inspection:
- Verify that the color of background is blue,
- Verify that the user manual has the CE mark on its cover
- Verify that the PC has 4Gb memory
- Verify that firmware version on electronic card is 1.0.1

Demonstration
- Verify that when the user closes the window, a confirmation message appears
- Verify that the file is saved in the output directory
- Verify that the result is shown
- Verify that if a value is out of range, a warning is displayed

Analysis:
- Verify that the statistical distribution of results of xxx algorithm is a Gaussian with mean=x and stdev=y, when input data are blah blah
- Verify that the linear regression of results of xxx algorithm is a line for which value is 1 on the y-axis, at zero on the x-axis,

Test:
- Verify that a file of 1Gb is processed in less than 3s
- Verify that the response time of the server is 15ms with 20 simultaneous requests

Test ID	SRS-AMS-TC-002.1	
Test desc.	AMS shall enable users to add the plane details:	
Verif. Req.	SRS-REQ-002.1,	Test
Init. Cond.	The user is logged into the AMS system and has access to the plane management functionality.	
Tests inputs	TK337 , 70	
Data collection	Name Capacity	
Tests outputs	N/A	
Assum & constr	Input formats	
Expected results and criteria	Collected data is expected to be in the SQL server.	TK333 plane should be created with capacity of 70
Test procedure		
Step number	Operator actions	Expected result and eval crit
1	Plane name should be inputted in the designated field.	inputs should be checked for correct format, if format not met user should be notified
2	Capacity should be inputted in the designated field.	inputs should be checked for correct format, if format not met user should be notified

Demonstration

Test ID	SRS-AMS-TC-002.2	
Test desc.	AMS shall enable users to remove the plane details:	
Verif. Req.	SRS-REQ-002.2	Test
Init. Cond.	The user is logged into the AMS system and has access to the plane management functionality.	
Tests inputs	N/A	
Data collection	N/A	
Tests outputs	Selected plane details should be deleted	
Assum & constr	N/A	
Expected results and criteria	Chosen plane details should be deleted from the database	
Test procedure		

Step number	Operator actions	Expected result and eval crit
1	Open the list of registered planes	The list of planes is displayed
2	Select plane	The plane details are displayed
3	Press delete button	The delete function is selected. The selected plane is deleted from DB.

Test ID	SRS-AMS-TC-003.1	
Test desc.	AMS shall enable users to add the flight details	
Verif. Req.	**SRS-AMS-003.1**	Test
Init. Cond.	The user is logged into the AMS system and has access to the flight management functionality	
Tests inputs	SAW,GYD,29/08/2024,29/08/2024	
Data collection	Inputed data should be added to the Database	
Tests outputs	N/A	
Assum & constr	Input Formats	
Expected results and criteria	Inputed flight details should be of correct format	
Test procedure		
Step number	**Operator actions**	**Expected result and eval crit**
1	Open the list of flight management	The list of flights should be displayed.
2	Insert data in appropriate sections	Registration window should be displayed.
3	Press the register button	After the press registration functionality should add the flight details to Database

Test

Test ID	SRS-AMS-TC-003.2	
Test desc.	AMS shall enable users to remove flights.	
Verif. Req.	**SRS-AMS-003.2**	Test

Init. Cond.	Flights should be preregistered.User should be logged into AMS.	
Tests inputs	N/A	
Data collection	N/A	
Tests outputs	Selected flights should be removed from the database	
Assum & constr	Flights for removal should be selected from the displayed list	
Expected results and criteria	Selected flight should be removed from the database and not be displayed in the list	
Test procedure		
Step number	**Operator actions**	**Expected result and eval crit**
1	Access the flight management system	AMS system should display the list of registered planes
2	Select the flight to be deleted	Selected flight should be highlighted
3	Press delete button	Selected flight should be removed from the database.

Test

Test ID	**SRS-AMS-TC-004.1**	
Test desc.	AMS shall enable users to buy and cancel tickets from selected flights.	
Verif. Req.	**SRS-AMS-004.1**	Test
Init. Cond.	User should be logged into AMS.	
Tests inputs	N/A	
Data collection	N/A	
Tests outputs	N/A	
Assum & constr	Only selected Tickets can be removed. Only correct format , and registered passenger, flights can be imputed into tickets	
Expected results and criteria	Tickets , should be added or deleted	
Test procedure		
Step number	**Operator actions**	**Expected result and eval crit**
1	Add ticket information from the preregistered list	
2	Press the buy or cancel button	Ticket should be added to/remove the database.

Test

Test ID	SRS-AMS-TC-004.2	
Test desc.	Users can buy tickets for only existing passengers which are shown in the list of Passenger Management System	
Verif. Req.	**SRS-AMS-004.2**	Test
Init. Cond.	The user should be logged into AMS.	
Tests inputs	N/A	
Data collection	N/A	
Tests outputs	N/A	
Assum & constr	Users cannot buy tickets for non-existent passenger	
Expected results and criteria	Error dialog should be shown	
Test procedure		
Step number	**Operator actions**	**Expected result and eval crit**
1	Insert the ID of a non-existent passenger, which can be identified from the Passenger list in the Passenger Management System	
2	Press the buy button	Error dialog should be popped up

Test ID	SRS-AMS-TC-004.3	
Test desc.	Users can buy tickets for passengers only if their passenger type(business, economy, and family) matches the wanted seat type (VIP for business, economy class for economy passengers, and Family class for Family passenger types)	
Verif. Req.	**SRS-AMS-004.3**	Test
Init. Cond.	The user should be logged into AMS.	
Tests inputs	N/A	
Data collection	N/A	

Tests outputs	N/A	
Assum & constr	Users cannot buy tickets for passengers whose Passenger type does not match the seat type	
Expected results and criteria	Error dialog should be shown	
Test procedure		
Step number	**Operator actions**	**Expected result and eval crit**
1	Insert the ID of any passenger and select any seat whose seat type does not match the Passenger Type of the selected passenger	
2	Press the buy button	Error dialog should be shown