Instructions

1. **Domain**: C# Desktop Application and Oracle database
   a. **Phase 1:** ERD/EERD Design (Visio). Make sure to submit Visio files as well as pdf documents.
   b. **Phase 2:** Project UI using Windows Forms Application (Visual Studio): Login and Signup Functionality for Passenger, Admin and Employees, including complete Admin Functionality without integrating employees and user.

Airline Management System (AMS)

The Airline Management System (AMS) coordinates all aspects of airline operations, from scheduling to passenger and maintenance management. It integrates ticket reservation, crew management, and maintenance tracking to ensure smooth operations and customer satisfaction. AMS optimizes resource utilization and revenue generation while prioritizing safety compliance.

Your project is to create the database for the Airline Management System (AMS) which contains at least these functionalities:

User Table: This table stores information related to users of the system, including passengers, employees, and admins. It includes fields such as UserID, UserType, Email, Password, Phone_Number, and CNIC. User authentication and account management functionalities are facilitated through this table.

Flight Table: This table contains details of flights scheduled within the airline management system. It includes fields such as FlightID, Departure, Destination, Departure_Time, Arrival_Time, AircraftID, and Status. Flight schedule management functionalities, including flight booking and tracking, are supported by this table.

Crew Table: This table stores information about crew members associated with the airline. It includes fields such as CrewID, Name, Position, Qualifications, and Contact_Number. Crew management functionalities, including scheduling and certification tracking, are managed through this table.

Maintenance Table: This table tracks maintenance tasks and schedules for aircraft within the airline. It includes fields such as MaintenanceID, AircraftID, Task_Description, Start_Date, End_Date, and Status. Maintenance tracking functionalities, including task assignment and status monitoring, are facilitated by this table.

Passenger Services Table: This table records passenger service interactions within the airline management system. It includes fields such as ServiceID, PassengerID, FlightID, Service_Type, Service_Details, and Service_Time. Passenger service functionalities, including notifications and assistance, are managed through this table.

Revenue Table: This table tracks revenue generated by the airline management system. It includes fields such as RevenueID, Transaction_Date, Amount, Source, and Description. Revenue management functionalities, including pricing strategies and fare optimization, are supported by this table.

Baggage Handling Table: This table manages the handling and tracking of passenger baggage within the airline. It includes fields such as BaggageID, PassengerID, FlightID, Status, and Location. Baggage handling functionalities, including tracking and monitoring, are facilitated by this table.

Safety and Compliance Table: This table monitors safety regulations and compliance within the airline management system. It includes fields such as SafetyID, Event_Date, Description, Severity, and Resolution. Safety and compliance functionalities, including regulatory adherence and safety monitoring, are managed through this table.

Reports and Analytics Table: This table generates reports and analytics based on data within the airline management system. It includes fields such as ReportID, Report_Type, Generated_Date, Details, and Analysis. Reporting and analytics functionalities, including performance analysis and decision-making support, are supported by this table.

Interface Functionality Rough View

Passenger	Admin	Employees (distinguish interface of each type of employee)
• Check Profile • Book Seat • Previous Reservation • Feedback • Track Flight	• Check Profile • Manage Employees • Manage Flight Schedule • Revenue(pdf) • View Flights • Assign Tasks to Employees • View Feedback • Dashboard	• Check Profile • Salary • To-Do Task (View/Mark Complete) • Customer Support (View Feedback, handle customer affairs) • Selling of ticket

Optional Tasks

1. After each booking a confirmation message is sent to passengers via SMS.
2. After updating each Flight schedule, its respective employees and passengers must be notified within the system.
3. As we are making this application for an airport make sure we can access the database from another system using an Ethernet cable.