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AIRLINES RESERVATION SYSTEM

Course Code: CSE2004

Course Title: Database Management Systems

Class Number: CH2020211700469

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Slot: D1

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Abstract:

Airline reservation systems incorporate airline schedules, fare tariffs, passenger reservations and ticket records. This project is aimed at exposing the relevance and importance of Airline Reservation Systems. After entering the details such as name, address, city, state and contact number, the system books the flight and update both airline database and user database. The system also allows cancelation. It is projected towards upgrading the connection among clients and aircraft organizations using ARSs, and subsequently making it advantageous for the clients to book the trips as when they require. It saves the time of the customer when booking tickets.

Introduction:

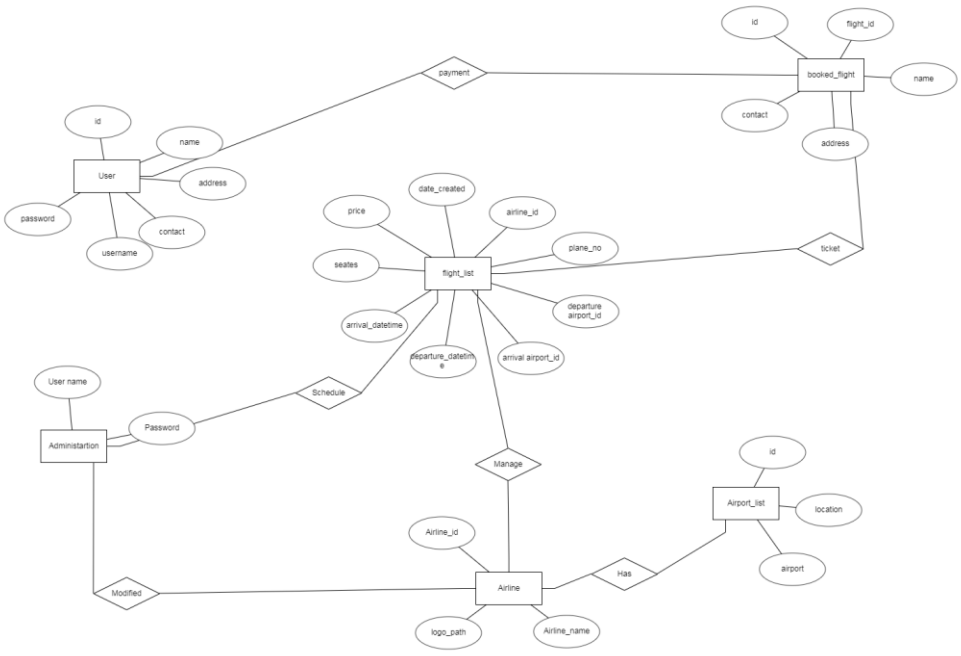
Airline reservation software is one of the crucial components of any flight reservation engine. This project has been developed in aim to assist and computerize and flight booking. It is a computerized system used to store and retrieve information and conduct transactions related to air travel. The project is aimed at exposing the relevance and importance of Airline Reservation Systems.

Project Motive:

Traditional methods of system often yielded late diversity, costliness, unreliability, on maintainability and nonuse ability. The main purpose of this software is to reduce the difficulties involved in the existing airline reservation process and make it user friendly for the customers to book the flights as when they require such that they can utilize this software to make reservations, modify reservations or cancel a particular reservation.

Database Design:

- **ER Diagram:**



- **Tables:**

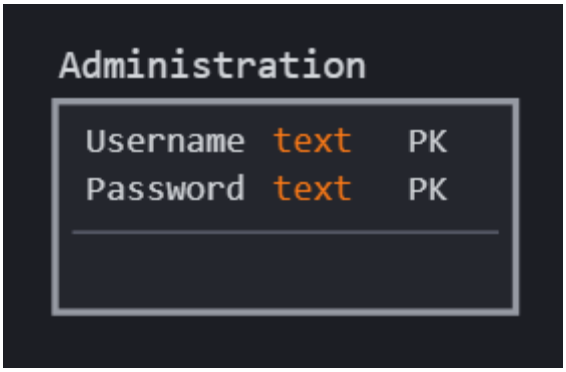


Fig. Administration Table

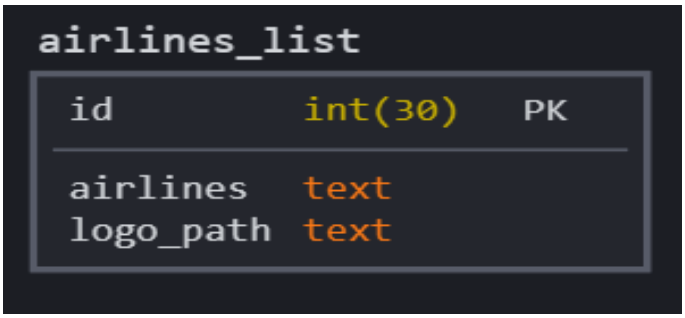


Fig. Airlines List Table

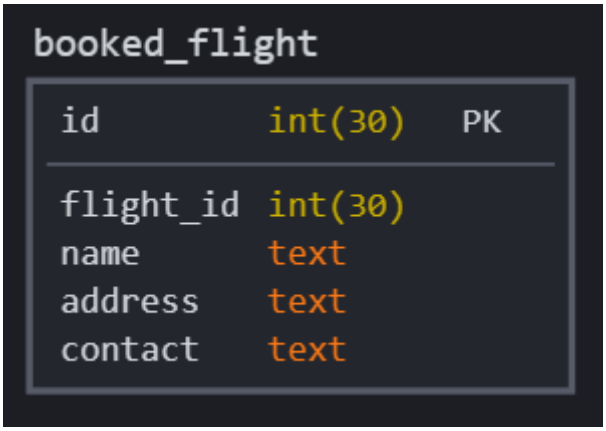


Fig. Booked Flight Table

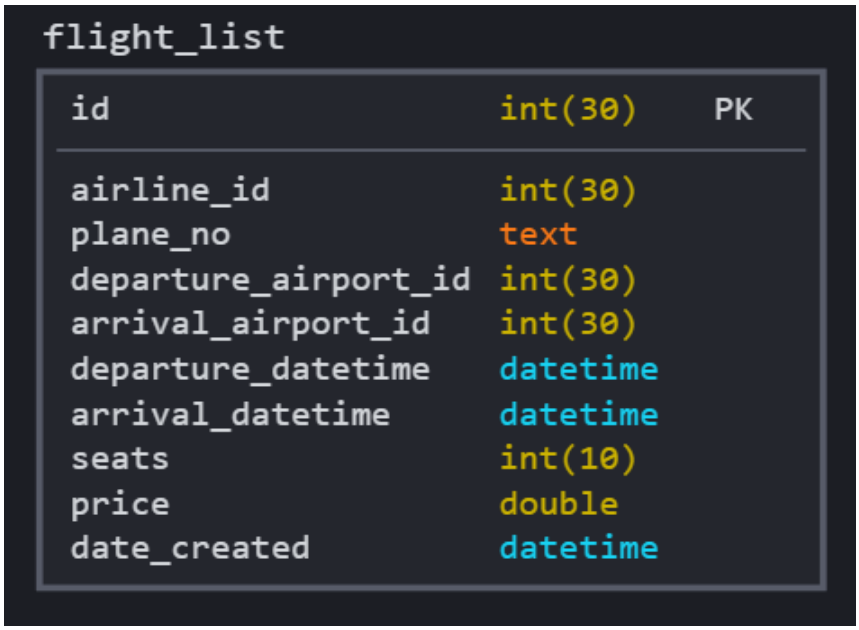


Fig. Flight List Table

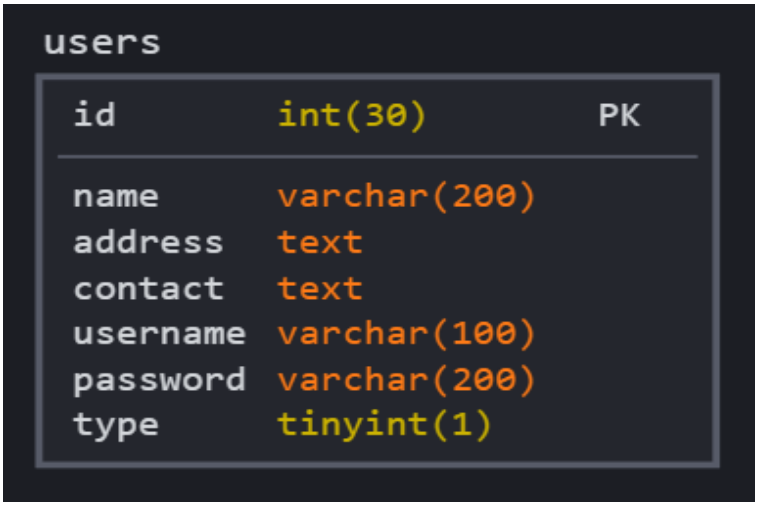


Fig. User Table

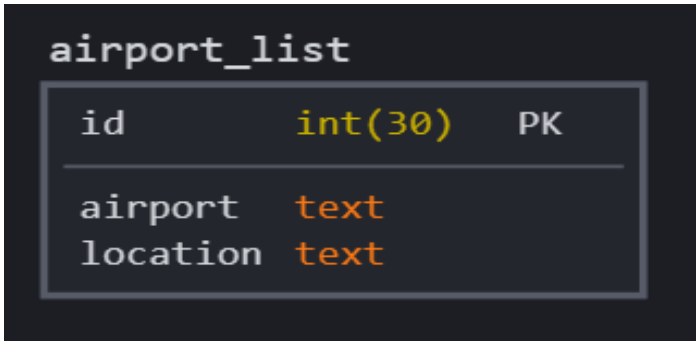


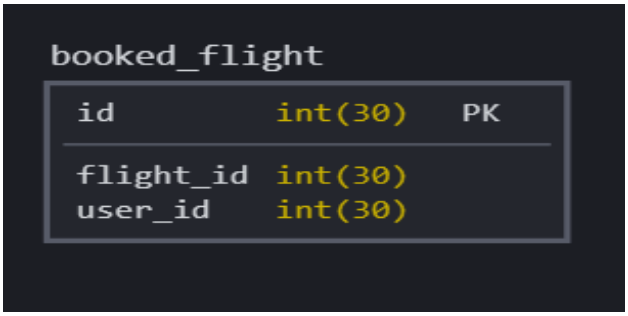
Fig. Airport List Table

- **Normalization**

Normalization is a process of organizing the data in database to avoid data redundancy, insertion anomaly, update anomaly & deletion anomaly. Let's discuss about anomalies first then we will discuss normal forms with examples.

Booked flight table:

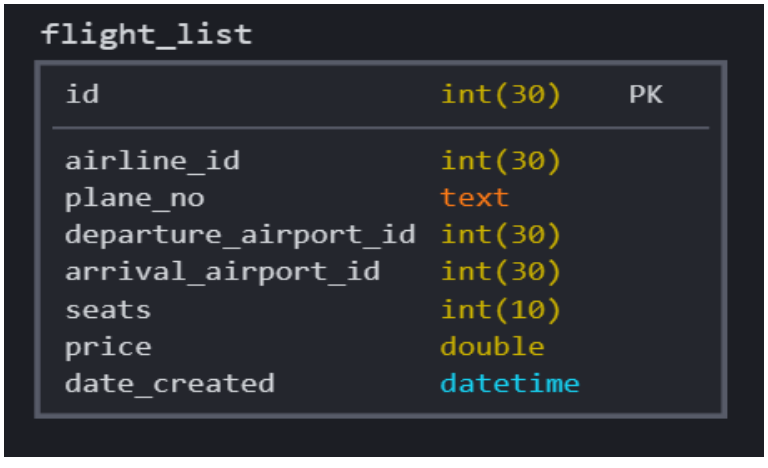
Since all attributes does not have atomic values, it's not in 1NF.
No functional dependency between {name,address,contact} → {id}
This results in data redundancy.
To overcome this respective table can be created.

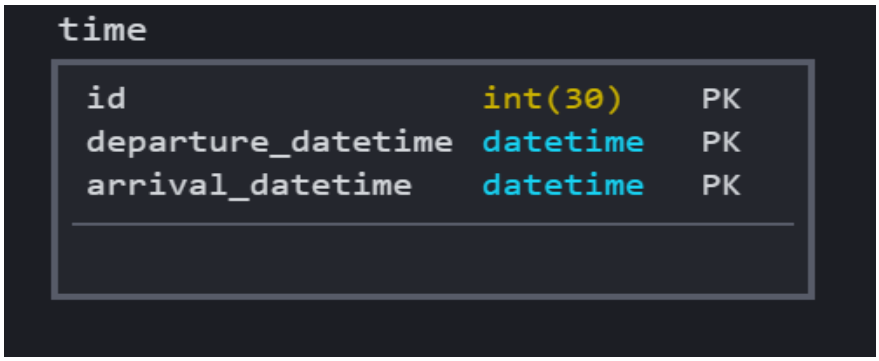


Flight list table:

Since no prime attribute is dependent on the proper subset of any candidate key of the table, its not in 2NF.

There is no transitive dependency among attributes.





Module specification:

The airline reservation system has many modules that are related to two major attributes Admin and Customer of the application.

- Flight Management System

Flights are the physical component of the application. So the admin can Add (or) Edit (or) Delete the new flight in the database. Also, an admin can schedule the flight on a particular date or according to the source and destination. An end customer can view that flight and book the ticket according to his requirement.

- User Management System

This management System allows the administration sector to get the basic information of the customer such as his/her Name, address, E-mail ID, Mobile Number. The Administration Sector can only access the information after the customer logged in to the application.

- Login/Registration Management System

Customers must have to register in the application to view the booking history or book a new ticket. Admin also can login to this application and perform the activity according to his/her role. So It has login registration for admin as well as for the user.

- Ticket Booking Management System

A customer can view all the available flights. They can search the flight according to the source and destination. They can book a ticket after login into the application for the first-time customer have register in the system.

- Payment Management System

It allows the user to process the payment after ticket booking and helps them to view the booked ticket after their payment process.

System Specification:

- Hardware requirement

  Processor-Pentium III @500 MHz or above

  RAM – 256 MB or above

  Hard Dist – 40 GB or above

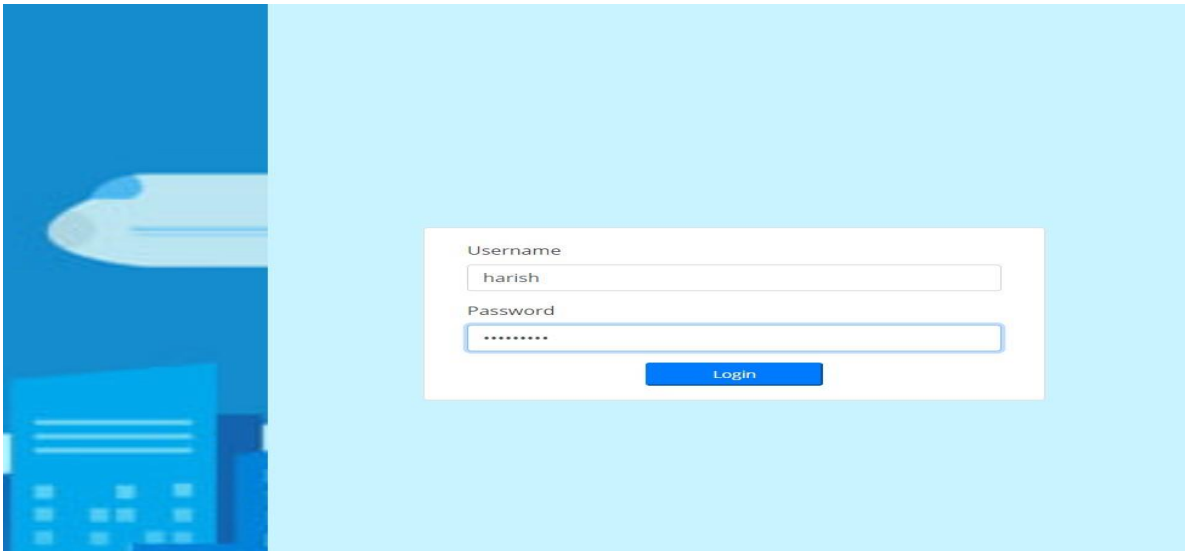
- Software requirement

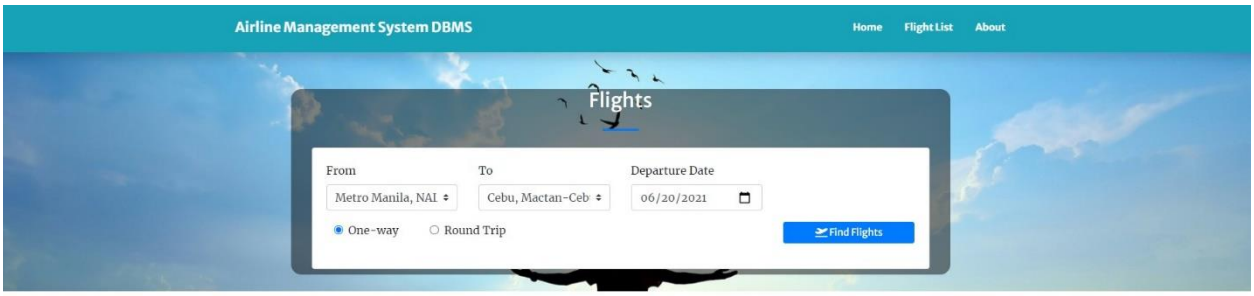
  Operating system – windows 2000 or above

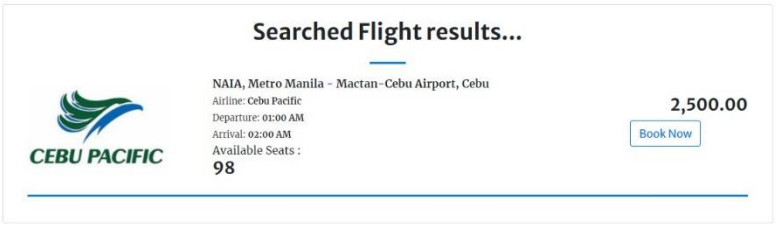
  Front End - PHP

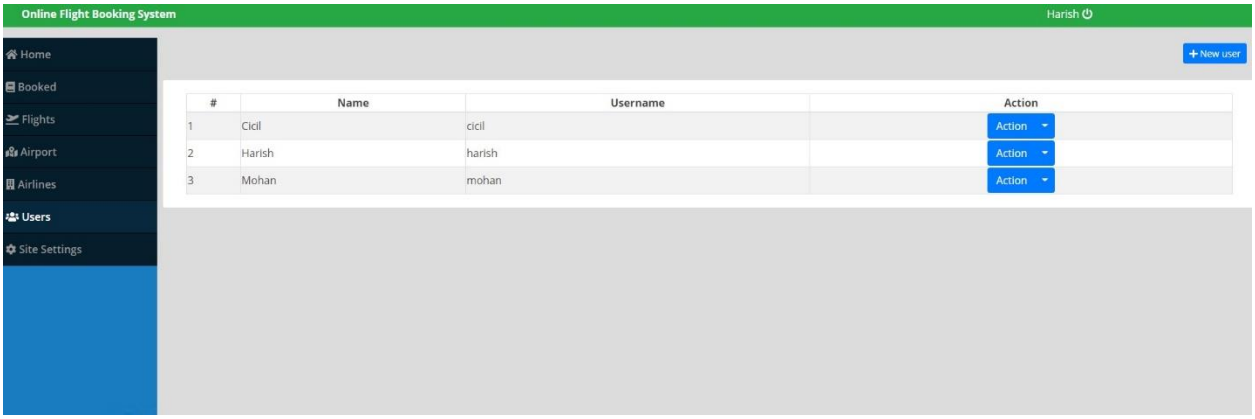
  Back End - My SQL Server

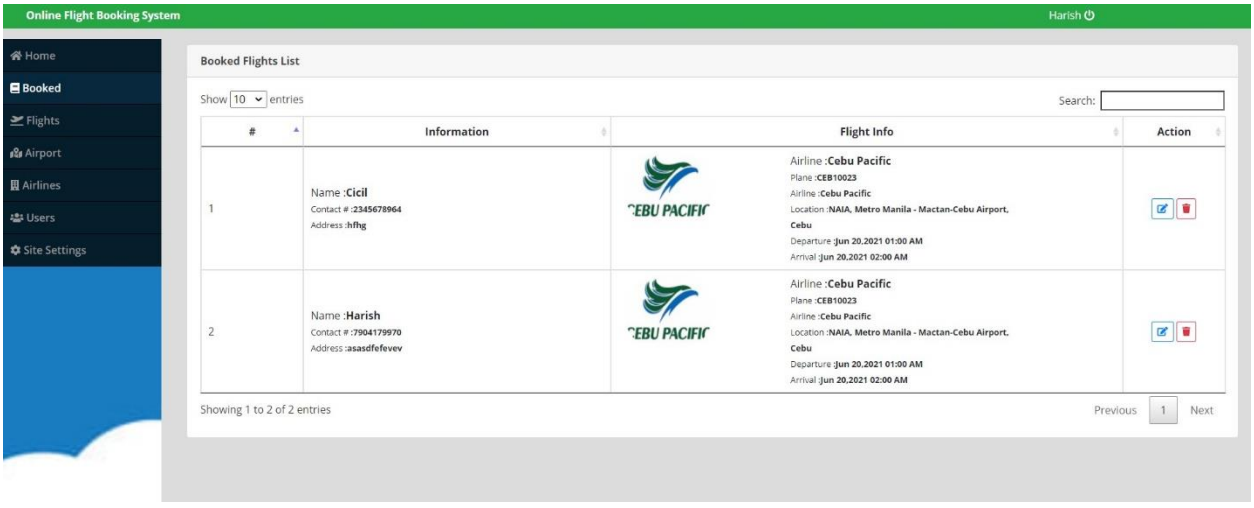
Results (with Screenshot):

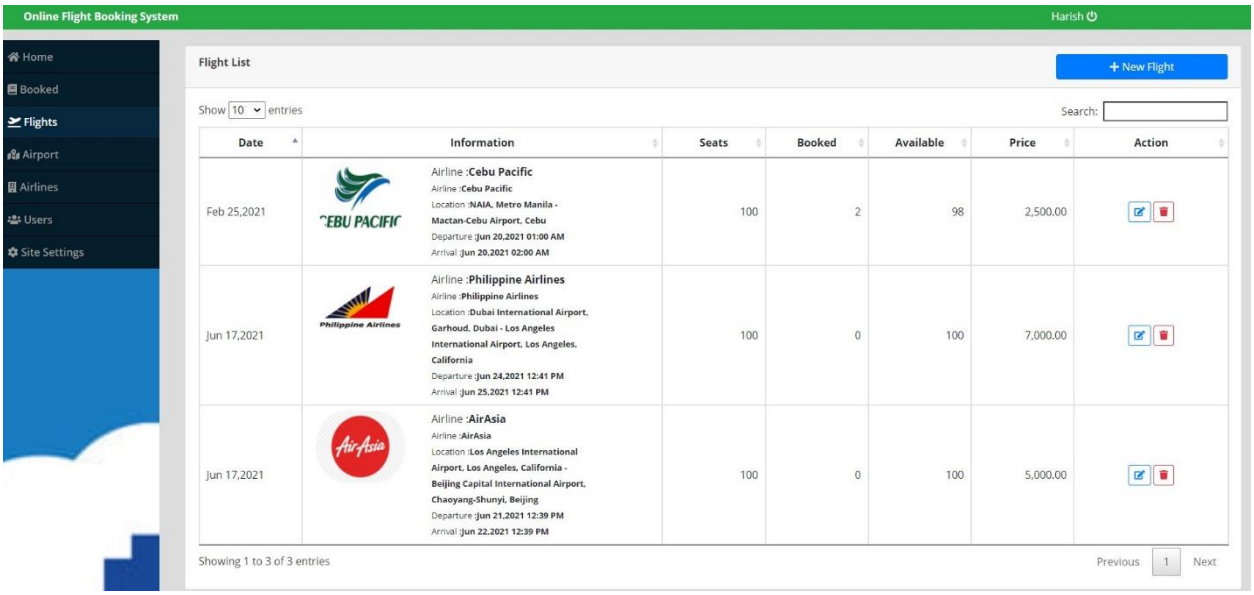



Airline Management System DBMS
Home
Flight List
About
Flights
From
Metro Manila, NAI
To
Cebu, Mactan-Ceb
Departure Date
06/20/2021
One-way
Round Trip
Find Flights


Searched Flight results...
CEBU PACIFIC
NAIA, Metro Manila - Mactan-Cebu Airport, Cebu
Airline: Cebu Pacific
Departure: 01:00 AM
Arrival: 02:00 AM
Available Seats :
98
2,500.00
Book Now


Online Flight Booking System
Harish
Home
Booked
Flights
Airport
Airlines
Users
Site Settings
+ New user
# Name Username Action
1 Cicil cicil Action
2 Harish harish Action
3 Mohan mohan Action


Online Flight Booking System
Harish
Home
Booked
Flights
Airport
Airlines
Users
Site Settings
Booked Flights List
Show 10 entries
Search:
Information Flight Info Action
1 Name :Cicil
Contact # :2345678964
Address :hfhg
Airline :Cebu Pacific
Plane :CEB10023
Airline :Cebu Pacific
Location :NAIA, Metro Manila - Mactan-Cebu Airport, Cebu
Departure :Jun 20,2021 01:00 AM
Arrival :Jun 20,2021 02:00 AM
2 Name :Harish
Contact # :7904179970
Address :asasdfefevev
Airline :Cebu Pacific
Plane :CEB10023
Airline :Cebu Pacific
Location :NAIA, Metro Manila - Mactan-Cebu Airport, Cebu
Departure :Jun 20,2021 01:00 AM
Arrival :Jun 20,2021 02:00 AM
Showing 1 to 2 of 2 entries
Previous 1 Next



Conclusion and Future scope:

This project was done on a small scale with minimal user interface. This can be improved with a better front end user interface. Features like email or message intimation to the user can be added.