Report

**Airline Reservation System**

**Introduction**

The Airline Reservation System (ARS) is a software solution aimed at automating the booking process for flights. This system will provide a seamless experience for passengers, enhance operational efficiency for airlines, and improve revenue management by integrating features like flight scheduling, passenger booking, and data management.

**Objective**

The main goal of the Airline Reservation System is to:

1. Simplify the process of booking, modifying, and canceling flights for passengers.
2. Provide airlines with a centralized platform for managing flights, passengers, and ticketing.
3. Ensure data integrity, security, and scalability to support future enhancements.

**Key Features**

1. **Flight Management**:
   * Create, update, and delete flights.
   * Store flight details (flight number, origin, destination, capacity, schedule).
2. **Passenger Management**:
   * Add, modify, and remove passengers.
   * Categorize passengers into Economy, Business, and First Class.
   * Maintain passenger details (name, age, passport number).
3. **Reservation System**:
   * Book tickets for flights based on class availability.
   * Handle overbooking restrictions with real-time capacity checks.
   * Allow passengers to cancel or modify reservations.

**Benefits**

* **For Airlines**:
  + Enhanced efficiency in managing flights and passenger bookings.
  + Streamlined operations with a centralized data system.
  + Improved decision-making through analytics and reporting.
* **For Passengers**:
  + A user-friendly interface for booking and managing reservations.
  + Transparency in ticket pricing and availability.
  + Reduced time and effort in the booking process.
* **Conclusion**
* The proposed Airline Reservation System aims to modernize and streamline the flight booking process while ensuring flexibility and scalability for future needs. This solution will benefit both airlines and passengers, creating a seamless and efficient reservation experience.
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