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DATABASE LAB
CSE-3104

FINAL PROJECT REPORT

Airways Management System

Submitted by

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1   Introduction

The Airways Management System project is an implementation of a general airline ticketing as well as a management system, which helps the user to search the availability and prices of various destination tickets along with many other utilities.

This project also covers various features like registration of the users so they can create an account and use the interface to see all the flight information of the airways company. Also a user can place feedback on the flights they have attended.The system also includes a Cargo service for the user.

This project also has an administrative side where an administrator can observe and modify the details of the interface by adding, deleting or modifying the user details and flight information.It will also conduct a Customer Care Service. This will help an Airline company to maintain its service quality and user contentment.

2   Objective

For the time being we are focusing on a single Airline company so our goal is to help every User to get every possible utility of the airline service for their comfort and find their perfect flight, destination and many more. Also the Administrator can alter details in their system according to the company policies and user feedback about the airline company. Overall, the objectives of this software are given in the following points.

- To help airlines system in making their business more efficient.

- An added attraction for their potential customers.

- It will also show the attitude of the management that they are aware to the newly introduced technology and ready to adopt them.

- To provide efficient, accurate, reliable, fast and robust structure that can handle any number of passenger's transactions.

3   Features

The software provides following features:

- A person can register as a user to use the features of the airline service.

- The software will have the options for the users to go through the flight schedules, flight details, Cost of the tours, Offers from the airline company and travel history of themselves.

- Users can book their flights from the flight schedules according to their preferences and flight status.

- Users can also enjoy some discounts on their respective flights according to their membership status. The membership status will be generated automatically based on the flight usage.

- The user will be able to give feedback of their flight and others can see the feedback of the flight.

- Transactions can be operated through the software for the ticket bookings/cancellations. Users can complete their payments through the system.

- A Customer support forum will be available for any query of the user.

- The administrator can maintain and modify the user details, flight schedules, flight status, tour offers in response to the user feedback and company policies.

- Information of all the employees can be handled through the software by the administrator if required.

4   Entity-Relationship Diagram

4.1   Entity and its attributes

4.1.1   Entity-01: User Login/Sign Up

Any person who wishes to travel can register an account to use the system. Users are required to put User ID, Email, First Name, Last Name , Password, D.O.B (Date Of Birth), Gender, Country Name, Contact No. in the system which are saved in this entity as the user information.User ID is the Primary Key of this entity.

4.1.2   Entity-02: FlightInfo

This entity contains information about the available flights for the User. This Entity contains Flight ID, From, To, Departure Date, Return Date, Class Type, Flight Type, Fare, Pilots and Cabin Crews.Flight ID is the primary key.

4.1.3   Entity-03: AirCraftInfo

This entity contains information about the air crafts. This entity contains information of AC_ID, AC_Name, Flight ID, and Capacity. AC ID is the primary key and Flight ID is the foreign Key.

4.1.4   Entity-04: PassengerFlight

This entity contains the list of all passengers who booked their flights. This table contains information about the Flight ID, User ID, Seat Numbers and Capacity. Here the foreign keys are Flight ID, User ID.

4.1.5   Entity-05: JourneyFeedback

This entity contains the information of the feedback from all the users who gave feedback about their experience. This contains information about the User ID, Flight ID and Feedback. Where User ID and Flight ID are Foreign Key.

4.1.6   Entity-06: Employee

This entity contains the information about all of the employees of the airline company. It consists of Employee ID, Name, Age, Address, Designation ,Email and Contact No. of the employees. Here primary key is Employee ID.

4.1.7   Entity-07: CustomerSupport

This entity contains the information about all the queries of users and replies of the admins. It consists of User Id and User Admin Conversation. Here User Id is foreign key.

4.1.8   Entity-08: Membership

This entity contains the information about membership status of an User. It consists of User Id, Membership Status and Points. Here User Id is foreign key.

4.2   Relationship

4.2.1   Relationship-01: Books

This relationship refers to the passengers travel details and history.

4.2.2   Relationship-02: Has

This relationship describes that the flight has confirmed their passenger flight booking.

4.2.3   Relationship-03: Achieves

The user who travels using this system achieves membership.

4.2.4   Relationship-04: Gives

The passenger gives journey Feedback after they attend the flight.

4.2.5   Relationship-05: Has

The flight info has the information of the employees assigned to it.

4.2.6   Relationship-06: Contains

The flight info contains the information of the aircraft.

4.2.7   Relationship-07: Consists

The flight info consists of feedback from the customer.

4.2.8   Relationship-08: Gets

A User gets customer support.

5 Project Snapshots of Different Interfaces

- This is the Login page for the users and admins.
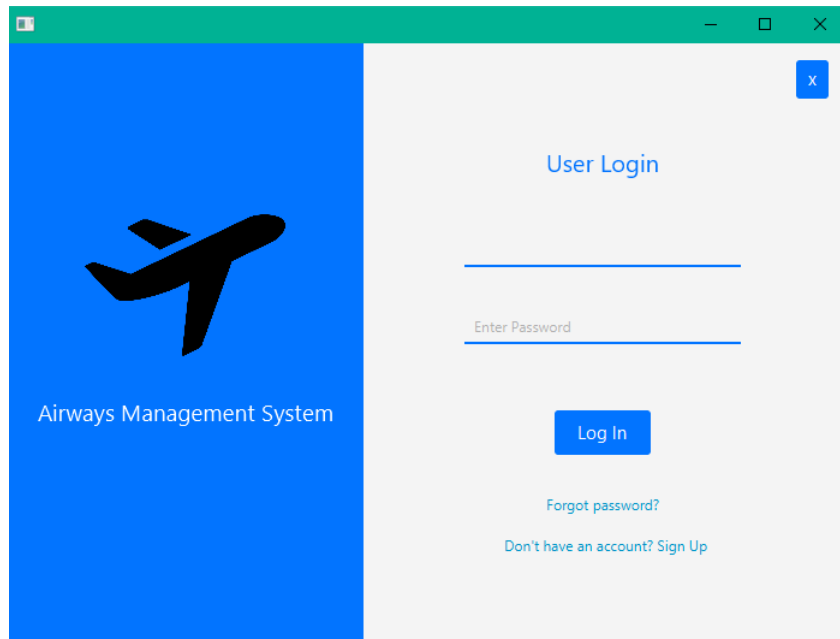
Figure 1: Login Page

- This is the Sign Up page where a user has to fill up the details in order to create an account in this platform.

Figure 2: Sign Up Page

- This is the first page of the user dashboard, the book ticket page where users can search for any flight with source, destination, date and class type.

Figure 3: Search Flight Page

- This is the available flight list page which will appear according to the user search request.

Figure 4: Available Flight List Page

- This is the booking details page where user has to give the necessary information to book a flight.

Figure 5: Booking Flight Page

- This is the confirm booking page page where a user has to confirm booking.

Figure 6: Confirm Booking Page

- This is the booked flight list page of the user where they can see their booked flight details.

Figure 7: Booked Flight List Page

- This is the previous flight page where a user can see their previous flight history.

Figure 8: Previous Flight List Page

- This is the journey feedback page where a user can see the previous flight journey feedback of all the users as well as give the feedback of any attended flight.

Figure 9: Journey Feedback Page

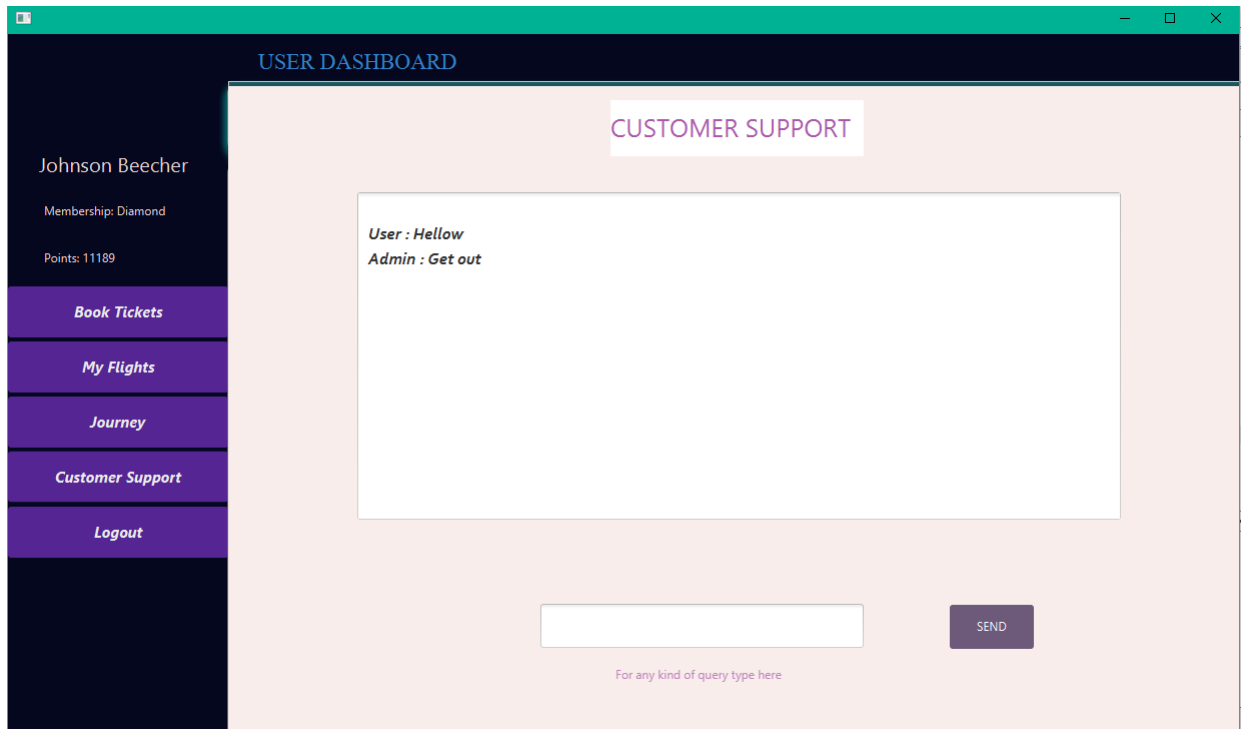- This is the customer support page where a user can ask about any type of queries regarding flights.

Figure 10: Customer Support Page

- This is the Flight List page of the Admin Dashboard where all the flight details will appear.

Figure 11: Flights Page

- This is the Flight Details page of the Admin Dashboard where the selected flight detail will appear.

Figure 12: Flight Details Page

- This is the Passengers List page of a selected flight in the Admin Dashboard to check the passengers of that flight.
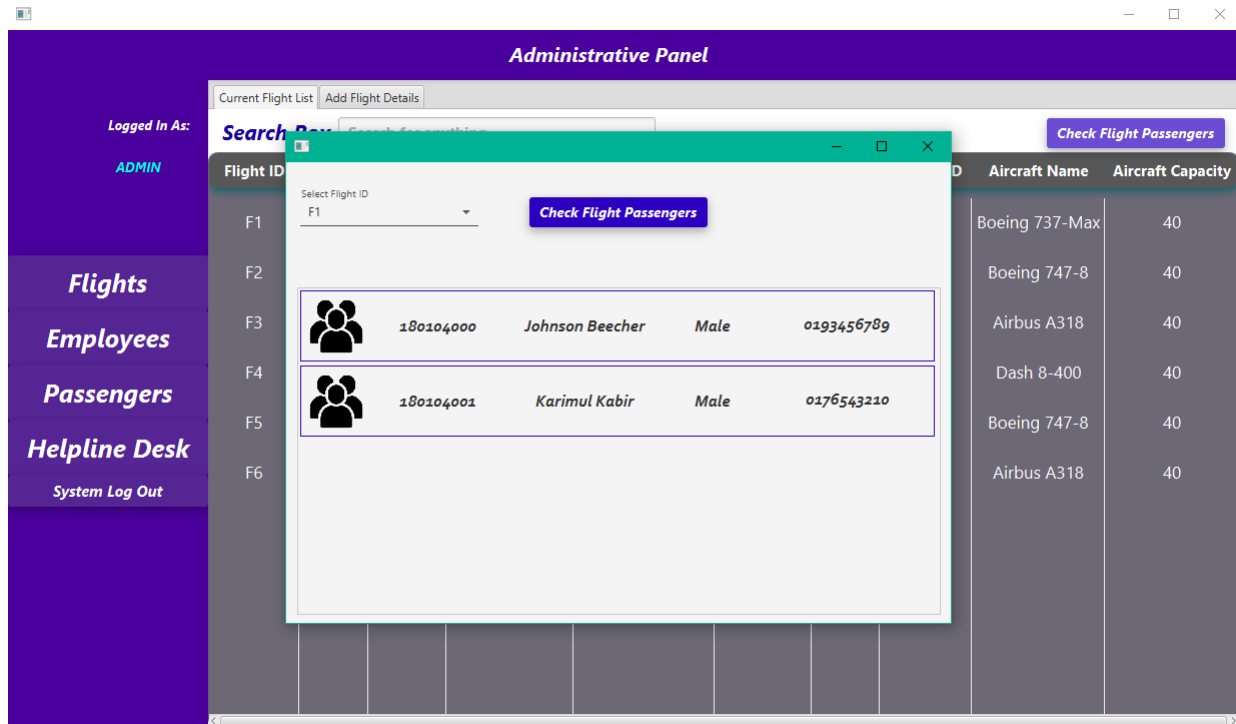
Figure 13: Flight Passenger List Page

• This is the page for adding a new flight details.

Figure 14: Add Flight Page

- This is the Employee Page where all the information of the working employees will appear.

Figure 15: Employees Page

- This is the page for adding new employee details.

Figure 16: Add Employee Page

- This is the Passengers List page where all the passenger details of all the available flights will appear.

Flight ID	User ID	Number of Seats Booked	Seats Taken
F5	180104000	4	A1B1B2A2
F1	180104000	3	A3A4A5
F1	180104001	3	C1C2D2
F3	180104000	2	A1B2

Figure 17: Passengers Page

- This is the page for Help Desk for the users.
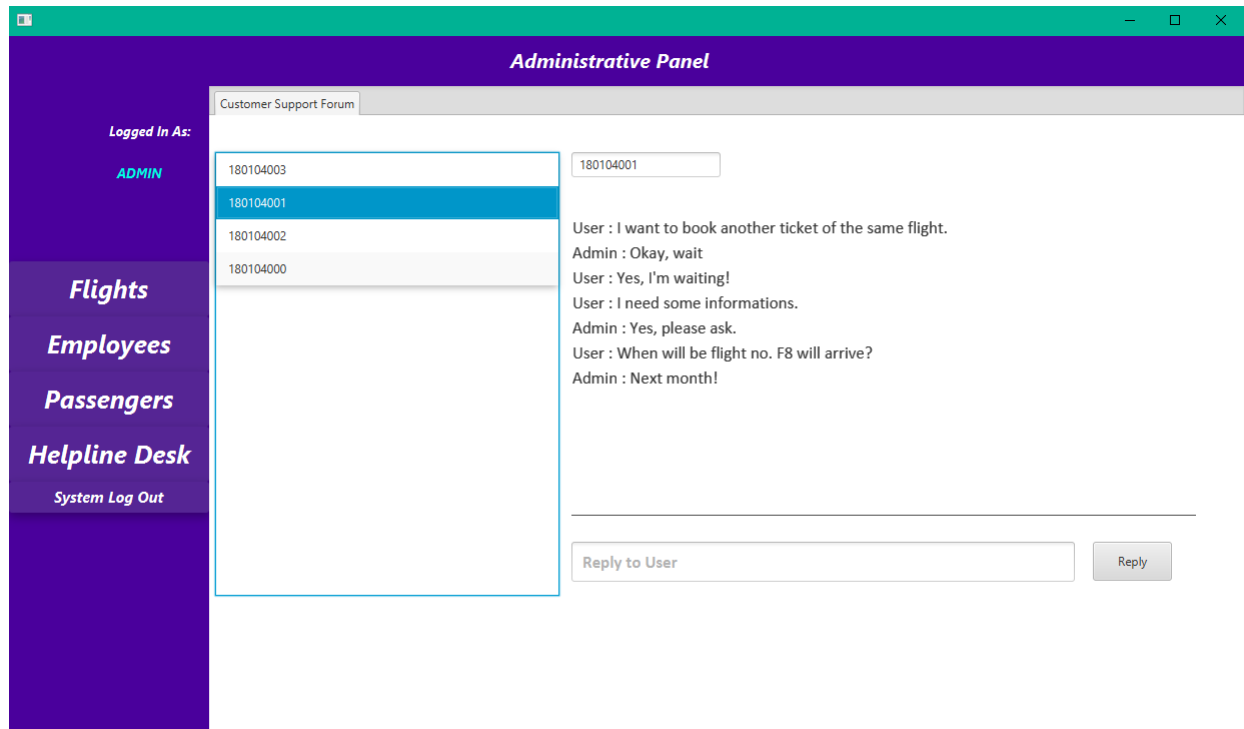
Figure 18: Helpdesk Page

6   Conclusion and Future Works

In this project, we are preparing and managing a platform which is not only for a User looking for a convenient flight booking system but also for an Airline company to manage their system properly. We want this platform especially for those companies who want their system to be managed easily.In general, this software is intended to perform like any other Airline ticketing and Management software available. In future, we want to upgrade the features to some advanced level so that the efficiency requirements of the airways company meets at its best way possible.

Table 1: UserLog

Field	Data Type	Constraint
UserID	Varchar (128)	Primary Key
Email	Varchar (128)	Primary Key
FirstName	Varchar (128)	Not Null
LastName	Varchar (128)	Not Null
Passkey	Varchar (128)	Not Null
DOB	Varchar (128)	Not Null
Gender	Varchar (128)	Not Null
CountryName	Varchar (128)	Not Null
ContactNo	Varchar (128)	Unique

Table 2: Passenger Flight

Field	Data Type	Constraint
Flight ID	Varchar (128)	Foreign Key
User ID	Varchar (128)	Foreign Key
NumberofSeats	Varchar (128)	Not Null
SeatNumbers	Varchar (128)	Not Null

Table 3: Flight Info

Field	Data Type	Constraint
FlightID	Varchar (128)	Primary Key
From1	Varchar (128)	Not Null
To1	Varchar (128)	Not Null
DepartureDate	Varchar (128)	Not Null
ArrivalDate	Varchar (128)	Null
ClassType	Varchar (128)	Not Null
Pilot1	Varchar (128)	Foreign Key
Pilot2	Varchar (128)	Foreign Key
CabinCrew1	Varchar (128)	Foreign Key
CabinCrew2	Varchar (128)	Foreign Key
CabinCrew3	Varchar (128)	Foreign Key
Fare	INT	Not Null
AvailableSeats	INT	Not Null
BookedSeats	Varchar (128)	Null

Table 4: Employee

Field	Data Type	Constraint
Employee ID	Varchar (128)	Primary Key
Name	Varchar (128)	Not Null
Age	INT	Not Null
EMail	Varchar (128)	Not Null
Contact	Varchar (128)	Not Null
Designation	Varchar (128)	Not Null

Table 5: Membership

Field	Data Type	Constraint
UserID	Varchar (128)	Foreign Key
MemberStatus	Varchar (128)	Not Null
Point	INT	Not Null

Table 6: Aircraft Info

Field	Data Type	Constraint
AC_ID	Varchar(128)	Primary Key
AC_Name	Varchar(128)	Not Null
Flight_ID	Varchar(128)	Foreign Key
Capacity	INT	Not Null

Table 7: Feedback

Field	Data Type	Constraint
UserID	Varchar (128)	Foreign Key
FlightID	Varchar (128)	Foreign Key
Feedback	Varchar (128)	Not Null

Table 8: Customer Support

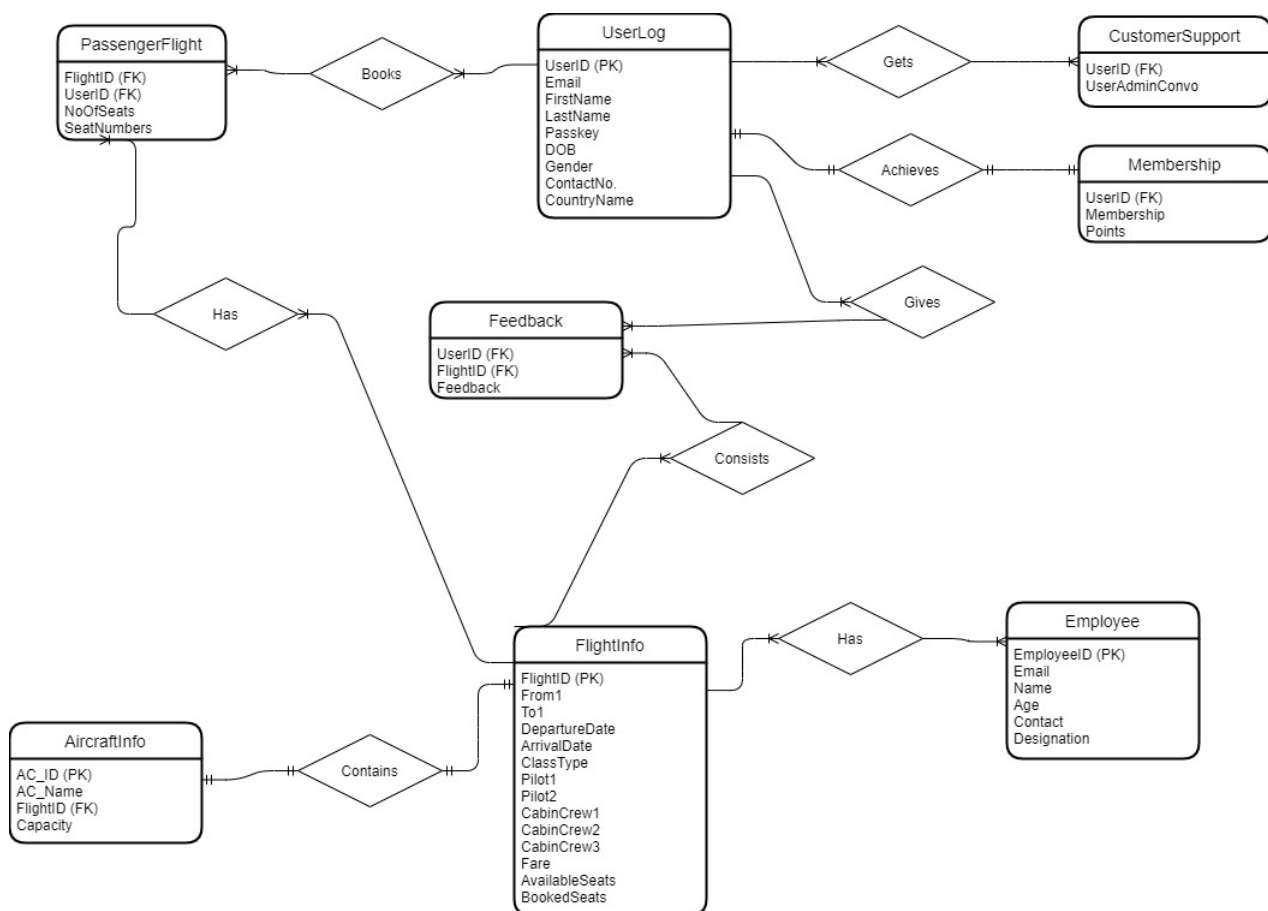| Field	Data Type	Constraint
UserID	Varchar (128)	Foreign Key
UserAdminConvo	Varchar (128)	Null

Figure 19: E-R diagram of a Airways Management System