Airline Reservation System - SQL Project

Introduction

This project presents a SQL-based Airline Reservation System designed to manage flight details, passenger records, seat availability, and bookings. It aims to provide a simplified and efficient data model for airline booking operations.

Abstract

The Airline Reservation System is a structured database project built using SQL to simulate the key functions of an airline booking system. The system incorporates real-world features such as passenger management, flight scheduling, seat assignments, and booking transactions, supported by automation through triggers and SQL procedures.

Tools Used

1. MySQL / MySQL Workbench
2. SQL (Structured Query Language)
3. FPDF (for PDF report generation)
4. Any SQL execution environment (GUI or CLI)

Steps Involved in Building the Project

1. Designed normalized tables: Flights, Passengers, Seats, and Bookings.
2. Inserted sample flight records, passenger data, and seat assignments.
3. Implemented SQL queries for searching flights and available seats.
4. Added triggers to auto-update seat status upon booking and cancellation.
5. Created summary reports showing passenger-wise booking and flight details.

Conclusion

This project demonstrates how SQL can effectively be used to model a real-world airline reservation system. With data normalization, constraints, and automation via triggers, it provides a foundation for managing scalable airline operations and supports future enhancements like fare calculation and multi-leg bookings.