Airline Reservation System - SQL Project Report

Introduction

The Airline Reservation System is designed to manage flight bookings, customer details, and seat availability using SQL. It simulates the backend database for an airline, ensuring efficient booking, cancellation, and reporting functionality.

Abstract

This system includes schema creation, data insertion, and critical SQL queries such as seat availability and booking summary. It uses relational database features like constraints, joins, and triggers to simulate real-time airline booking logic.

Tools Used

- MySQL (Command Line Client)
- Database management and query execution(Purpose)

Steps Involved in Building the Project

1. Schema Design:

   Tables created - Flights, Customers, Bookings, and Seats.

2. Normalization:

   Each table was normalized to 3NF.

3. Data Insertion:

   Sample data added using INSERT queries.

4. SQL Queries:

   Queries for flight search, seat availability, and booking reports.

5. Triggers:

   A trigger updates seat availability on booking cancellation.

6. Booking Summary Report:

   Created using JOIN operations.

Conclusion

This project demonstrates the ability to model and manage a real-time airline booking system using SQL. It applies various database concepts such as relational design, constraints, triggers, and reporting. This simulation provides a solid foundation for backend development in real-world applications.

Date:12-7-2025

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