SRS DOCUMENT

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What is an SRS Document?

SRS (Software Requirements Specification) is a comprehensive document that captures the complete software requirements for a project. It serves as a contract between the stakeholders (e.g., clients, users) and the development team, detailing what the software system should do and how it should perform.

Key Features of an SRS Document

1. **Clarity:** Clearly defines functional and non-functional requirements.
2. **Completeness:** Captures all necessary information to guide the development team.
3. **Consistency:** Ensures no conflicting requirements.
4. **Modifiability:** Easily updated as requirements evolve.
5. **Traceability:** Tracks requirements to ensure they are met.

Software Requirements Specification (SRS) for Flight Reservation Management System

1. Introduction

1.1 Purpose

The purpose of the Flight Reservation Management System is to provide an online platform for users to book, manage, and cancel flight reservations. It aims to streamline the booking process, ensure secure transactions, and improve overall user experience.

1.2 Scope

The system will enable customers to search for flights, book tickets, manage reservations, and process payments online. It will also allow airline staff and administrators to manage flight schedules, monitor bookings, and handle customer inquiries efficiently.

1.3 Stakeholders

- **Customers:** Users who book and manage flight reservations.
- **Airline Staff:** Employees managing flight schedules and customer inquiries.
- **Administrators:** Oversee system operations and manage user access.
- **Payment Gateway Providers:** Secure online transactions.

1.4 Overview

The system consists of three primary modules:

1. **Customer Module:** Flight search, booking, cancellation, and profile management.
2. **Airline Management Module:** Flight schedule management, seat availability updates.
3. **Administrator Module:** User management, system monitoring, report generation.

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2. System Overview

2.1 System Features

- User authentication and profile management.
- Flight search with filters (date, price, airline, class, etc.).
- Online ticket booking with seat selection.
- Payment integration with multiple payment options.
- Booking confirmation via email and SMS.
- Cancellation and refund processing.
- Flight status tracking and notifications.
- Customer support chat integration.

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3. Functional Requirements

3.1 Customer Module

- Register/Login with secure authentication.

- Search for available flights based on criteria.
- View flight details, including fare, duration, and layovers.
- Book tickets with seat selection.
- Make secure payments.
- View booking history and print e-tickets.
- Cancel reservations and request refunds.
- Receive flight status updates.

3.2 Airline Staff Module

- Manage flight schedules (add, update, or remove flights).
- Update seat availability and pricing.
- Respond to customer inquiries and complaints.

3.3 Administrator Module

- Manage users (customers, airline staff, and administrators).
- Generate reports on bookings, cancellations, and revenue.
- Monitor system security and handle exceptions.

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4. Non-Functional Requirements

4.1 Performance

- The system should handle 5,000 concurrent users.
- Search results should load within 2 seconds.

4.2 Security

- User authentication with encryption.
- Secure payment transactions.
- Data privacy compliance with GDPR.

4.3 Usability

- User-friendly interface optimized for mobile and desktop.

- Multilingual support.

4.4 Availability

- System uptime of 99.9%.
- Automated backups every 24 hours.

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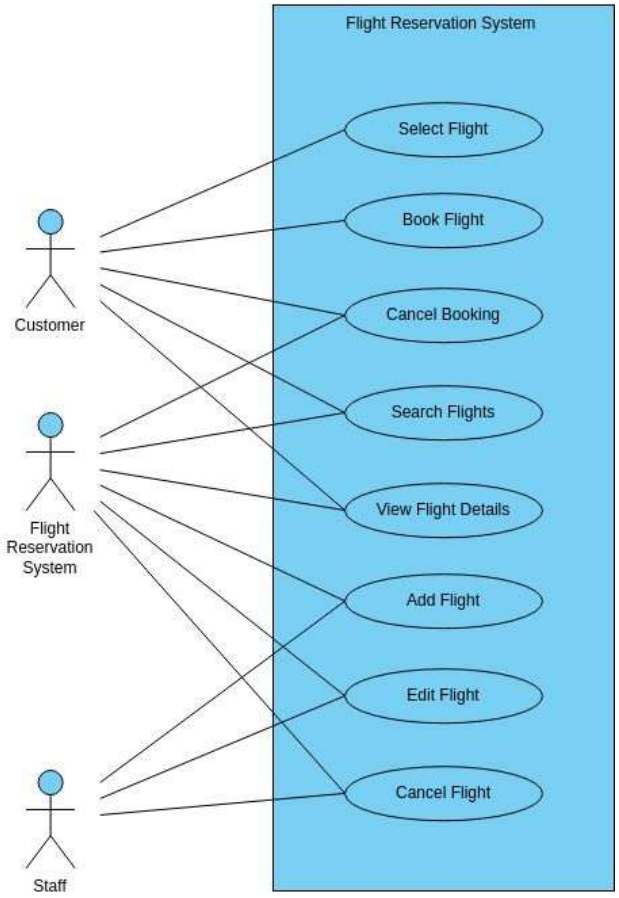
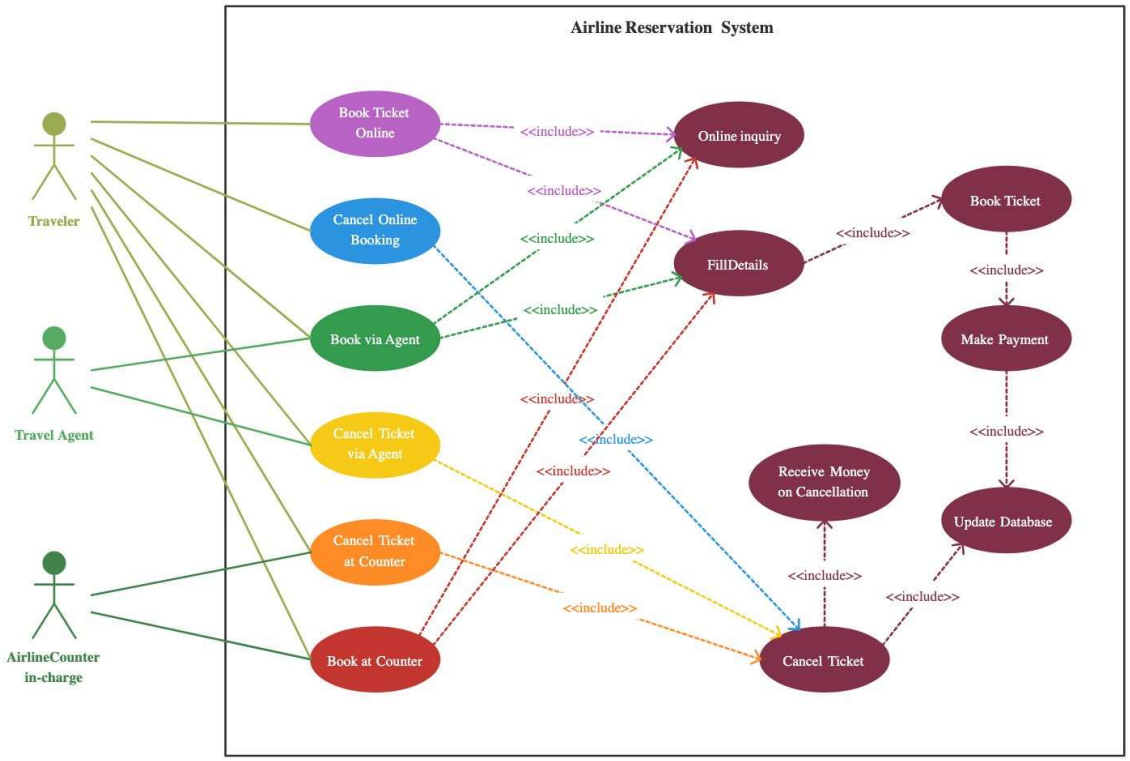
5. System Models

5.1 Use Case Diagram

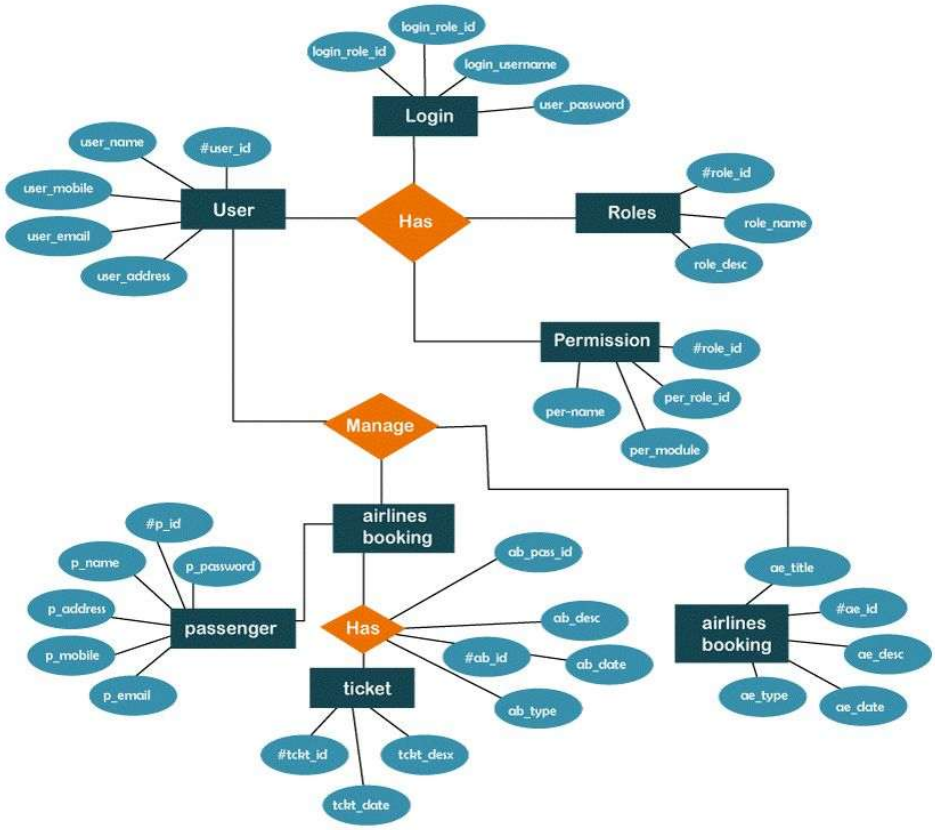
- Illustrates interactions between users, airline staff, and administrators.





5.2 ER Diagram

- Represents entities such as Users, Flights, Reservations, Payments, and Notifications.



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6. System Constraints

- Must integrate with third-party payment gateways.
- Should comply with airline industry regulations.
- Mobile app support for both iOS and Android.

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7. Assumptions and Dependencies

- Users have internet access to book flights online.
- Airlines provide accurate real-time flight schedules.
- Payment gateway services are operational for transactions.

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8. Benefits of the System

- **Convenience:** Customers can book flights anytime, anywhere.
- **Efficiency:** Streamlined operations for airline staff.
- **Security:** Secure payment processing and data protection.
- **Revenue Management:** Real-time booking insights for administrators.

Conclusion

The Flight Reservation Management System ensures a seamless and secure way for customers to book flights, manage reservations, and receive updates while providing airline staff and administrators with essential management tools. The system enhances efficiency, security, and user experience in flight booking and management.