AIRLINE MANAGEMENT SYSTEM

TEAM MEMBERS :

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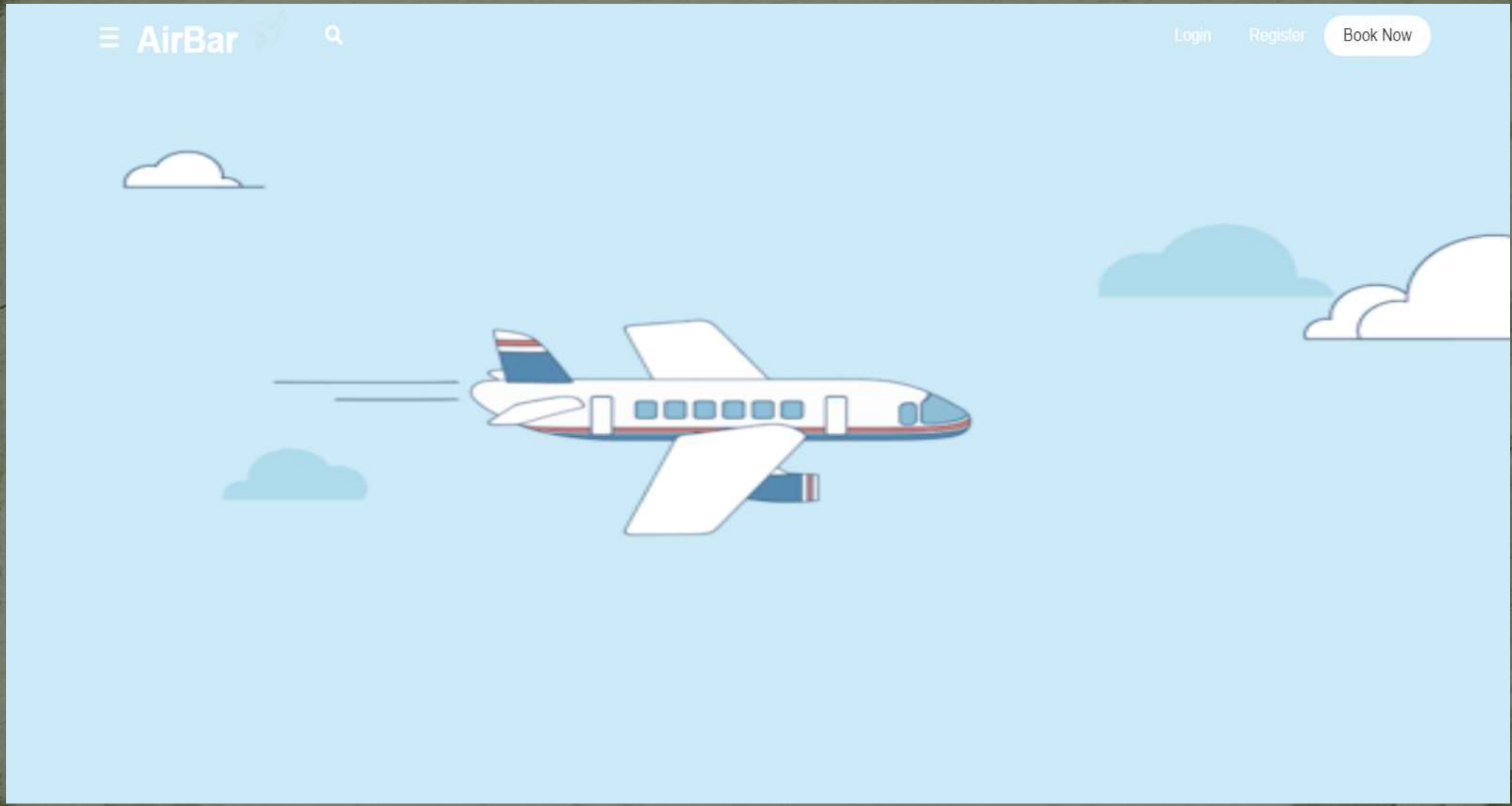
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Flight Search

Booking Management

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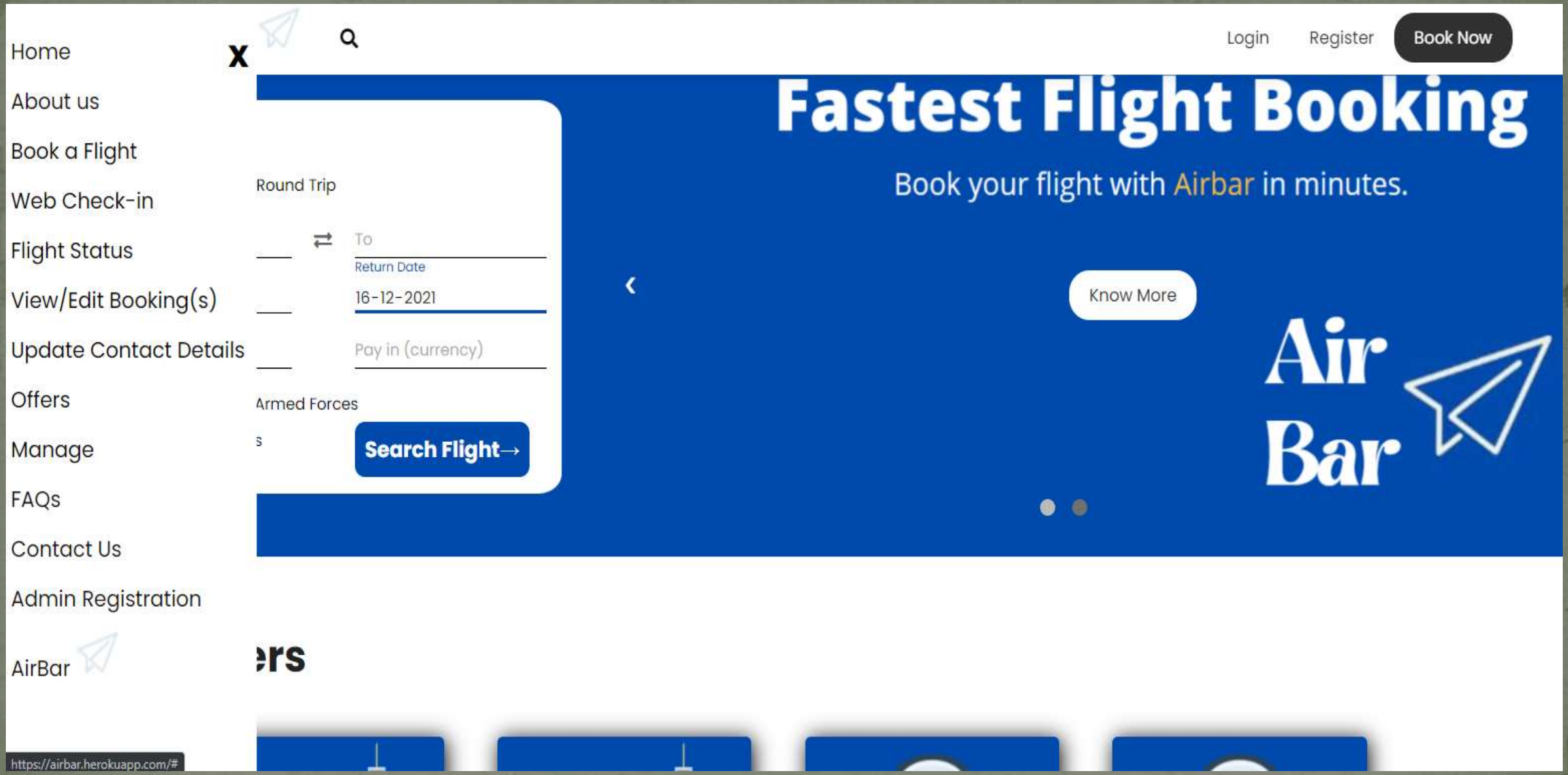
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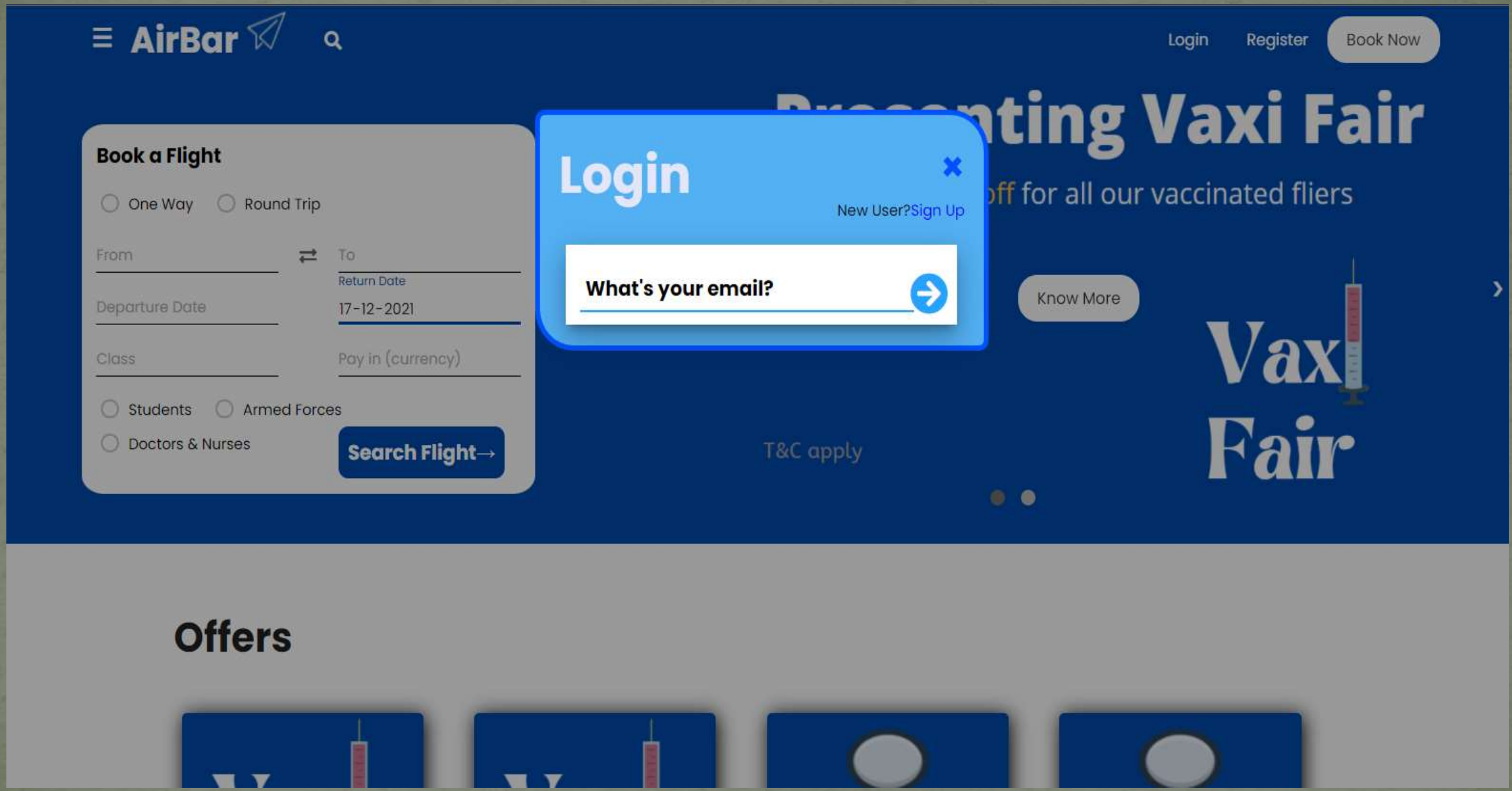
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AirBar

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FREQUENTLY ASKED QUESTIONS

- Basics
- Flight Details
- Account
- Payments
- Privacy
- Travel information

BASICS

What is online booking and how do I use it?

How do I use the online booking service?

Can people who have tested COVID-19 positive can travel?

How can I protect myself from COVID-19 ?

FLIGHT DETAILS

What flights are available for online bookings on https://airbar.herokuapp.com ?

CERTIFICATE

This is to certify that the project entitled "**AIRWAYS MANAGEMENT SYSTEM**" is being submitted at IGDTUW, Delhi for the award of **Bachelor of Technology** in **Computer Science Engineering (Artificial Intelligence)** degree. It contains the record of Bonafede work carried out by **06001172020 Ms. Shrishti Kumari, 06501172020 Ms. Simran and 03301172020 Ms. Simran Singh** under my supervision and guidance. It is further certified that the work presented here has reached the standard of B.Tech and to the best of my knowledge has not been submitted anywhere else for the award of any other degree or diploma.

Dr. Nisha Rathee
(SE Professor)
CSE(AI)
IGDTUW

Date: 8 December, 2021
Place: IGDTUW, DELHI

ACKNOWLEDGEMNET

We had a great experience working on this project and we go to learn a plethora of new skills through this project. However, it would not have been possible without the kind support and help of many individuals. We would like to extend our sincere thanks to all of them. We are highly indebted to the teachers and specially **Mrs Nisha Rathee Ma'am for** their guidance and constant supervision as well as providing necessary information regarding the project and also for their support in completing the project.

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Shristi Singh (06001172020)
Simran(06501172020)
Simran Singh(03301172020)

INDEX

PROBLEM STATEMENT

- Information about the route, cancellation of tickets, departure time , number of flights available and other such information.
- Store and retrieve information about the various transactions related to air travel.
- Keep track of all its passengers and thus schedule their journey accordingly.
- Maintains records of passengers travelling in the different flight on different dates reaching different destinations in the system.
- User friendly interface to administer and customer.

Table of Contents

Table of contents

Table of Contents

SYSTEM REQUIREMENTS SPECIFICATION

INTRODUCTION

1.1 Purpose

- Airline Reservation System aims to automate the flight operations and ticketing / seat booking and confirmation sytem of an Airline company. The software is providing options for viewing different flights available within a different timings for a specific day. That provide customers within facility to able to book ticket smoothly. The customers can modify and able to cancel the ticket for any reason. That prepare within a role and policies. The software should provide option for checking availability of the tickets. That is important for the customers to get message if the ticket unavailable. That will be displayed into customers. The customers should be noted when the change has been made or any other further changes.

1.2 Scope

- The airline booking website is an application stored in the user server. The purpose of the website is to resolve the client to allow website users to perform tasks related to booking an airline flight. The system enables to perform the following functions:
- Automation of flight operations
- Automation of ticketing / seat booking
- confirmation system
- Cancellation
- Improved and optimized service

1.3 Glossary

- ARS-Airline Reservation System
- LAN-Local Area Network
- GUI-Graphical User Interface
- OS-Operating System
- RAM-Random Access Memory
- MB-Mega Bytes
- GB-Giga Bytes
- Mbps-Mega bits per second
- HDD-Hard Disk Drive
- UML-unified modeling language

1.4 Overview

- The remaining section of this document provide a general description including characteristic of the users of this product, the product's hardware, and functional and non-functional requirements of the product.

Overall Description

2.1 Problem Statement

- Developing an AIRLINE RESERVATION SYSTEM- ARS for an air line company that want to automate its flight operations and ticketing / seat booking and confirmation sytem.

2.2 Existing System

- Before the automation the system suffered from following DRAWBACKS:
- Existing system is highly manual and involves a lot of paper work and calculation and therefor may be erroreous. This lead to inconsostency and inacuracy.
- The data may be lost, stolen or destroyed because it is stored on paper.
- The existing system consumes a lot of time causing inconveniencing to customers and the staff.
- Its difficult to update, delete, or view the data due its manual nature.
- Increasing number of passengers leads to difficulty in maintaining and retreiving details.

2.3 Proposed Sytem

- The ARS is proposed with the following,
- The computerization of the reservation system will reduce a lot of paperwork and hence load on the hence the load on airline admin and staff.
- The machine will perform all calculations. Hence chances of error are nearer to nil.
- The passenger, reservation, cancellation list can be easily retrieved and any required addition,
- deletion, updation can be performed easily and fast.
- Proper way of confirmation of bookings etc.

2.4 Product Functions

Booking agent with varying level of familiarity with computers will modify use this system .With this on mind , an important feature of this software is that it will be relatively simple to use.

SEARCH:

This function allows the booking agent to search for aeroplane's and ticket's availability between two cities, departure city and arrival city ,the date of departure ,preferred time and number of passengers.

SELECTION:

This function allows a particular aeroplane to be selected from the displayed list . Details as:

- Aeroplane number
- Date , time and place of departure
- Fare per head

Product functions

REVIEW:

If seats are available , then system prompts for the booking . All the information including total fare with taxes and flight details are reviewed.

TRAVELLER INFORMATION:

The details of all passengers supposed to travel including name , address , contact number , detail , email etc.

PAYEMENT:

It asks the agent to enter the various credit card details of the person making reservation.

- Credit card type
- Credit card number
- Expiration date of the card
- The name on card etc

Product Function

CANCELLATION:

The system allows the passenger to cancel a reservation and register the information regarding his/her ticket. It includes Confirmation no ,name ,date of journey , fare , deducted.

2.5 User Characteristics

2.5.1 User requirements

- User properties like Name, Address, Age,
- Associated with Flight Miles accumulated and Credit Card information.
- Flight properties like Departing/Arriving City, Departure/Arrival dates and times, Miles, and an identifying Flight Number.
- Flight Seat properties of identifying seat number, reserved and flight .
- Associated to Flight by flight number.

2.5.2 User Education Level

- At least user of the system should be comfortable with English Language.

2.5.3 User's Technical Expertise

- User should be comfortable using general purpose applications on the computer system.

2.6 Constraints

- System contstraints:
- The system is a web base, so it will run on a web browser i.e IE, Chrome, Firefox etc.
- The system will run under any OS with internet functionality.

2.7 Assumption and Dependencies

- Booking agent will be having a valid user name and password to access the system.
- The software needs booking agent to have complete knowledge of ARS.
- Software is dependent on access to internet

. 3 Requirement Specification

- This section highlights the functional requirements, non-functional requirements and other requirements.

3.1 Functional Requirements

3.1.1 Performance requirements

- User Satisfaction: The system is such that it stands up to the user expectations.
- Response Time: The response of all operations is good.
- Error Handling: Response to user errors and undesired situation has been taken care
- of to ensure that the system operates without halting.
- Safety and Robustness: The system is able to avoid or tackle disastrous action. In
- other words it should be foul proof.
- Portable: The software should not be architectecture specific. It should be easily
- transferable to other platforms if needed.
- User Friendliness: The system is easy to learn and understand. A native user can
- also use the system effectively, without any difficulties

Requirement Specification

3.1.2 Design constrain

- There are a number of factors in the client's environment that may restrict the choices of a designer. Such factors include standards that must be followed, resource limits, operating environment, reliability and security requirements and policies that may have an impact on the design of the system.

- Standard Compliances This specifies the requirement for standards the system must follow. The standards may include the report format and accounting properties.

- Hardware Limitations Hardware limitations can include the types of machine to be used, operating system available on the system, languages support and limits on primary and secondary storage.

- Reliability and Fault Tolerance Fault tolerance requirement can be place a constraint on how the system is to be designed. Recovery requirements are often on integral part here, detailing what the system should do if some failure occurs to ensure certain properties. Reliability requirements are very important for critical application.

- Security Security requirements are particularly significant in defense system and database system. They place restrictions on the ues of certain commands, control access to data, provide different kinds of access requirements for different people, require the use of passwords and cryptography techniques and maintain a log of activities in the system.

3.1.3 Hardware Requirements

- For the hardware requirements like memory restrictions, cache size, the processor, RAM size
- etc… those are required for the software to run.
- MINIMUM Hardware Requirements
- Processor Pentium IV
- Hard Disk Drive 100 GB
- RAM 1 Gb

PREFERED HARDWARE REQUIREMENTS

- Processor Core i3
- Hard Disk Drive 500 GB
- RAM 4 GB

3.1.4 Software Requirements

- Any window based operating system with DOS support are primary requirements for software development. Windows 7 and up are required. The system must be connected vie LAN and connection to internet is mandatory.

3.1.5 Other Requirement

- Security
- Portability
- Correctness
- Efficiency
- Flexibility
- Testability
- Reusability

3.2 Non-Functional Requirements

3.2.1 Security

- The system is must automatically log out all customers after a period of inactivity. The system should not leave any cookies on the customer's computer containing the user's password. The system's back-end servers shall only be accessible to authenticated management.

3.2.2 Reliability

- The reliability of the overall project depends on the reliability of the separate components.
- The main pillar of reliability of the system is the backup of the database which is continuesly maintained and updated to reflect the most recent changes. Also the system will be functional under a container. Thus the overall stability of the system depends on the stability of the container and its underlying OS.

3.2.3 Availability

- The system should be available at all the times, meaning the user can access it using a web browser, only restricted by the down time of the server on which system runs. A customer friendly system which is in access of people around the worlds should work 24 hours. In case of a hardware failure or database corruption, a replacement page will be shown. Also in case of hardware failure or database corruption backups of the database should be retreived from the server and saved by the Organizer. Then the service will be restarted. It means 24x7 availibility.

3.2.4 Maintainability

- In case of a failure, a re-installization of the system will be done. Also the software design is being done with modularity in mind so that maintainability can be done efficiently.

3.2.5 Supportability

- The code and supporting modules of the system will be well documented and easy to understand. Online user documentation and Help system requirements will be provided.

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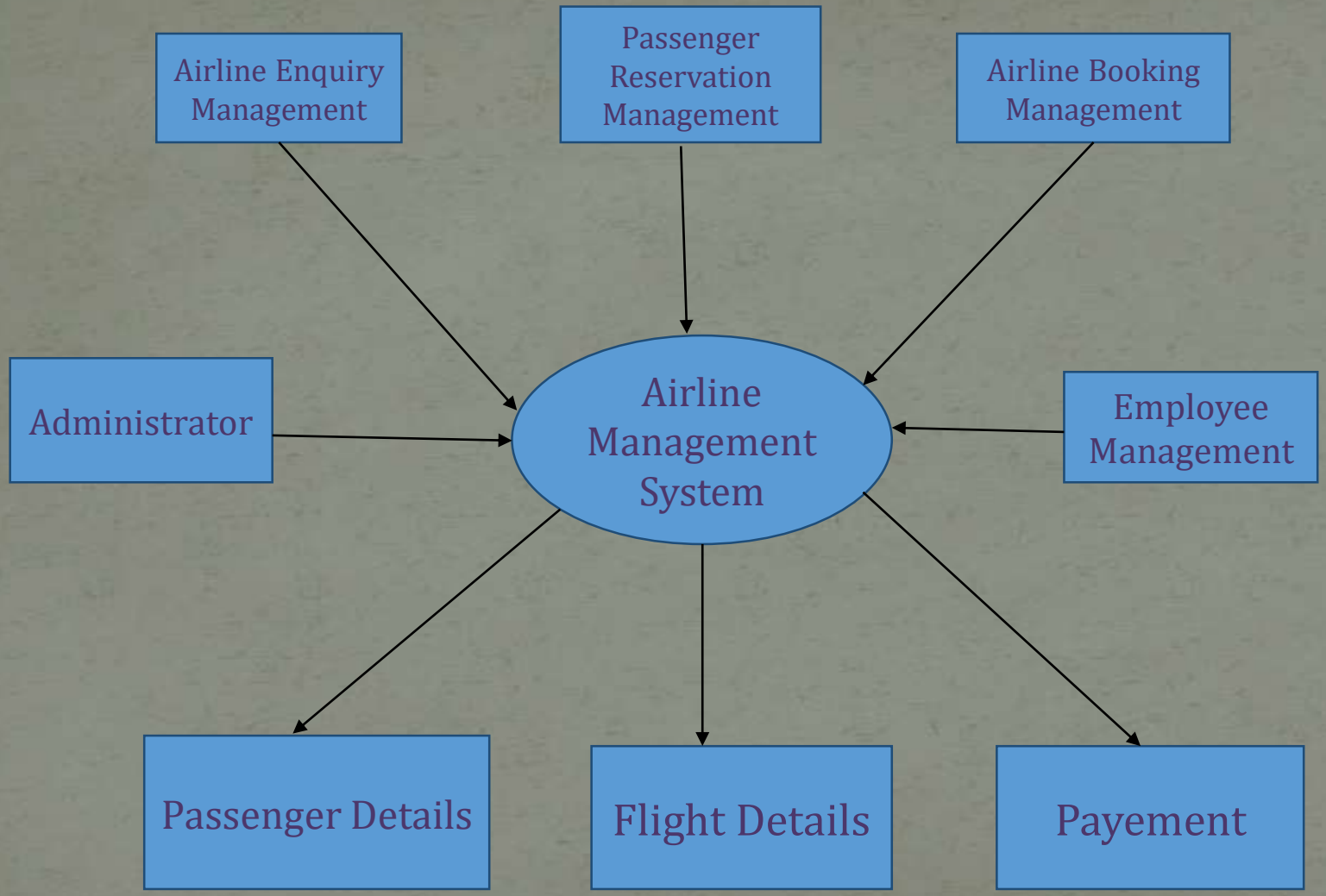

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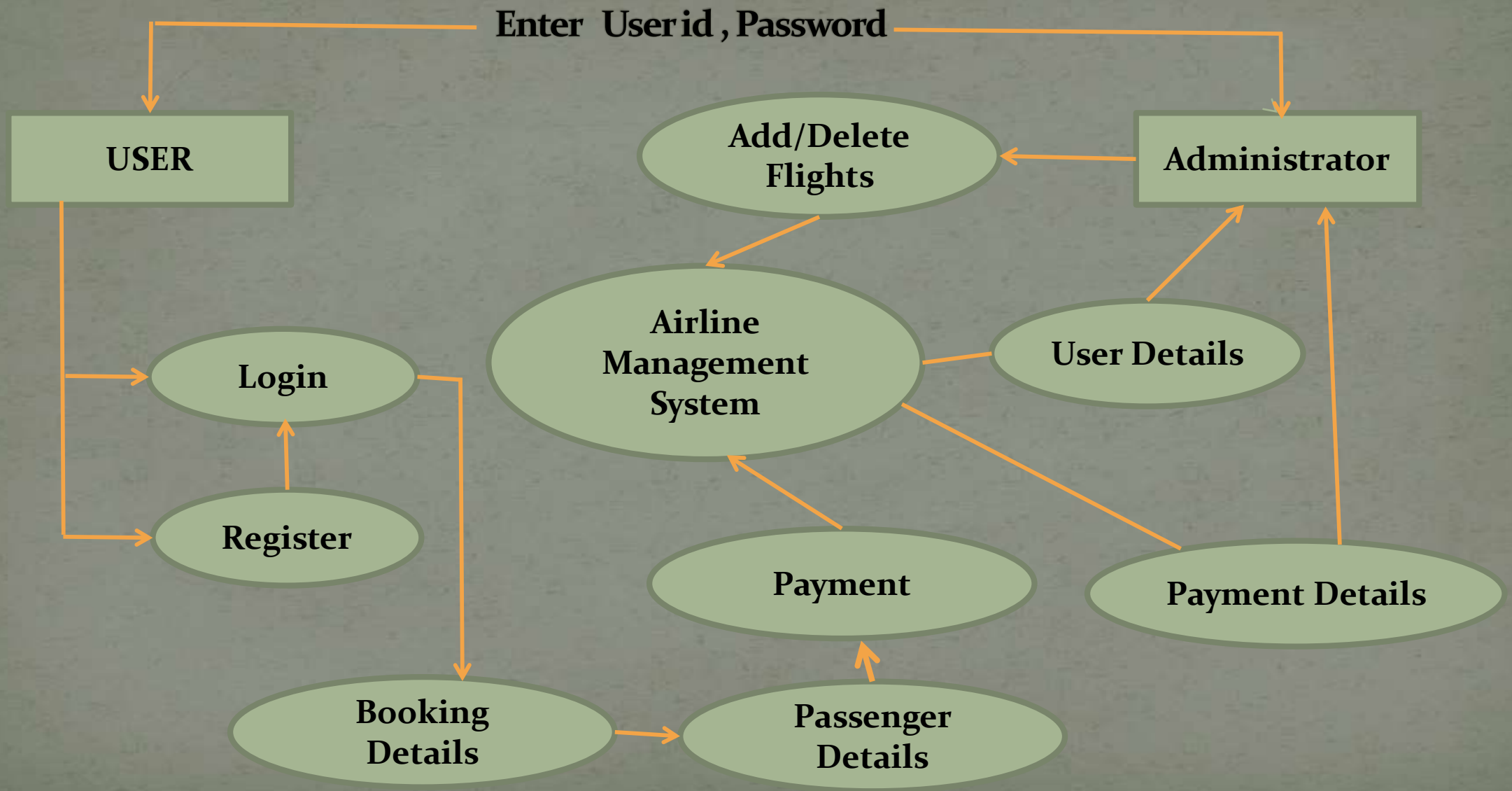
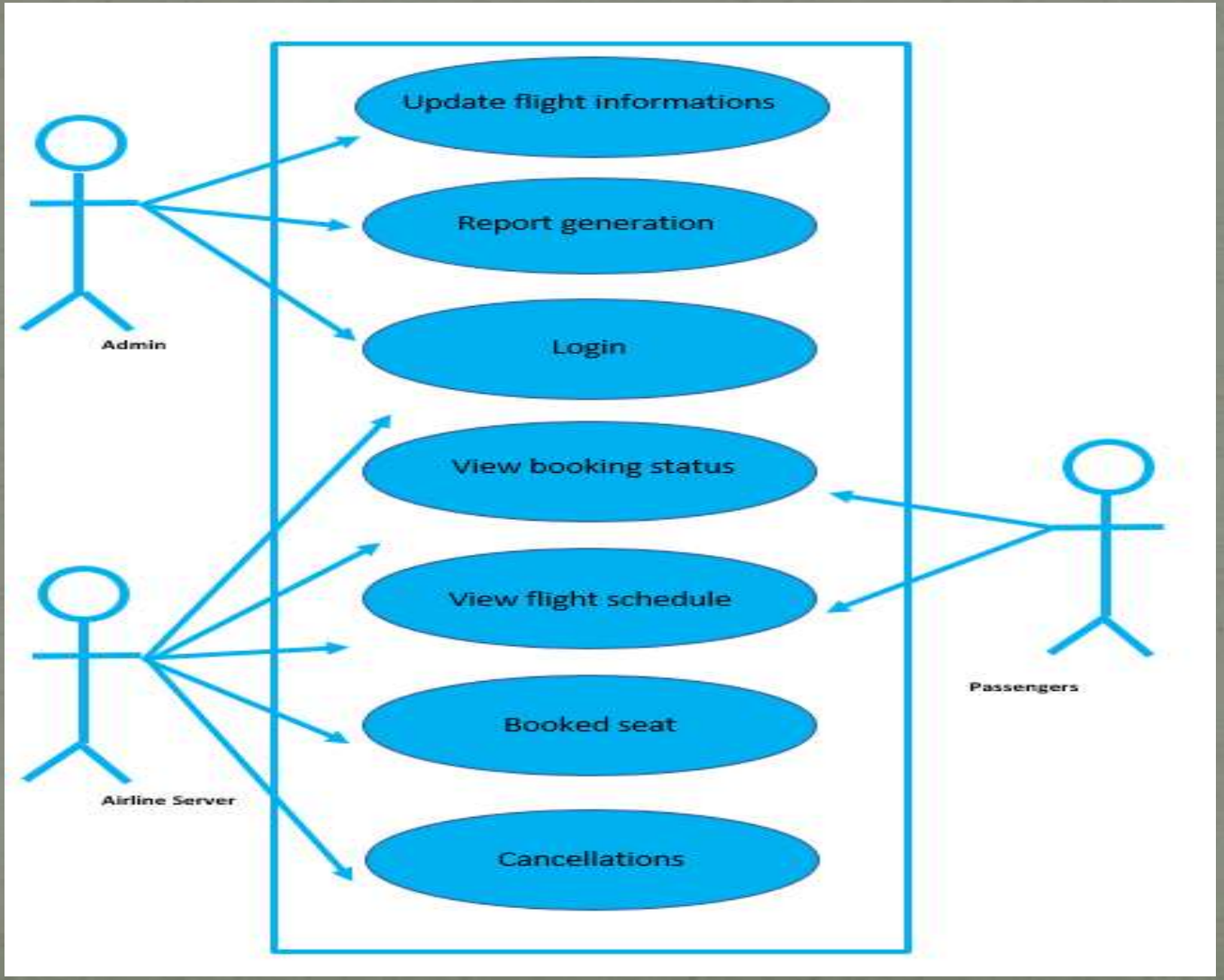


USE CASE DIAGRAM



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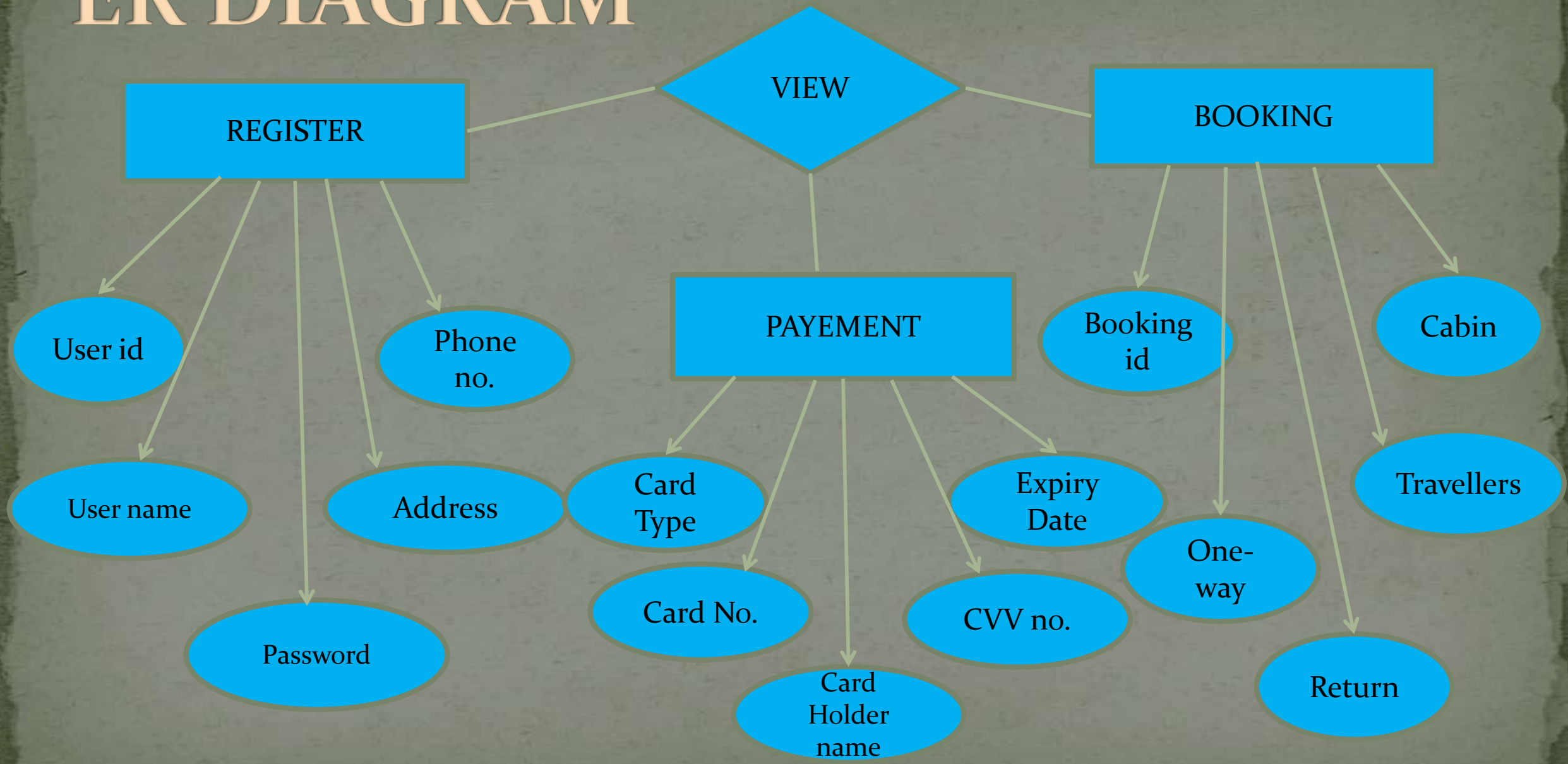
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Card Type
Card No.
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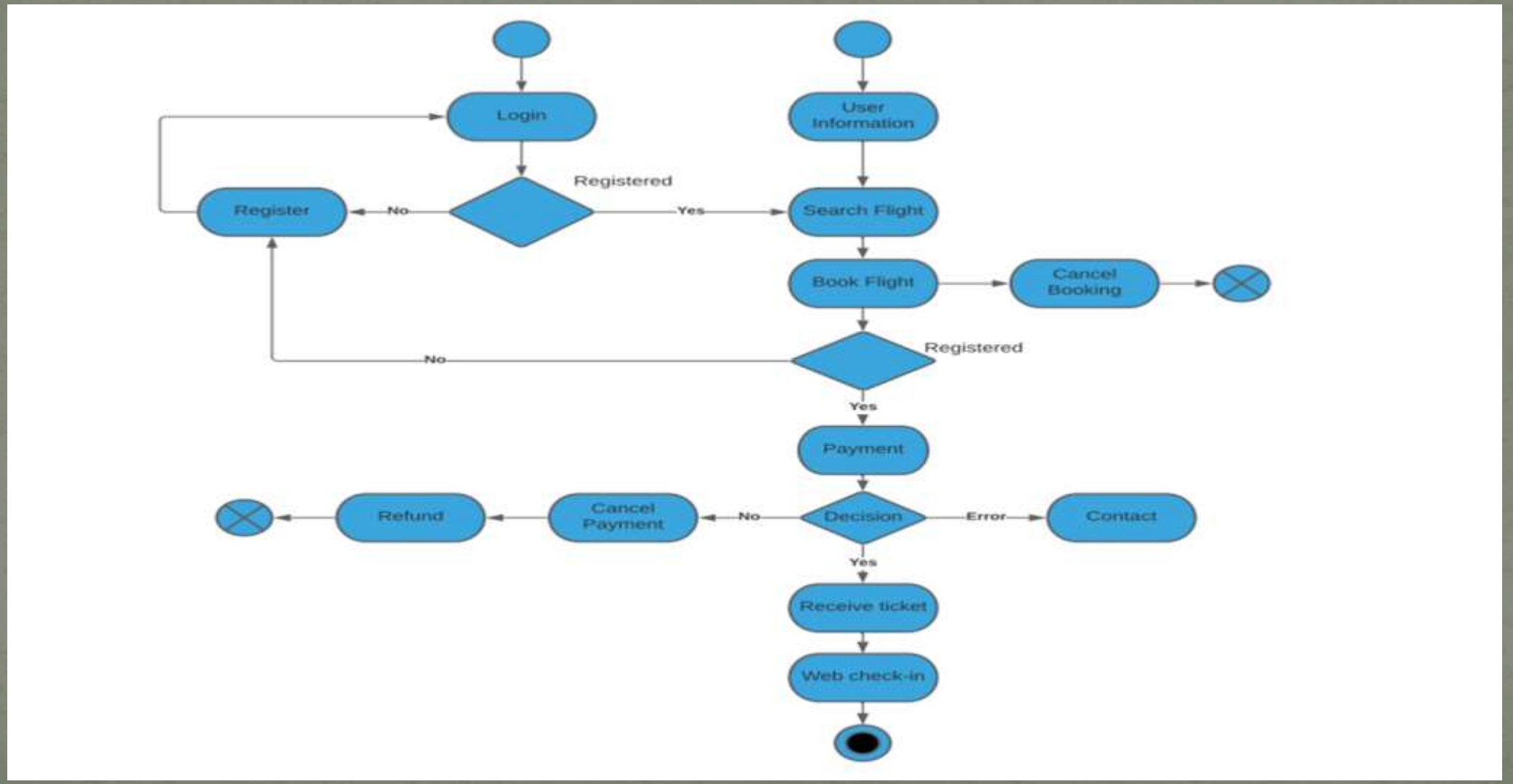
One-way
Return
Travellers
Cabin

ACTIVITY DIAGRAM



Thank You