

Software Requirements Specification

—

Document ID: ASP-CMS-SRS-02.doc

Author(s): TN Team

Version: 0.2

Date: 25 March, 2023

1. Objective and Scope3

Confidential

1



Copyright notice: Copyright © 1996-2004 Aspire Systems. All rights reserved. The contents on this document are not to be reproduced or duplicated in any form or kind, either in part or full, without written consent from Aspire Systems.

2. Project End Users	3
3. Features	4
3.1 Login to the system	4
3.2 Add/Edit User	4
3.3 Permission	4
3.4 Edit Email Content	4
3.5 View Campaign Details	6
3.6 View Transaction Details	7
3.7 Reports	8

AIRLINE RESERVATION SYSTEM

Abstract

An airline reservation system is a computerized system that enables airlines to manage the booking process for their flights. It allows airlines to store and retrieve information related to the reservation of airline tickets, including flight schedules, seat availability, and fare information. The system can be accessed by travel agents, airlines, and passengers through a variety of channels, such as the internet, mobile apps, and call centers. This makes it convenient for customers to search for available flights, make reservations, and purchase tickets at any time and from any location.

One of the main advantages of an airline reservation system is that it automates and streamlines the booking process. It eliminates the need for manual processes, such as phone and paper-based bookings, which can be time-consuming and error-prone. Additionally, the system can provide real-time updates on flight schedules and seat availability, ensuring that customers always have access to the most up-to-date information. The system also allows airlines to manage their inventory more efficiently, making it easier to fill seats and optimize revenue. Furthermore, the system can also generate reports and analyze data, which helps airlines to better understand customer behavior and make informed decisions about their business operations.

Existing systems

There are several existing systems that airlines use for their reservation process. Some of the most widely used systems include:

1.Amadeus: A global distribution system (GDS) that provides access to a wide range of travel products and services, including flights, hotels, and rental cars. Amadeus is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

2.Sabre: Another global distribution system that offers similar functionality to Amadeus. Sabre is used by many airlines, travel agencies, and online travel booking sites to manage their reservations.

3.Galileo: A global distribution system owned by the Travelport company, Galileo provides access to a wide range of travel products and services. Galileo is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

4.Travelport: A travel commerce platform that provides access to a wide range of travel products and services, including flights, hotels, and rental cars. Travelport is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

5.Worldspan: A global distribution system that provides access to a wide range of travel products and services, including flights, hotels, and rental cars. Worldspan is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

6.Apollo: A global distribution system owned by the Sabre company, Apollo provides access to a wide range of travel products and services. Apollo is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

7.SITA: A global distribution system that provides access to a wide range of travel products and services, including flights, hotels, and rental cars. SITA is used by many airlines, travel agents, and other travel companies to manage their bookings and reservations.

8.Home-grown systems: Many airlines have their own in-house reservation systems that are specifically tailored to their specific business needs.

These are some of the most popular systems currently used by airlines and travel companies. Each system has its own unique features, and the choice of which system to use depends on the specific needs of the airline.

Proposed Systems

A proposed system for an airline reservation system could include the following features:

1.User-friendly interface: The system should have a simple and intuitive interface that is easy to navigate for both customers and airline staff. This could include a search function for flights, the ability to view seat availability, and the ability to make and manage reservations.

2.Real-time updates: The system should provide real-time updates on flight schedules, seat availability, and pricing. This ensures that customers have access to the most up-to-date information and can make informed decisions about their travel plans.

3.Mobile-responsive design: The system should be optimized for mobile devices, allowing customers to access the reservation system on-the-go and make bookings from their smartphones or tablets. This can include features such as mobile ticketing, real-time notifications and mobile payments.

4.Personalization: The system should allow customers to create and manage their own profile, including their booking history, preferences, and frequent flyer information. This can enable airlines to offer personalized offers and recommendations to their customers.

5.Integration with other systems: The system should be able to integrate with other systems such as payment gateways, loyalty programs, and baggage tracking systems. This can enable airlines to offer a seamless and integrated experience to customers across different touchpoints.

6.Advanced analytics: The system should provide airlines with advanced analytics and reporting capabilities. This can include data on customer behavior, revenue management and seat occupancy patterns, which can help airlines make data-driven decisions to optimize their business.

7.Security: The system should have robust security features to protect sensitive customer information and ensure compliance with data protection regulations.

8.Scalability: The system should be designed for scalability and be able to handle a large volume of transactions and data.

Functional Requirements

an airline reservation system would likely include the following functional requirements:

1. Flight search: The system should allow customers to search for flights based on various criteria such as departure and arrival locations, dates, and class of service.
2. Seat reservation: The system should allow customers to view seat availability and make reservations for specific seats.
3. Fare management: The system should allow airlines to manage fare classes, pricing, and inventory.
4. Payment processing: The system should integrate with payment gateways to process customer payments for reservations.
5. Ticketing: The system should generate electronic tickets and/or provide mobile ticketing options for customers.
6. Customer management: The system should allow airlines to manage customer information such as contact details, booking history, and frequent flyer information.
7. Reporting and analytics: The system should provide airlines with data analytics and reporting capabilities to track important metrics such as revenue, passenger volume, and booking patterns.
8. Inventory management: The system should allow airlines to manage and track their inventory, including the ability to overbook flights.

- 9.Scheduling: The system should allow airlines to manage flight schedules and make changes to flights as needed.
- 10.Integration with other systems: The system should be able to integrate with other systems such as baggage tracking, loyalty programs, and airport check-in systems.
- 11.Access Control: The system should have access control features to allow different levels of access to the system for different roles and responsibilities
- 12.Security: The system should have robust security features to protect sensitive customer information and ensure compliance with data protection regulations.

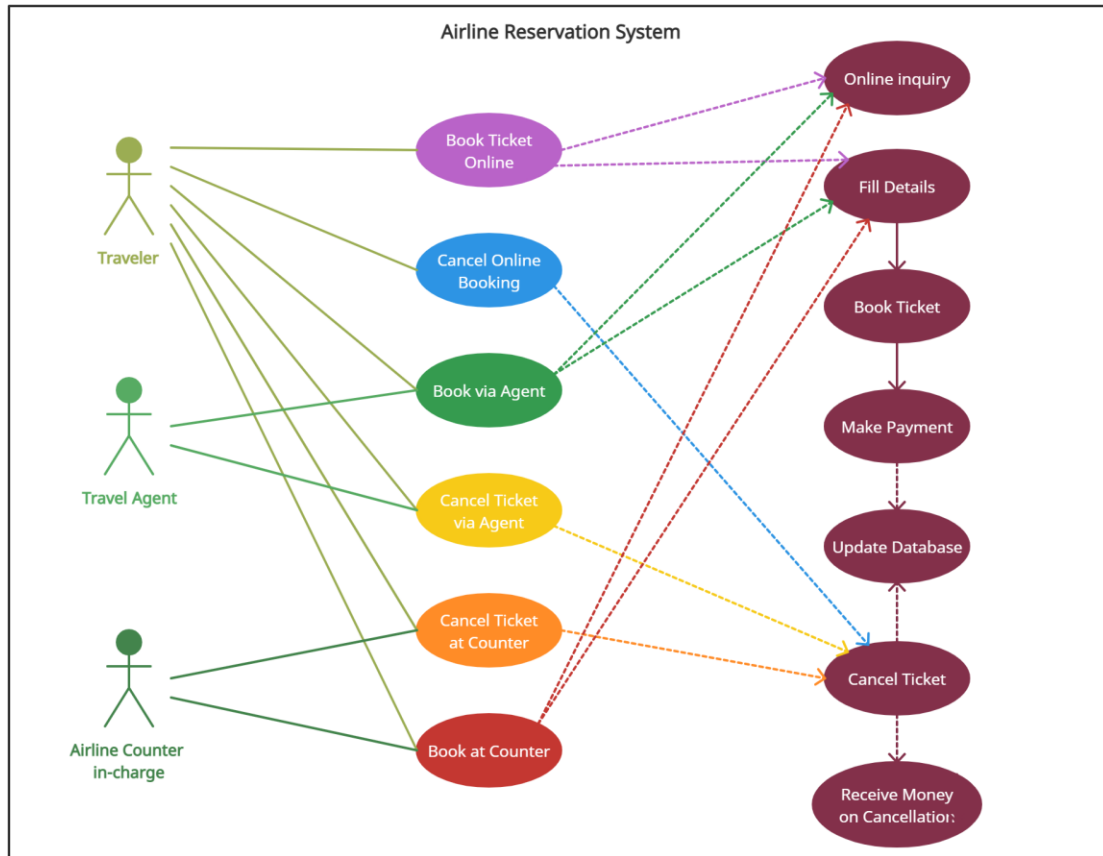
Non Functional Requirements

An airline reservation system would likely include the following non-functional requirements:

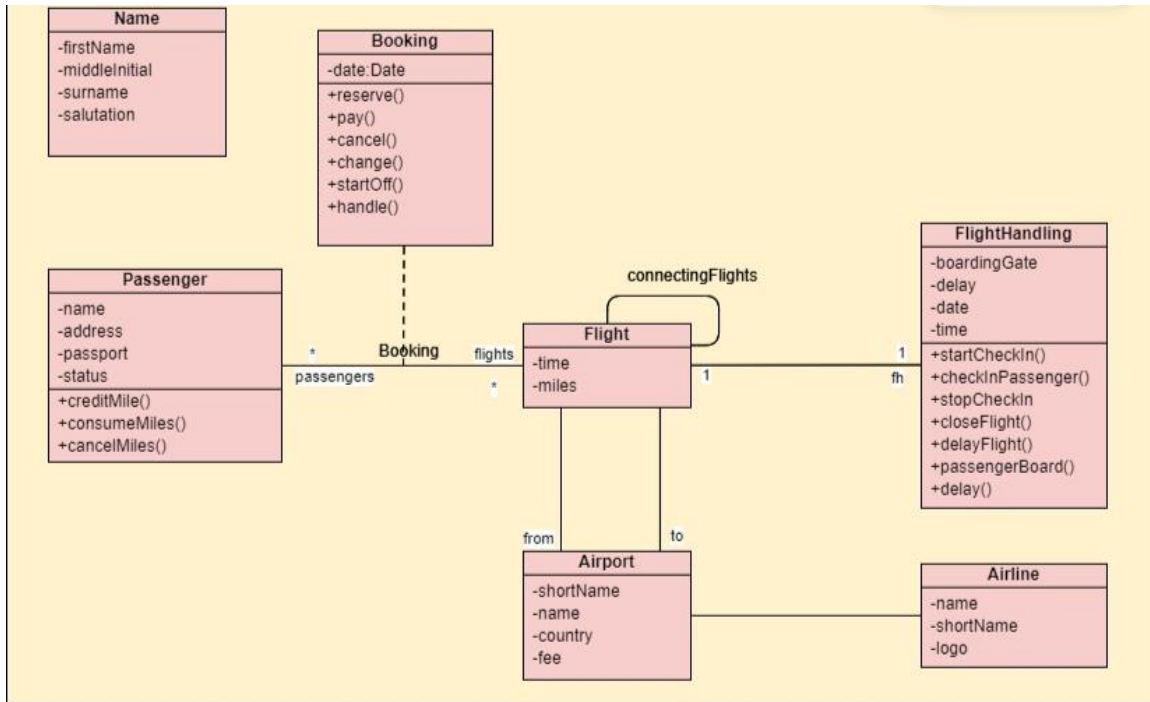
- 1.Performance: The system should be able to handle a high volume of transactions and perform quickly and efficiently to ensure a positive user experience.
- 2.Scalability: The system should be designed to scale up or down as the number of users and transactions increases or decreases.
- 3.Reliability: The system should be highly available and able to handle unexpected events such as power outages and network failures without losing data or becoming unavailable.

4. Usability: The system should be easy to use and navigate, with a user-friendly interface.
5. Accessibility: The system should be accessible to customers with disabilities and conform to relevant accessibility standards.
6. Security: The system should be secure and protect against unauthorized access, data breaches, and other security threats.
7. Compliance: The system should comply with relevant laws, regulations and industry standards related to data protection and privacy.
8. Interoperability: The system should be able to integrate with other systems and technologies, such as other airlines' systems, GDSs, and travel agents' systems.
9. Supportability: The system should be designed to be maintainable and supportable, with a clear and logical structure, easy-to-use monitoring, and troubleshooting tools.
10. Testability: The system should be testable and have automated test scripts and test cases, to ensure that the system functions correctly.
11. Internationalization/Localization: The system should be able to adapt to different languages and cultures, to support customers from different regions and countries.
12. Mobile-responsive design: The system should be optimized for mobile devices, allowing customers to access the reservation system on-the-go and make bookings from their smartphones or tablets.

Use Case Diagram

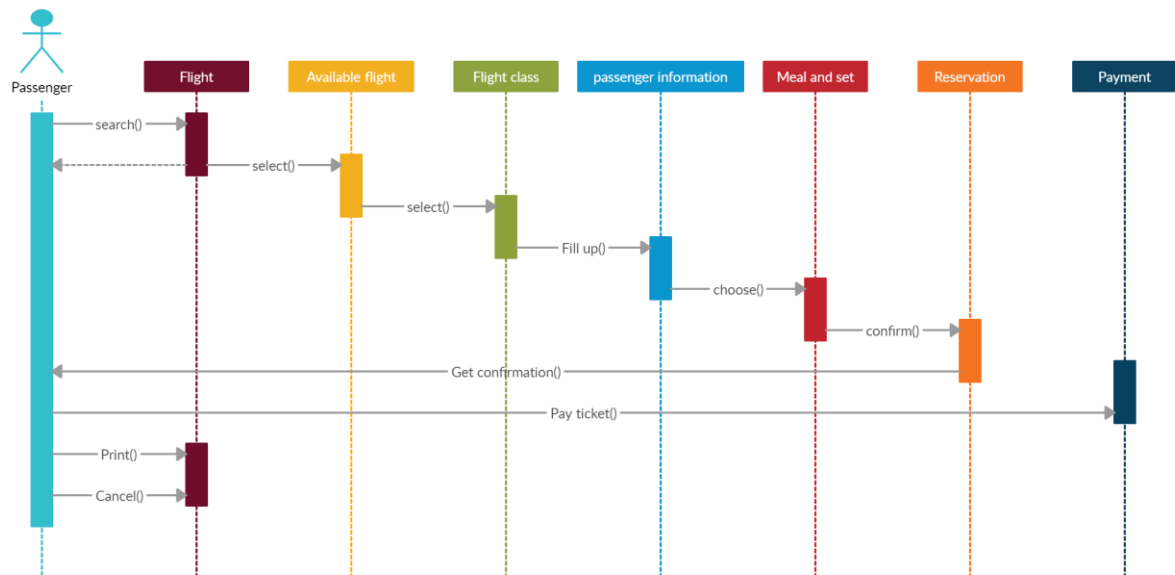


Class Diagram

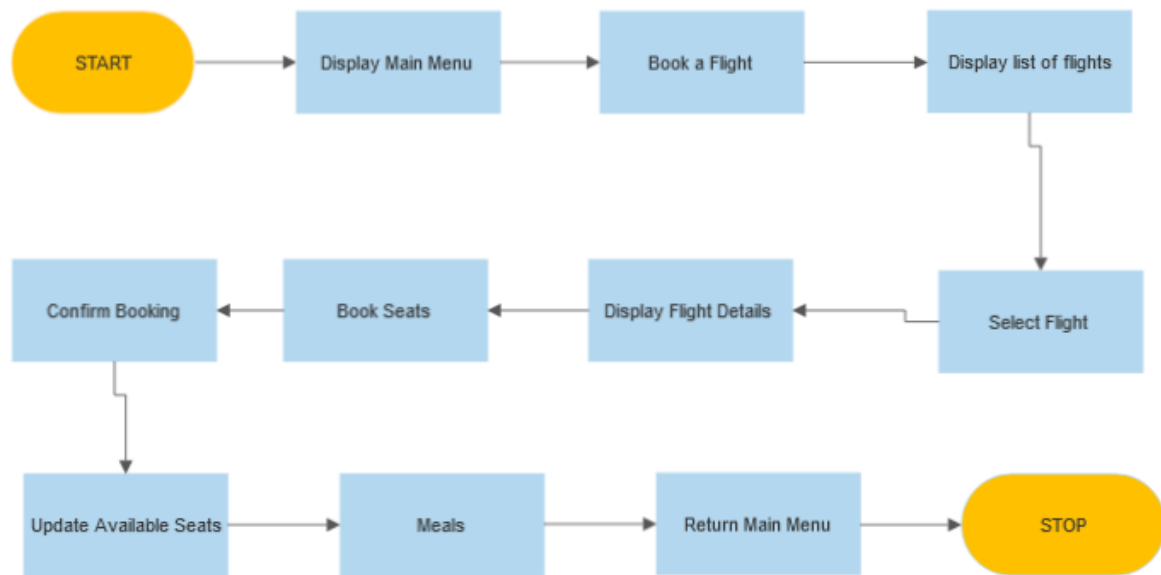


Sequence Diagram

Sequence Diagram for online booking system



Flowchart Diagram



ER Diagram

