

Airline Management System

Introduction

The Airline Management System is a database-driven Java application designed to automate and manage airline operations such as flight management, passenger handling, booking, payment processing, and ticket cancellation. The system reduces manual work, improves accuracy, and provides a structured approach to airline operations.

Objectives

- * To automate airline booking and management processes
 - * To store and manage flight, passenger, and booking data efficiently
 - * To provide secure user access
 - * To ensure fast and accurate ticket booking and cancellation
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Project Category

Database Management System (DBMS) based Java Application

System Modules

1. User Module

- * Manages user registration and login
- * Controls access based on roles

2. Flight Module

- * Stores flight details
- * Manages routes, fares, and seat availability

3. Passenger Module

- * Stores passenger personal information
- * Links passengers to bookings

4. Booking Module

- * Handles ticket booking
- * Connects users, flights, and passengers

5. Payment Module

- * Records payment details
- * Stores transaction status

6. Cancellation Module

- * Manages booking cancellations
 - * Updates seat availability and refunds
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Database Design

Tables Used

- * Users
- * Flights
- * Passengers
- * Bookings
- * Payment
- * Cancellation

Each table uses a primary key, and foreign keys are used to maintain relationships between tables.

Tools and Technologies Used

- * Programming Language: Java
 - * Database: MySQL
 - * Build Tool: Maven
 - * IDE: IntelliJ IDEA
 - * Connectivity: JDBC
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DFD Overview

- * Level 0 DFD shows interaction between user and system
 - * Level 1 DFD explains booking, payment, and cancellation processes
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Advantages

- * Reduces paperwork
 - * Improves data accuracy
 - * Faster booking and cancellation
 - * Easy data retrieval
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Limitations

- * No real-time payment gateway integration
 - * Limited to basic airline operations
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Future Scope

- * Online payment gateway integration
 - * Mobile application support
 - * Real-time flight tracking
 - * Advanced security features
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Conclusion

The Airline Management System provides an efficient and structured solution for managing airline operations. It demonstrates the practical use of Java, JDBC, and database concepts in real-world applications.

Bibliograph

- * Java: The Complete Reference – Herbert Schildt
- * Database System Concepts – Silberschatz
- * MySQL Official Documentation
- * Oracle Java Documentation