**Noor-Ul-Aain L1F21BSCS0484 DB – D10**

**Project:**

**FLIGHT MANAGEMENT SYSTEM**

**Part 1:**

**DESCRIPTION OF THE PROJECT**

XYZ Airlines is a growing airline that operates flights to various destinations. As the airline expanded its operations, it became increasingly challenging to manage flight schedules, aircraft, crew members, and passengers efficiently. The airline decided to develop a flight management system database to address this challenge.

The flight management system project database contains several tables to store information about flights, aircraft, passengers, crew members, and maintenance activities. The **Flights table** stores flight details such as flight number as a primary key, departure airport, arrival airport, departure time, arrival time, aircraft type, and the number of seats available. The **Aircraft table** contains aircraft details such as aircraft type unique identifier, manufacturer, model, maximum capacity, maximum range, and fuel capacity. The **Passengers table** stores passenger information such as passenger ID as a primary key, first name, last name, email, phone number, and address. The **Bookings table** contains booking details such as booking ID a unique identifier, flight number as a foreign key from the Flights table, passenger ID as a foreign key from the Passengers table, and seat number. The **Crew table** stores crew member information such as crew ID as P.K., first name, last name, job title, email, and phone number. The **Maintenance table** contains information about maintenance activities performed on each aircraft such as maintenance ID a unique identifier, aircraft type, maintenance type, maintenance date, and maintenance cost. The **Tickets table** has several attributes, including the ticket number, which is a unique identifier for each ticket sold to a passenger. It also contains information about the ticket price and the seat number assigned to the passenger on the flight, along with references to the Booking and Flight entities that the ticket is associated with. The **Baggage** **entity** has several attributes, including a unique baggage ID number, weight, and description of the baggage. The baggage type, such as checked or carry-on, is also included as an attribute. It may include the passenger's ID. The **Meal** has several attributes, including a unique meal ID number, the name of a meal (such as breakfast, lunch, or dinner), its description, and the price of the meal.

By using this flight management system database, XYZ Airlines can efficiently manage its flight schedules, aircraft, crew members, and passengers. The database helps the airline keep track of all its flights, aircraft, and crew members. It allows the airline to schedule crew members for flights and assign them to specific flights. The database also enables the airline to manage passenger bookings and seat allocations. In addition, the database helps the airline to monitor maintenance activities and costs associated with each aircraft.

**CONCLUSION**

In conclusion, the flight management system database developed for XYZ Airlines has helped the airline to streamline its operations and improve its efficiency. The database has enabled the airline to effectively manage its flight schedules, aircraft, crew members, and passengers. By using this database, XYZ Airlines can provide better service to its customers and maintain high safety and reliability in its operations.