**Online Flight Booking**

1. **Introduction**

**Overview**

The Online Flight Booking System is a digital platform designed to facilitate the booking of flights over the internet. This application aims to streamline the process of searching for flights, booking tickets, managing reservations, and providing support for users throughout their journey. The platform connects airlines, travel agents, and customers, offering a range of features to enhance the travel booking experience.

**Purpose**

The purpose of this SRS document is to define the functional and non-functional requirements for the development of the Online Flight Booking System. It serves as a guideline for developers, stakeholders, and project managers to understand the system's capabilities and constraints.

**Scope**

This document covers the requirements for the Online Flight Booking System, including user management, flight search and booking, payment processing, notifications, and administrative functions.

**2. Functional Requirements**

**User Management:**

* User Registration: Allow users to register with personal information (name, email, password, contact details).
* User Authentication: Implement secure login and logout procedures.
* User Profile: Users can view and update their profiles, including personal information and booking history.

**Flight Search and Booking:**

* Flight Search: Users can search for flights based on criteria such as departure and arrival locations, dates, and number of passengers.
  + Search Filters: Provide filters for airline, flight duration, price range, and layovers.
  + Flight Details: Display detailed information about each flight, including departure and arrival times, duration, layovers, and airline.
  + Booking System: Allow users to book flights by selecting available options and providing necessary details.
  + Seat Selection: Enable users to choose their preferred seats during the booking process.
  + Booking Confirmation: Send confirmation emails and display booking details on the user’s profile.

**Payment Processing:**

* Payment Gateway: Integrate a secure payment system to process transactions using credit/debit cards, digital wallets, and other payment methods.
* Transaction History: Users can view their past transactions and payment receipts.

**Notification System:**

* Email Notifications: Send notifications for booking confirmations, payment receipts, flight status updates, and promotional offers.
* Real-time Alerts: Notify users about flight delays, cancellations, and gate changes.

**Admin Panel:**

* + Dashboard: Provide admin tools for managing flights, users, and transactions.
  + Flight Management: Admins can add, update, or remove flight listings and schedules.
  + User Management: Admins can manage user accounts and profiles.
  + Reporting: Generate reports on user activity, flight bookings, revenue, and system performance.

1. **Non-Functional Requirements**

Response Time: Ensure quick loading times for flight search results and booking pages.

Scalability: The system should handle a large number of concurrent users and transactions.

Data Encryption: Secure user data and transactions with encryption protocols.

Access Control: Implement role-based access control for users and admins.

User Interface: Design an intuitive and visually appealing interface for both desktop and mobile users.

Accessibility: Ensure the platform is accessible to users with disabilities.

**3. System Architecture**

Frontend Technologies: React.js.

Backend Technologies: Java with Spring Boot .

Database: MySQL or MongoDB for data storage and management.