

Final Project Topic Selection

Course: COE 891 – Section 9

Group: 2

Project Title: Flight Booking Application in Java

Abstract:

The **Flight Booking Application** is a Java-based software solution designed to optimize and simplify the airline ticket reservation process. This project aims to develop a highly functional, scalable, and user-friendly system that allows users to efficiently search for available flights, select departure and destination locations, and manage passenger information.

The application will be built using Java's object-oriented programming paradigm to ensure modularity, reusability, and maintainability. A structured relational database will be implemented to securely store flight schedules, passenger details, and booking records, enhancing data organization and retrieval efficiency.

Key Features:

- **Flight Availability Search** – Users can browse and filter available flights based on their preferences.
- **Dynamic Seat Selection** – Passengers can choose their preferred seats during the booking process.
- **Real-time Fare Calculation** – Ticket pricing dynamically updates based on class selection and availability.
- **Automated Booking Confirmation** – Users receive instant booking confirmation upon successful reservation.
- **User Authentication & Data Security** – Secure login and encrypted data storage ensure privacy and protection.

Scalability & Future Enhancements:

To extend the functionality and applicability of this system, future improvements may include:

- Integration with third-party APIs for real-time flight data retrieval.
- Online payment processing for seamless transactions.
- Enhanced airline management features for broader usability.

This project serves as both an academic and practical initiative, demonstrating core software engineering principles, object-oriented programming concepts, and database management techniques. The project repository is hosted on GitHub to facilitate version control, collaboration, and continuous improvements.

 **Project Repository:** [GitHub Link](#)

Group Members

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