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A

Mini-Project Report on

"Airline Reservation System"

In Partial Fulfillment of the Requirements for Award of
The Degree of
BACHELOR IN ENGINEERING
BY

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Project Guide
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T.E Computer. (Sem-VI) 2021-2022

Certificate

This is to Certify that work on the Mini-Project Report " **Airline Reservation System** " Presented by :

1. **" Prathamesh Madhukar More "**
2. **" Omkar Rajendra Lokhande "**
3. **" Viraj Jalindar Raut "**

in Partial Fulfillment of the Requirement for the Award of *Bachelor of Computer Engineering* to the VPKBIET, Baramati has been carried out under my guidance.

To the best of my knowledge and belief the matter presented in this report has not been submitted earlier or copied from anywhere.

Mr. M . D . Shelar,

Mini- Project Guide

ACKNOWLEDGEMENT

In Our Endeavor to achieve the Success in Completing our Mini-Project " **Airline Reservation System** " in the Third Year Engineering Course with Specialization in Computer Engineering, we are greatly thankful to those People without whose Assistance, Guidance and Efforts we would not be able to Complete our Mini-Project Successfully.

We express with our Heartfelt Gratitude to our guide '**Mr. M. D. Shelar**' Sir, who through his Experience, Encouragement and constant Guidance helped us to Shape Our Project to the Present Stage, without their Guidance, Our Project would not be Completed.

Finally, we would also like to thank our College's Teaching and Non-Teaching Staff of our Department for Co-ordinating with us.

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ABSTRACT

As a part of Mini-Project under Web Technology, it is necessary that the student should be more familiar to the different technologies in the market, so we are going to create the Software using a Three-tier Architecture and Some Block of Codes using different technologies that would help in Reservation System in Airlines, such as providing some applications like Booking a ticket, Payment Options, cancelling a Ticket, Adding a Flight. All this is done in two parts, like Admin Section and User Section. In this Mini-Project we are trying to implement the Front-End type Application Software that will help both the Client & the Administrator to get the information about the Airline Reservation data.

This Web Technology Mini-Project is basically Created to Reduce the Work of Administrator in a large scale. In this Mini-Project we are also providing an option of creating a New User Login Account and a Forgot Password Option if the user doesn't recognize his Login Credentials. Also, we have taken help of Database from XAMPP Server in order to store the Data of the Customers Which are been provided with the Services.

This all things will help the Administrator, and completely all the system will be user friendly. It will be Very Easy to Handle. This Mini-Project will also hide Details about the Records. So, Data Security is Maintained.

<u>INDEX</u>

1-Introduction

Need of Computerization :

We live in a Computer Age. Most of our day-to-day activities are beginning influenced by the use of computer. It has become necessary for every one to have Basic knowledge of Computer. The computer field as a whole continues to experience tremendous growth of Personal Computer, which were introduced in early 1980's, now have become Popular and being Widely Used in Offices and Homes. The Usefulness of Computer has growth steadily with the Introduction of Powerful and versatile Computer Software Programs, while in areas like Science and Technology Improvements are Unimaginative.

Some people enormously believed that Computers can only work on arithmetic operations. The use can work on any kind of data – text, numeric, images, sound and video clipping etc.

Generally, the Computer is Characterized by Incredible Speed, Great Accuracy, High Consistency and High amount of Storage Capacity.

A crucial difference between manual and computerized systems is the ease of backup of a computerized system. All transactions can be saved and backed up, in case of fire or other Mishap. Also, in case of a mishap, Computerized systems allow for quicker recovery from data loss.

Need Of Database:

Basically, Database is a System of inter-related data and set of certain Programs which helps us to Store and Access those stored Data in a very easy and Efficient Way. Such Systems are generally developed for large amount of Data. So, when dealing with such large amount of Data, we should consider two things which will definitely require optimization, which are "Efficient way of Storage of Data" and the other one being "Fast and Easy Retrieval of data".

Database System generally decreases the effect of "Data Redundancy". As, Data Redundancy leads to higher storage costs and poor Access Time. One of the problems in storing data on a machine is "Lack of Data Security". Because, while using a Proxy Server, there are possibilities of the Data Leakage. But Database System has an Advance facility of Providing "Data Security", So that the data remains secured.

Also, Database systems provides Encapsulations, Data Abstraction Methods, and Proper Functionalities to Handle Large Data.

Some Applications of the Database Include Telecom, Industry, Banking System, Sales, **Airlines,** Education Sector, Online Shopping, and many more.

Need Of Learning Web Technology :

As we discussed in the earlier sessions, Web technology is nothing but a field of Engineering Science which basically deals with deep study on the current Technologies (Programming languages) which are in the society, their requirements, their advantages, their disadvantages, their limitations and their applications.

Some of the Web technologies in the current fast growing society are HTML, Java, Javascript, PHP, Ruby, Perl, Python, Servlet, JSP, any many more.

From this, we use HTML for Designing basic Webpage, Java and Javascript are used for accessing interfaces in the Web Pages, PHP is used where we want to reduce the number of operations and is a simple language to understand. As such there are vast number of applications of each Programming Language.

If we want to deal with Webpage handling and Webpage application, we need to learn more and more about these different technologies. It is mandatory to know about these technologies if we want to work with the online interfaces and webpages.

So, it is said that in this modern era if we don't know about the web technologies which is been currently used, then the individual is much back to this era.

2 - Introduction to the Mini-Project

We have designed the Mini-Project "**AIRLINE RESERVATION SYSTEM**". The Mini-Project is made to be used by Respective Airport Authorities which will make their Airline reservations and respective transaction work easy. It is built in such a way that user and admin section are kept different, in order to maintain data security.

At starting, it contains a basic Login page which will re-direct the admin to the Home-page if correct matching Login Credentials Used. By this Mini-Project we can create New Admin Logins, Adding a New Flight Details, Booking a Ticket for a respective flight, Payment option for Particular Flight, Cancelling the Booked Ticket of any Customer, etc.

One of the functionalities of this Mini-Project is that it is more user friendly. In this Mini-Project we keep the records of all the Customer details and all their transactions required while booking as well as Cancelling a Ticket.

This Mini-Project provides vast facilities to the Airport Authorities (Admin) as they are very busy in their work; it is time consuming work for them to keep the things in manual registers. So, from that Point of View, our Mini-Project saves a lot of time, which has important to that of money. And is Efficient too.

In this Mini-Project, "Database from XAMPP" is used as back-end that is for "Storing data" in Database. XAMPP is a powerful Database Management Package/System, in order to which we can efficiently Provide Security to the Customer Data as well as take Backup as and when Necessary.

Connecting to Java Interface :

Importing the Packages – We need to include all the packages that contain the JDBC classes needed for "Database Programming". Most often, using "import java.sql".

Registering the JDBC driver – Here we have to initialize a driver so that we can open a communication channel with the database.

Opening a Connection – Here, we can use getconnection() method to create a Connection object, which represents a physical connection with the database.

Executing a Query – This actually requires to use an object of type Statement for building and submitting an SQL statement to the database.

Extracting data from Result Set – It is Suggested that we use the appropriate getXXX() method to retrieve the data from the result set.

Cleaning the Environment – Here, it is essential to explicitly close all database resources versus relying on the JVM's garbage collection.

3- Database Design

Table 1

This table gives the detail information of " *Adding Customer Details* "

Field	Type	Size	Description
Name	Text	10 Characters	It defines the Name of the Customer in the current Session
Contact Address	Number	15	It is a Primary id which will store the customer contact details
Address	Text	15 Characters	it defines the Address of the Customer which will book the ticket

Table 2

This Table gives the detail information about " *Adding a Flight* "

Field	Type	Size	Description
Name	Text	20 Characters	It defines the Name of the Flight in the current Session
Airline	Text	15 Characters	It defines the Name of Airline to which the Flight will belong
Departure	Number	10	It defines the Departure time of the respective flight
Arrival	Number	20	It defines the Arrival date and time of the respective flight
Available Seats	Number	10	It will contain the seat number of the respective flight

Table 3

This table gives the information about " *Searching the Flight Section* "

Field	Type	Size	Description
From	Text	20 Characters	It will contain the Departure Location of the flight
To	Text	20 Characters	It will contain the Arrival Location of the Flight
Departure Date	Date	10	It defines the Departure time of the respective flight

Table 4 (Transaction Table)

This table will give information about the *User Login Section*

Field	Type	Size	Description
Username	Text	20 Characters	It will contain the Username of the admin
Password	Text	15 Characters	It will contain the Password of the Admin to Login

4 - ER Diagram

-(Part A)-
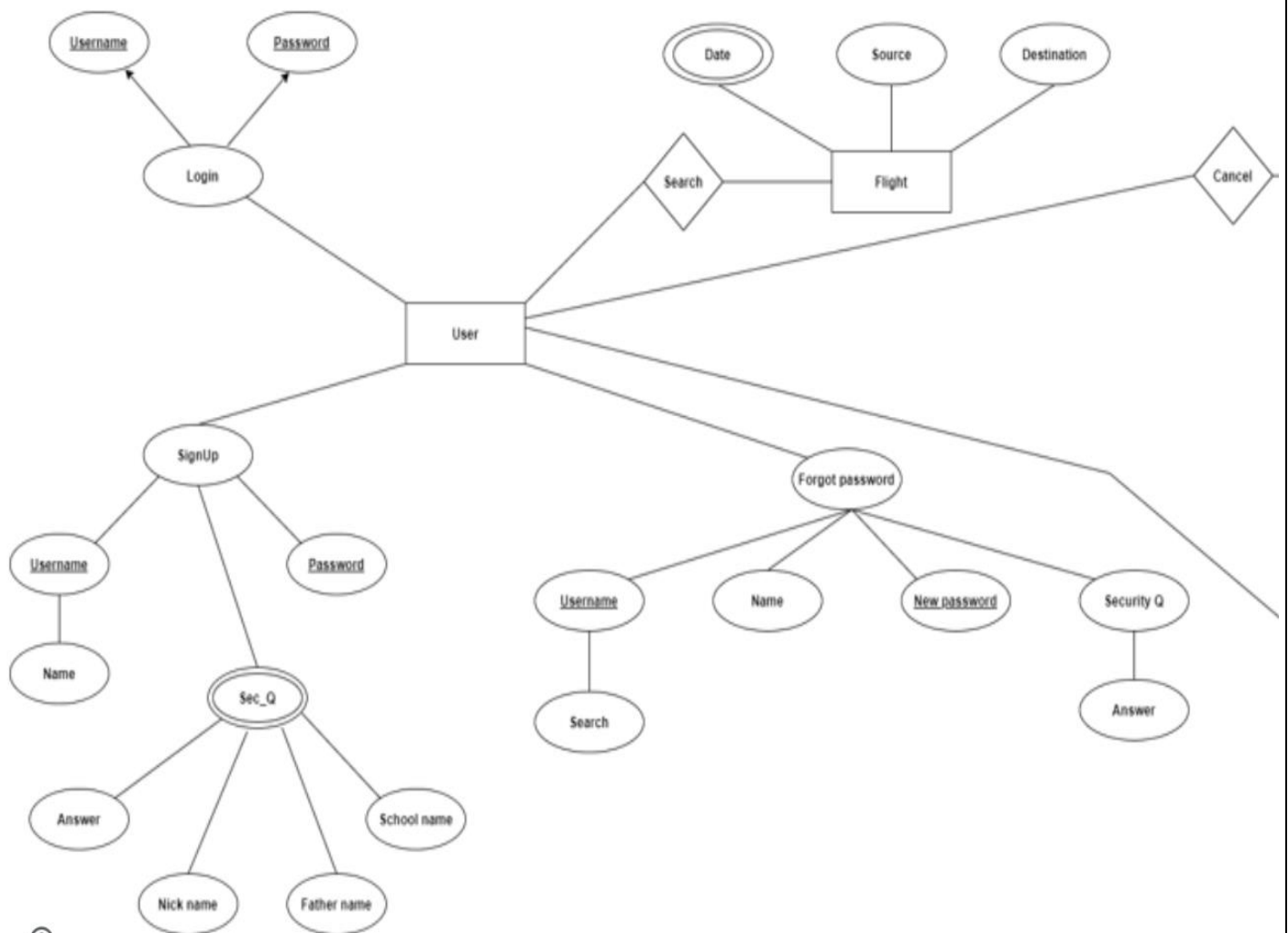
-(Part B)-
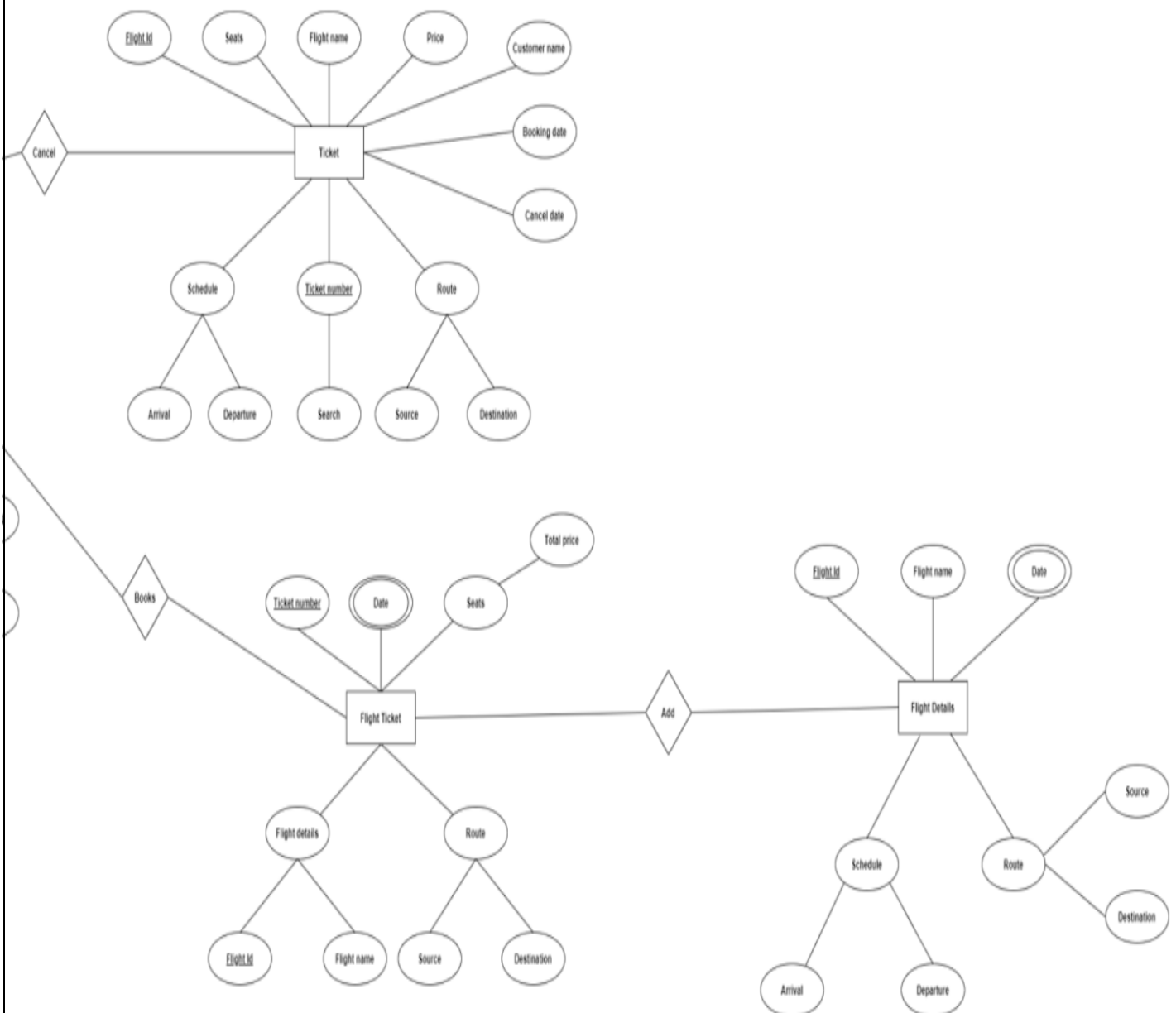
5 - TECHNICAL SPECIFICATION:

HARDWARE REQUIRED:-
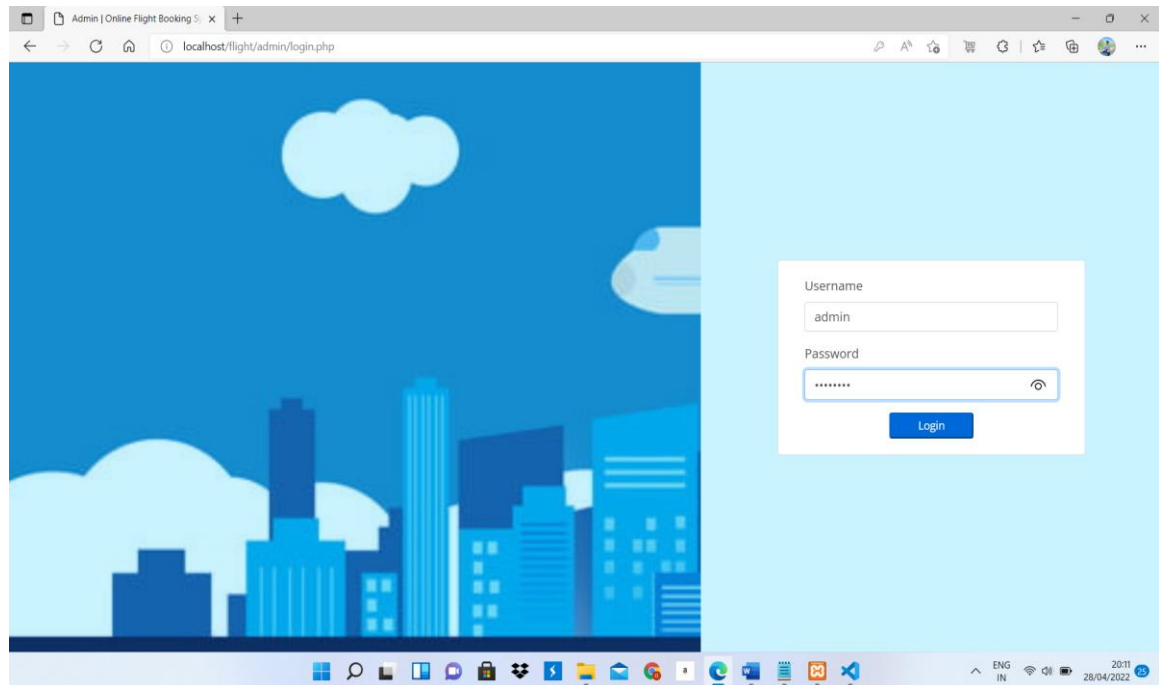
- CPU processor :-i5, 8th Generation

- RAM – Preferred 128 MB and above (Used 256 MB)

- Hard Disk – Preferred 40 GB and above (Used 1 TB)

- Output device:- Monitor, Printer.

SOFTWARE REQUIREMENTS :-

- Operating system:-Preferred Windows XP and above (Used Windows X64)

- Front end :- XAMPP Server

- Back end:- My-SQL (Structured Query Language to handle Database).

- Notepad++ (if required)

6- Output Screen (Admin Section)

Login Section :
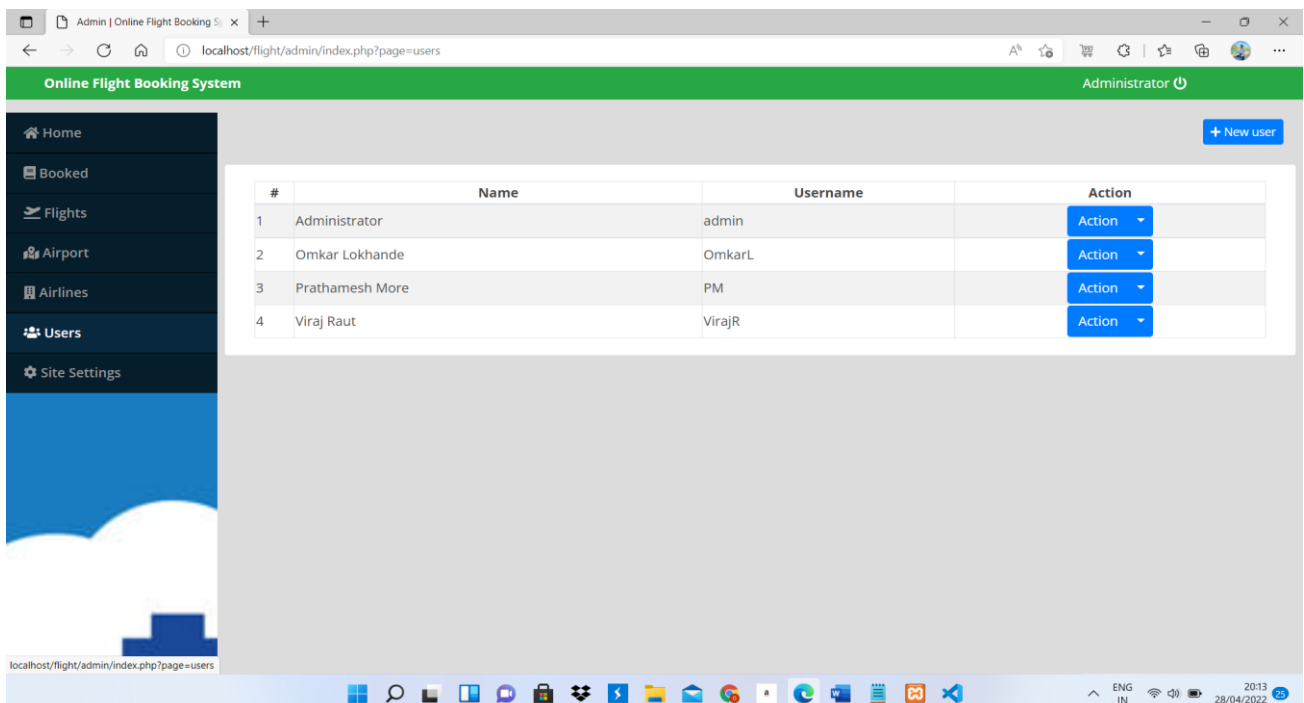
Previously Registered Admins :

Welcome Page After Successful Login :
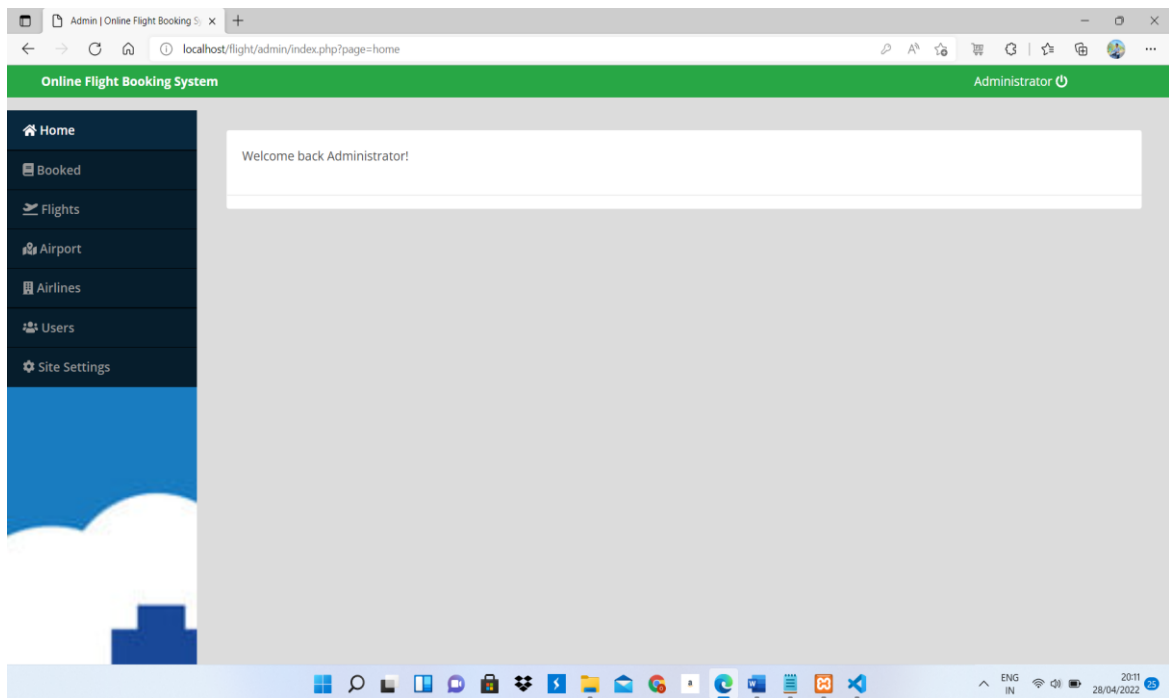
Adding a Flight from Admin Side :
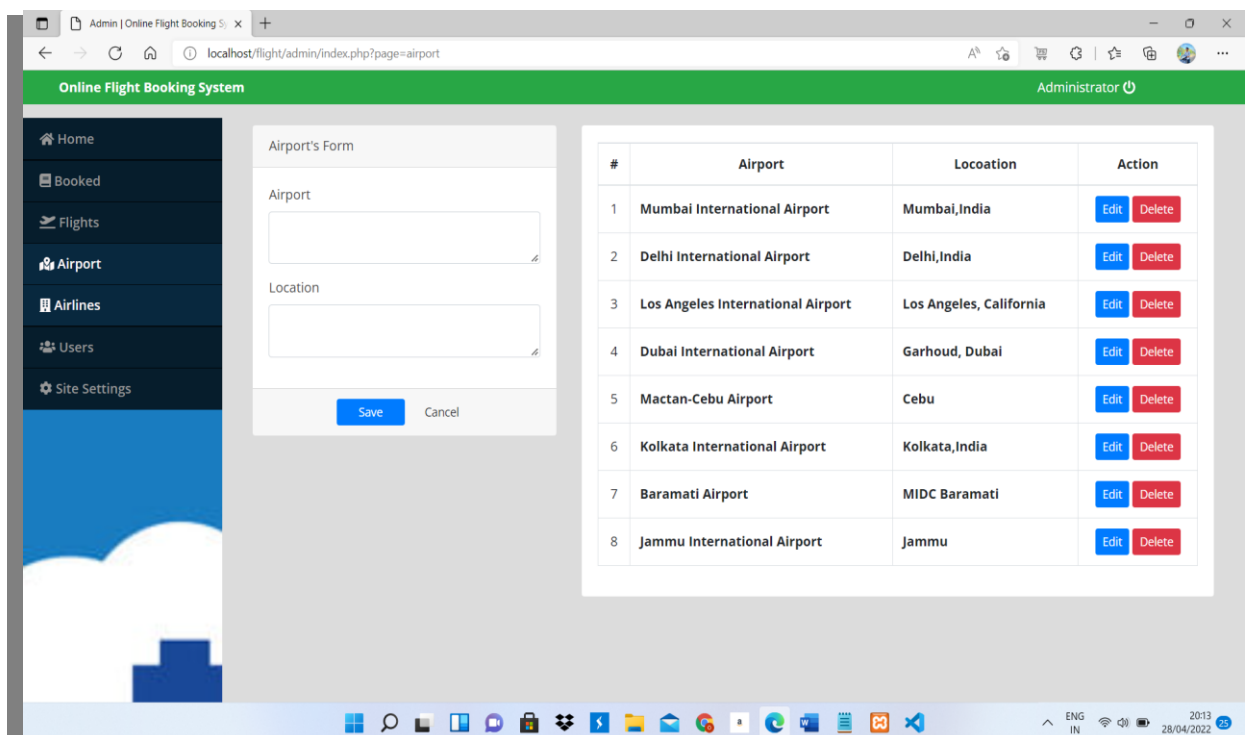
Confirming the Added flight :

Displaying the Booked Customer Flights Details :

7. Output Screen (User Section)

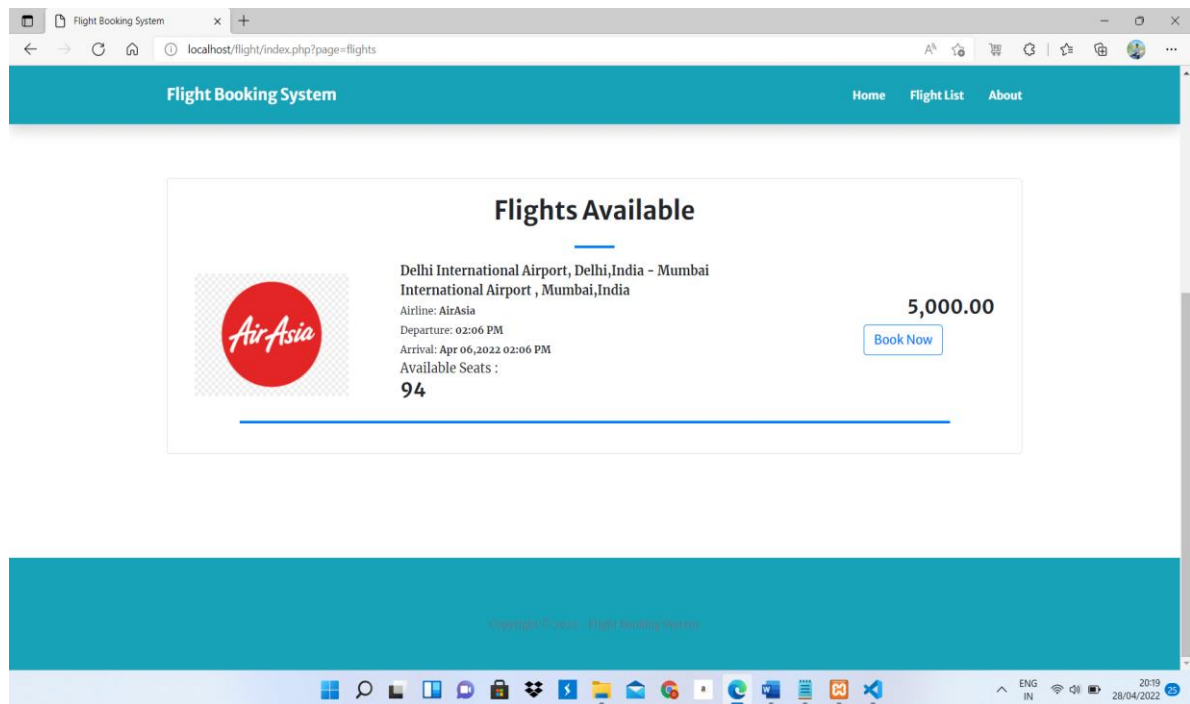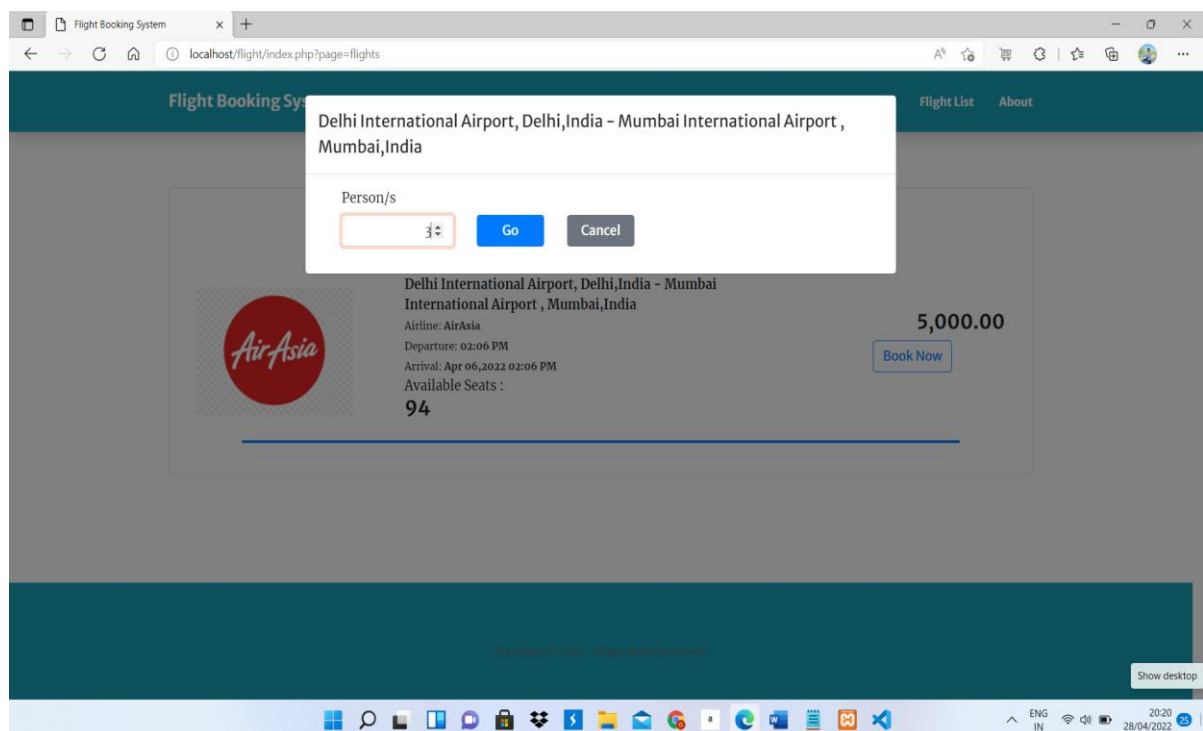## User Welcome Page :
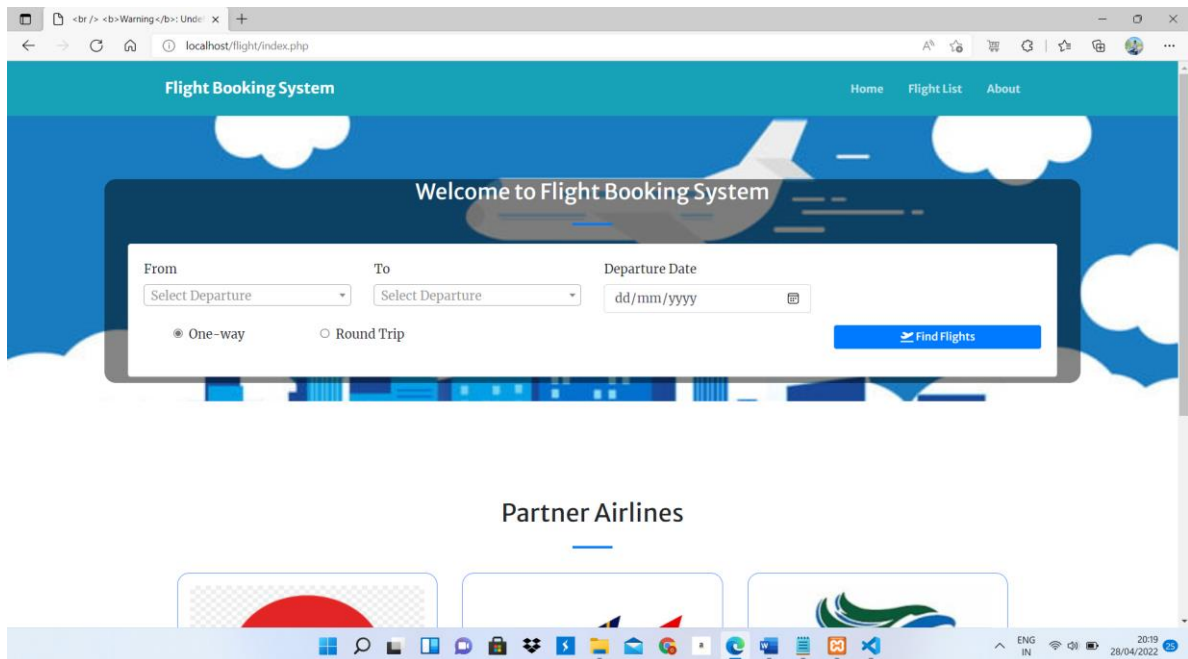
Selecting Airline to travel with, Page :
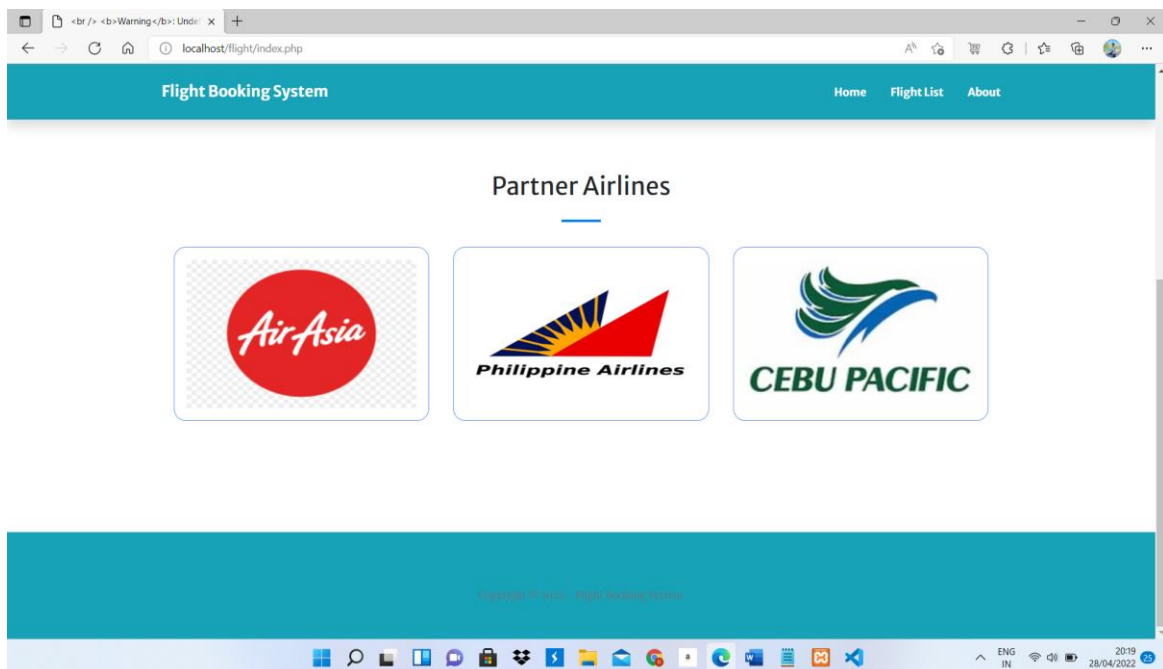
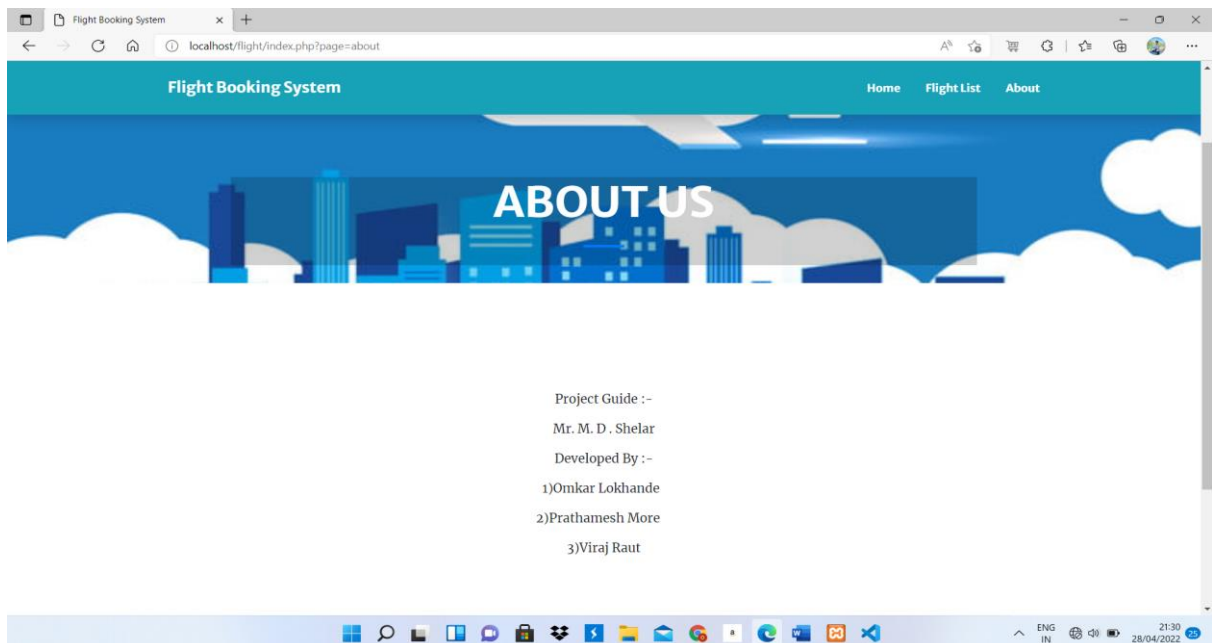# Flights Available for the Current Airline Chosen Page :

Confirming the Number of Passengers for a Selected Flight :

Adding Customer Detail for the Selected Flight :

About Us Page :

8 - USER MANUAL

The Application Software "**AIRLINE RESERVATION SYSTEM**" is developed in XAMPP (Along with Apache Tomcat Application Server) as a Front-End and My-Sql as Back-End.

This chapter introduces you to interact the user with Our Mini-Project. User's Understanding and Satisfaction is the most important issue in the Airline Reservation System Mini-Project.

The Main Menu contains the tabs: -

- Creating a New Account Page
- Login Page
- Adding a New Flight
- Booking Ticket for a Flight
- Confirmation of Ticket
- Cancelling the Previously Booked Ticket

1) **Creating a New Account Page : -**
   This is the form through which the Authorities can add a new account to get login into the system. This option is provided in order if the handling in-charge is changed.

2) **Login Page -**
   This is the form through which the admin can enter into the System if the admin provides correct credentials. After Successfully getting login, the admin would see the home page of the system with multiple options available for the customer.

3) **Adding a New Flight : -**

   This is the form through which the admin can add a new flight to a day. Its like scheduling a flight to a particular day. All this Changes will be accessible to Higher Officials only.

4) **Booking Ticket for a Flight : -**

   This is the form through which the admin can Book a ticket for the customer as per the availability of the flight in the current duration. Also, as per customer schedules and flight availability, the ticket will be booked.

5) **Payment Option Page : -**

   This form will involve the confirmation of the Ticket for a customer. In this, the customer would be asked for Card details (Credit/Debit) of the Customer, and after successful transaction, the ticket for a customer will be booked.

6) **Cancelling the Previously Booked Ticket: -**

   Using this Menu, the customer will be provided with the option for cancelling the previously booked ticket. It would ask for information of the customer used while booking a ticket, and match for the entries in the customer dataset; if matched, it will delete the entry.

9 - Conclusion

We designed this Mini-Project to the Best of our Ability.

After the development of " **AIRLINE RESERVATION SYSTEM** "
Working of the System showed that it dealt with
Following aspects:

1. Creating a New Admin Account for Login into the System.

2. Login Page Section, i.e., System would ask for Login Credentials, if
   the credentials match with the dataset, Admin would be redirected to
   the Home-Page of the System.

3. Adding a New Flight or in Simple Words, Scheduling a flight to
   Corresponding Date.

4. Booking the Ticket of the Flight while checking the availability of the
   flight.

5. Providing Confirmation Option to confirm the Ticket for a Customer of
   a Particular Flight.

6. Cancelling the Previously Booked Ticket by a Customer, as per his
   requirement.

10 - BIBLIOGRAPHY

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