Software Requirements Specification

for

Airline Management System

Version 1.0

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Revision History

Name	Date	Reason For Changes	Version

1.Introduction

1.1. Purpose

Purpose of this document is to a detailed description of the requirements for Airline Management System . It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system .

1.2. Document Conventions

The Airline Management System is abbreviated as A.M.S. The title is written in Times , **BOLD ,**14pt and 18pt , whereas the Document is written in Arial , 11pt .

1.3. Intended Audience

This SRS document is intended for Managers ,Developers ,users and testers .

1.4. Product Scope

Airline Management System is a dedicated and highly configurable system for all airlines, which can be easily accessed by all users.This system can be accessible by any user from any location at any time. In such a system, a passenger should be able to view the availability of flights' details, as per their requirement. They can book the flights online and can also cancel the reservation. The administrator manages the passenger booking system and updates the reservation status.
Also ,
(a). A.M.S. helps the users to book flights without visiting offline booking counters and is accessible by the user from any location at any time .
(b). In addition to cancelling the reservation , users can also check there reservation status , whether it is confirmed or not .

1.5. References

IEEE. IEEE Std 830-1998 .
IEEE Recommended Practice for Software Requirements Specifications.
IEEE Computer Society, 1998.

2. Product Description

2.1. Introduction

This application will be a replacement to all those application which provide only to view the flights and not allow reserving a seat . This application saves you from the ordeal of visiting the offline

booking counters for reserving a seat in a flight . It lets user view flights according to their convenience and lets them make reservation based on that . Users can also check their reservation status after making there reservation and also cancel their ticket if they want to. once confirmed the ticket will be emailed to the user.

2.2. Input

*(a). **Passenger Information** : Name, Email id, Password, Passport No, Passenger ID, Flight No, Source, Destination, Date, Time.*
*(b). **Administrator Information** : Admin_ID, Name, Email id, Contact no, Password .*
*(c). **Flight Information** : Type of Flight, Flight No, Source, Destination, In between stations, Date, Time, Type of class, Meal, Amount (information same for both Intl. and Domestic flights).*

2.3. Product Functions

(a). For Passengers :
- *> Edit Profile*
- *> Request to view the available flights as per requirement*
- *> Request for reservation*
- *> Ticket cancellation*
- *> Ticket Status*

(b). For administrator :
- *> Edit Profile*
- *> Manage passengers*
- *> Update the passenger's status*

2.4. Design and Implementation Constraints

The following constraints must be followed while designing the system :
(a). All the passengers must register themselves into the system.
(b). Login information contains only passenger id and password.
(c). To view the available flight details, passenger has to give source, destination, and date and time.
(d). After confirmation of reservation request, passenger can see the status.

2.5. Output

The following objects are to be displayed :
(a). Display the available flights as per the user's requirement.
(b). Display the confirmation of reservation (Display record/Error message).
(c). Print the ticket.

2.6. Operating environment

The following project need a JAVA SE and hence can run on any operating system satisfying the above requirements like Linux, Windows, MacOS.

3. Functional Requirements

3.1. Passenger

Passenger user class have various different functions mentioned below.

3.1.1. Register

Description : Passenger signup function helps a new user to register in the a.m.s portal by giving the required details .
State : User has Entered for the first time.
Input : User enter all the details as mentioned in 2.2(a).
Processing : User data gets updated in the database.

3.1.2. Login

Input : User enters the login Id and Password .
Output : If the password entered is correct then menu will be be displayed else he will be asked to enter the credentials once again.
Processing : Password validation from the database .

3.1.3. View Flight

Description : View Flight will allow Passengers to view flights for a One way trip as well as a round trip .
State : the user is logged in and wants to view the flights
Input : User inputs the source, destination , date and time if only viewing for oneway trip else enters data twice for the roundtrip flights.
Output : All the flights satisfying the criteria entered by the user.

3.1.4. Request for reservation

Description : Requesting for ticket has a Payment Gateway that is also integrated for allowing users to make payment for the ticket .
State : the user is logged in and has viewed the available flights in accordance to the conditions entered by the user
Input : User inputs the flight name and other Passenger data if he/she wants to make a reservation also if he/she want to book a round trip ticket , the Passenger has to then enter the data twice , for both the trips .
Output : System redirects the user to main menu after making the reservation request .
Processing : Sending the reservation request to the administrator .

3.1.5. Ticket Status

State : The user has already made a reservation request earlier and now wants to view the status of the ticket .
Input : User enters the ticketId for seeing the status of the ticket booked by him/her.
Output : Yes/No depending upon whether the ticket is confirmed or not and also user can print the ticket if the ticket is confirmed .

3.1.6. Ticket Cancellation

State : The user has selected ticket cancellation from the menu and already has made a reservation request.
Input : User enters the TicketId of the ticket to be cancelled .
Output : System redirects the user to main menu .

3.2. Administrator

if the administrator comes in , the Manage Passengers function help the administrator to manage the reservations and view and update passenger reservation status . Administrator also updates/ add the flight information in the flight information database.

3.2.1. Register

State : Administrator has entered for the first time .
Input : Enter all the details according to 2.2(b) and asked by the system .
Processing : The administrator data gets updated in the database .

3.2.2. Login

Input : Admin Enters the admin Id and Password.
Output : If the password entered is correct then menu will be be displayed else he will be asked to enter the credentials once again.
Processing : Password validation from database.

3.2.3. Update Passenger Status

State : The admin is logged in and reservation request list has been displayed already .
Input : the admin enters the TicketId for confirming that particular ticket .
Processing : TicketId verification and then confirmation of the ticket .

3.2.4 Update Flight Information

State : The admin is logged in and has selected to update the flight information from the menu.
Input : all the flight details as mentioned in 2.2 (c) .
Processing : the flight information gets updated in the database.

3.3. Edit User Profile

The user can also edit their profile using the edit profile function .
State : The User is logged in and has selected edit profile from the menu .
Input : new phone number , new Password and new email-id.

3.4 Edit Passenger Profile

The Administrator can also edit their profile using the edit profile function .
State : The Admin is logged in and has selected edit profile from the menu .
Input : new phone number , new Password and new email-id.

4.External Interface Requirements

Following Interface requirements other than the design and functional requirements should also be fulfilled .

4.1. User Interfaces

4.1.1. Passenger Interfaces

>The first screen will ask the user to enter as either administrator or passenger , then it will be followed by the Register/Login page , then if it is a new registration a register page will be opened .
>if Login is successful as a Passenger then a main menu page will be opened and the options of view flight , Ticket Status/History , and Edit profile will come .
>then if he selects view flight , another page opens where he can view flight by entering the details, following it will be the reservation request page if the user wants to make a reservation .
>if the user selected ticket Status/History then a page where user can view his ticket history as well as cancel a ticket and also see his ticket status .
>Edit profile will take the user to a page where he can edit his profile by entering the details asked for.

4.1.2. Admin Interfaces

>The first screen will ask for Register/Login.
>if selected Register it will be redirected to a page where he can signUp by entering the details asked for and then he will be redirected to Login page after signing up successfully .
>if selected Login , then he will be asked login id and password , which if correct will redirect him to main menu page.
>main menu page will have manage passengers , edit flight info , edit profile ,exit .
>manage passengers will lead to a page where admins can confirm the reservation of the passengers or decline them.
>in edit flight info , admins enter the flight info for new flights and updates it in the database .
>edit profile helps admins to to edit their profile by entering the details asked for .

4.1.3. Display Standards

> Standard error messages will be displayed for wrong login credentials .
> each iteration will lead back to main menu for easy flow in the application for both the passengers and administrator .

4.2. Software Interface

Java SE developments kit is needed for developing the application
The system shall communicate with billPay system to identify available payment methods , validate the payments and process payment.

4.3. Hardware Interfaces

Since the application will use internet , all the hardware shall require to connect internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

5. Nonfunctional Requirements

5.1. Performance Requirements

The Performance may be affected by loading of the files for data . If files are very large in size they may need large RAM to load and run . Internet connectivity is required for sending of emails .

5.2. Availability

Available every time and at every location to all the users who have a system that can run java projects .

5.3. Security Requirements

The online payment will be done on a secured gateway. The system is provided with authentication and access rights. Under no circumstances, the user's personal information will be compromised by any other user or administrator .

5.4. Software Quality Attributes

5.4.1. Portability

The system is portable and can be run on the systems with JAVA 8 , But remember to also import the database files while porting to other systems.

5.4.2. Reliability

The system is quite reliable and the data will be kept secured for a long time without any compromise .

5.5. Maintainability

The maintainability requirement is minimal, though this application will be regularly updated to provide better service .