Airline Management System

**1 Objective**

To develop a robust, user-friendly, and scalable Airline Management System that streamlines airline operations management by integrating multiple stakeholders. The system aims to address key challenges in flight scheduling, ticket booking, customer support, and administrative tasks through role-based access control and enterprise collaboration. Leveraging technology ensures efficient coordination between the airline company and associated organizations, enhancing operational efficiency, user satisfaction, and overall business value.

**2 Description:**

The Airline Management System is a comprehensive software application designed to manage and streamline various operations within the airline industry. Built using Java Swing/JavaFX and integrated with a MySQL database, the system addresses the challenges faced by airlines and their associated enterprises. It facilitates efficient management of flight schedules, ticket bookings, passenger services, and administrative operations through a role-based access control mechanism. This system operates within a multi-enterprise ecosystem, involving two primary stakeholders: the airline company and a partner organization, such as a travel agency. Each stakeholder plays a vital role in delivering seamless services to end-users. The system supports four distinct roles—administrative and two operational—ensuring that each user type has access to relevant functionalities tailored to their responsibilities.

**3. Features and Functionalities:**

* **Multi-Enterprise Collaboration:**  
  The system integrates two key enterprises, such as an airline company and a travel agency, each contributing to the system's overall value.
* **Role-Based Access Control:**  
  The application supports four distinct roles:
  + **Airline Admin:** Manages flight schedules, crew assignments, and aircraft details.
  + **Airline Travel Agency:** Oversees ticket pricing, promotions, and customer support.
  + **User:** Allows passengers to search and book flights, manage reservations, and view flight status.
  + **Ground Staff:** Handles check-ins, baggage tracking, and customer queries at the airport.
* **CRUD Operations:**  
  Full-fledged Create, Read, Update, and Delete operations for key entities such as flights, bookings, users, and feedback.
* **Database Integration:**  
  The system uses MySQL for persistent storage of data, ensuring reliability and accessibility.
* **User-Friendly Interface:**  
  Developed with Java Swing to provide an intuitive and responsive UI for all user roles.