**Software Requirements**

**Specification**

**For**

**Airline Reservation System**

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**25th Oct 2023**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reasons for changes** | **Version** |
|  |  |  |  |
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1. **Product Perspective**

The airline reservation system plays a vital role in our organization’s digital infrastructure. Our system is a stand-alone system which aims to incorporate all the major features which a customer could expect while booking a flight from their phone or computer.

The airline reservation system contains details about flight schedules and fare tariffs, passenger reservations and ticket records. It saves time as it allows online procedures as users no longer have to wait in queue to book the flights. It is automatically generated by the servers. Admin is the main authority who can do addition, deletion and modification of flights if required.

The project also covers various features like online registration of the users, and modifying the details of the website by the management staff or admin of the website, by adding, deleting or modifying the customer details, flights or package information. In general, this website would be designed to perform like any other airline ticketing website available online.

1. **Scope and Objectives** 
   1. **Scope**

This system helps users to make effective flight booking and reservation management. Our system includes various functionalities like user registration and authentication, seat selection, itinerary management like viewing, modifying and cancelling bookings and payment processing for booking confirmation. It does not include in-flight services like entertainment or onboard catering.

* 1. **Objectives**

The primary objectives of our airline reservation system are as follows:

* Enhance the booking efficiency and user experience
* Maximise revenue through dynamic pricing and seat allocation.
* Ensure data security and compliance with relevant aviation regulations.
* Provide a user-friendly, accessible interface for passengers.

1. **Functional Requirements**

Our system provides the following functional requirements:

1. User registration and authentication

User can register their accounts by providing the necessary information. Registered user can log in using their email and password. Users can reset passwords through a secure process.

1. Flight searching and booking

Users can search for flights by entering departure and destination locations, departure dates, and class preferences. Search results should display available flights, including pricing and seat availability. Users can select a flight and proceed to the booking process. Booking includes passenger details, seat selection, and payment.

1. Payment processing

The system should support various payment methods, including credit/debit cards and mobile wallets. Payment processing should be secure and comply with industry standards. Users receive booking confirmation after successful payment.

1. Seat selection

Passengers can view seat maps and select seats based on availability and preferences. Preferences like windows or aisles should be taken into account. Seat selections are saved during the booking process.

1. Itinerary Management

Registered users can view and manage their reservations, make changes to flights, and cancel bookings. Users receive email notifications for booking confirmations, flight updates, and cancellations.

1. Admin features

Administrators can manage flight data, including schedules, seat configurations, and pricing. User accounts can be managed, including resetting passwords and resolving issues.

1. **Non-Functional Requirements**

Our system provides the following non-functional requirements:

1. Performance

The system should handle a minimum of 1000 concurrent bookings. Response

times should be within 2 seconds for flight searches and seat selections.

1. Usability

The user interface must adhere to accessibility standards and provide a seamless

user experience. Mobile applications should be compatible with popular platform.

1. Security

User data including personal information and payment details, should be

Encrypted and securely stored.