

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction to DBMS

Database is a collection of related data. DBMS came into existence in 1960 by Charles. Again in 1960 IBM brought IMS-Information management system in 1970 Edgar Codd at IBM with new database called RDBMS. In 1980 then came SQL Architecture- Structure Query Language. In 1980 to 1990 there were advances in DBMS,

e.g.DB2, ORACLE. A database has the following implicit properties:

- A database represents some aspects of the real world, sometimes called the mini world or the universe of the discourse (UoD). Changes to the mini world are reflected in the database.
- A database is a logically coherent collection of data with some inherent meaning. A random assortment of data cannot correctly be referred to as a database.
- A database is designed, built, and populated with data for a specific purpose. It has an intended group of users and some preconceived applications in which these users are interested.

In other words, a database has some source from which data is Derive, some degree of interaction with events in the real world, and an audience that is actively interested in its contents.

Metadata (Meta data, or sometimes Meta information) is “data about data”, of any sort in any media. An item of metadata may describe a collection of data including multiple content items and hierarchical levels, for example a database schema. In data processing, Meta data is definitional data that provides information about or documentation of other data managed within an application or environment. The term should be used with caution as all data is about something, and is therefore metadata.

A database management system (DBMS) is a collection of programs that enables users to create and maintain database. The DBMS is a general purpose software system that facilitates the process of defining, constructing, manipulating and sharing databases among various users and applications.

Defining a database specifying the database involves specifying the data types, constraints and structures of the data to be stored in the database.

The descriptive information is also stored in the database in the form database catalogue or dictionary; it is called meta-data. Manipulating the data includes the querying the database to retrieve the specific data. An application program accesses the database by sending the queries or requests for data to DBMS. The important function provided by the DBMS includes protecting the database and maintain the database.

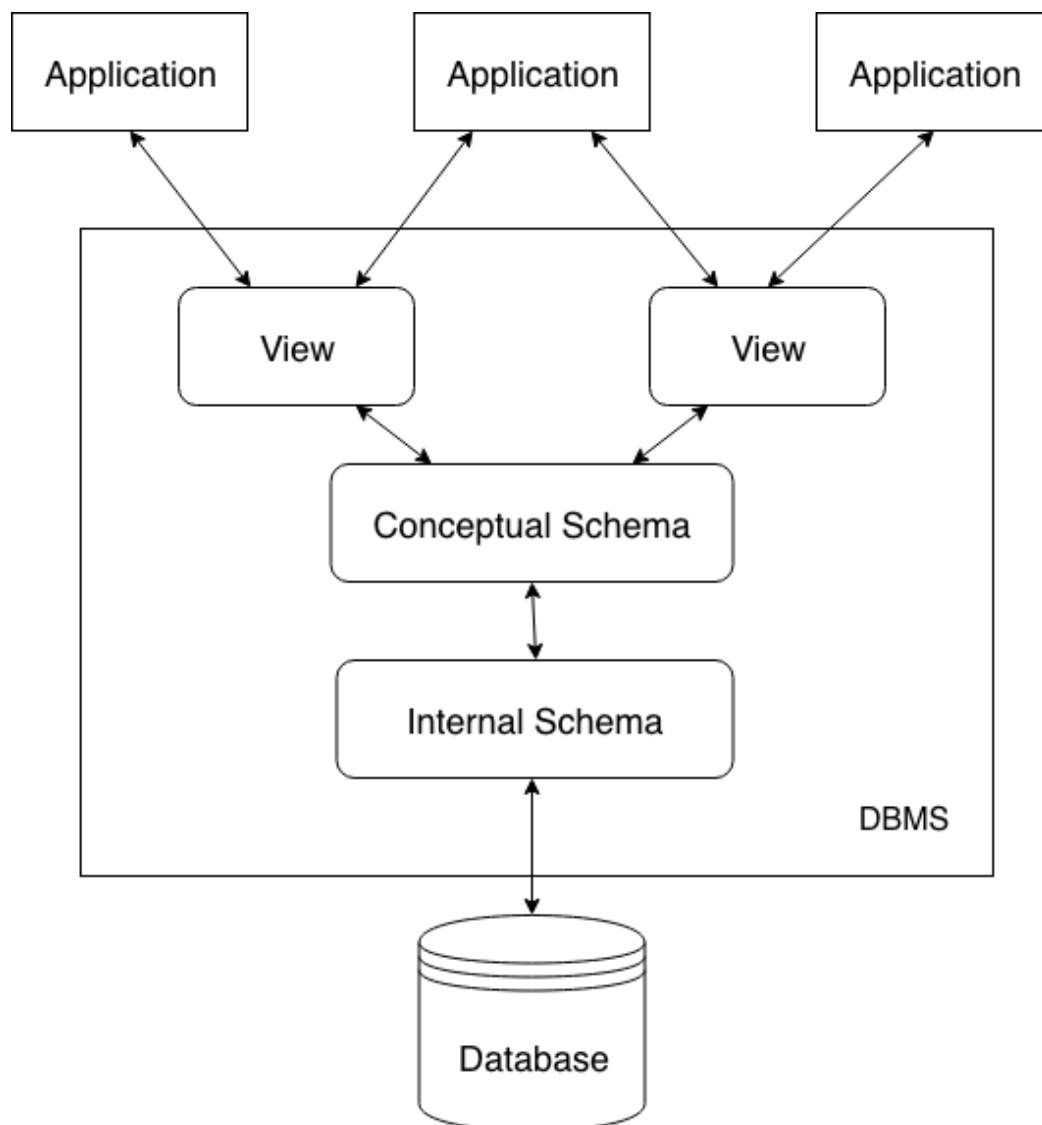


Figure 1.1: Three schema architecture

## **1.2 Overview of the project**

The objective of this project is to implement the airline reservation system to the best satisfaction of the customer. The normal process which was followed until recently was to manually fill the data and then process the data which used to cause a lot of inconvenience to both the administrator and the customer as well. Now, we would like to use databases to facilitate this process of smooth reservation of airline tickets with minimal work on the part of both the customer and the administrators involved. Now let us look at the various aspects of airline reservation. The various aspects of the Airline Reservation System can be presented in views of the different people involved with it. The main people involved in the airline reservation are

1. Administrator
2. Customer

### **1.2.1 Problem statement:**

To maintain and manipulate the data to be stored in the Airline Reservation database system.

### **1.2.2 Objectives of the project:**

- The main objective behind this project is to provide another way for the passengers to book a flight ticket.
- It is aimed to provide the passengers the complete information about the airlines.
- Airlines Reservation system manages the details of Passengers and flights.
- A passenger is uniquely identified by his/her token no and stored in the database.
- This project is built at administrative end and thus only the administrator is guaranteed the access.
- The main purpose of this project is to reduce manual work for managing the details of the passengers.

## CHAPTER 2

### SYSTEM DESIGN AND METHODOLOGY

#### 2.1. System Architecture

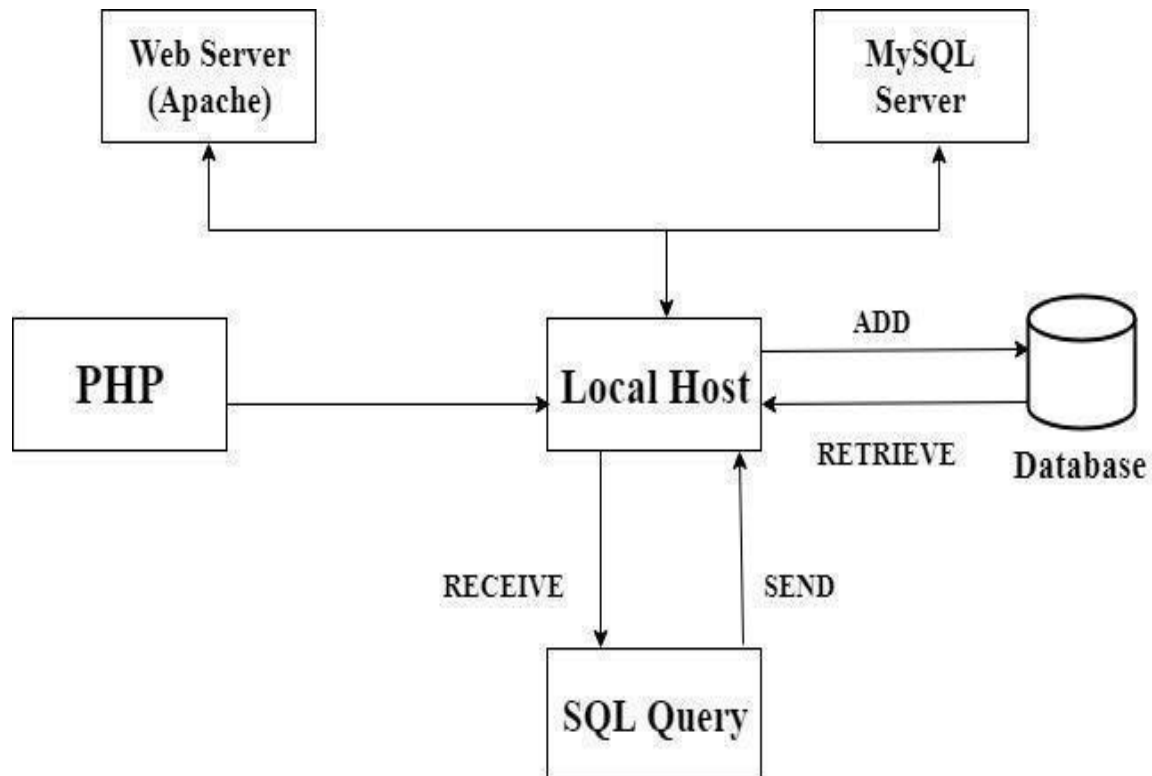


Figure 2.1 System Architecture of an Airline Reservation System

The architecture consists of a centralized database, which will be accessed by 2 types of users namely: Administrator and the Passengers. Administrative access is required for the Passengers, which is implemented through login module with which the Passengers can login with their token number. Administrator can also view the registered passenger details and tickets booked by the passengers. Once login is successful, the Admin can register passenger details and view the registered details of the passenger and book a ticket. Only the authorized Admin can login.

## 2.2 ER DIAGRAM:

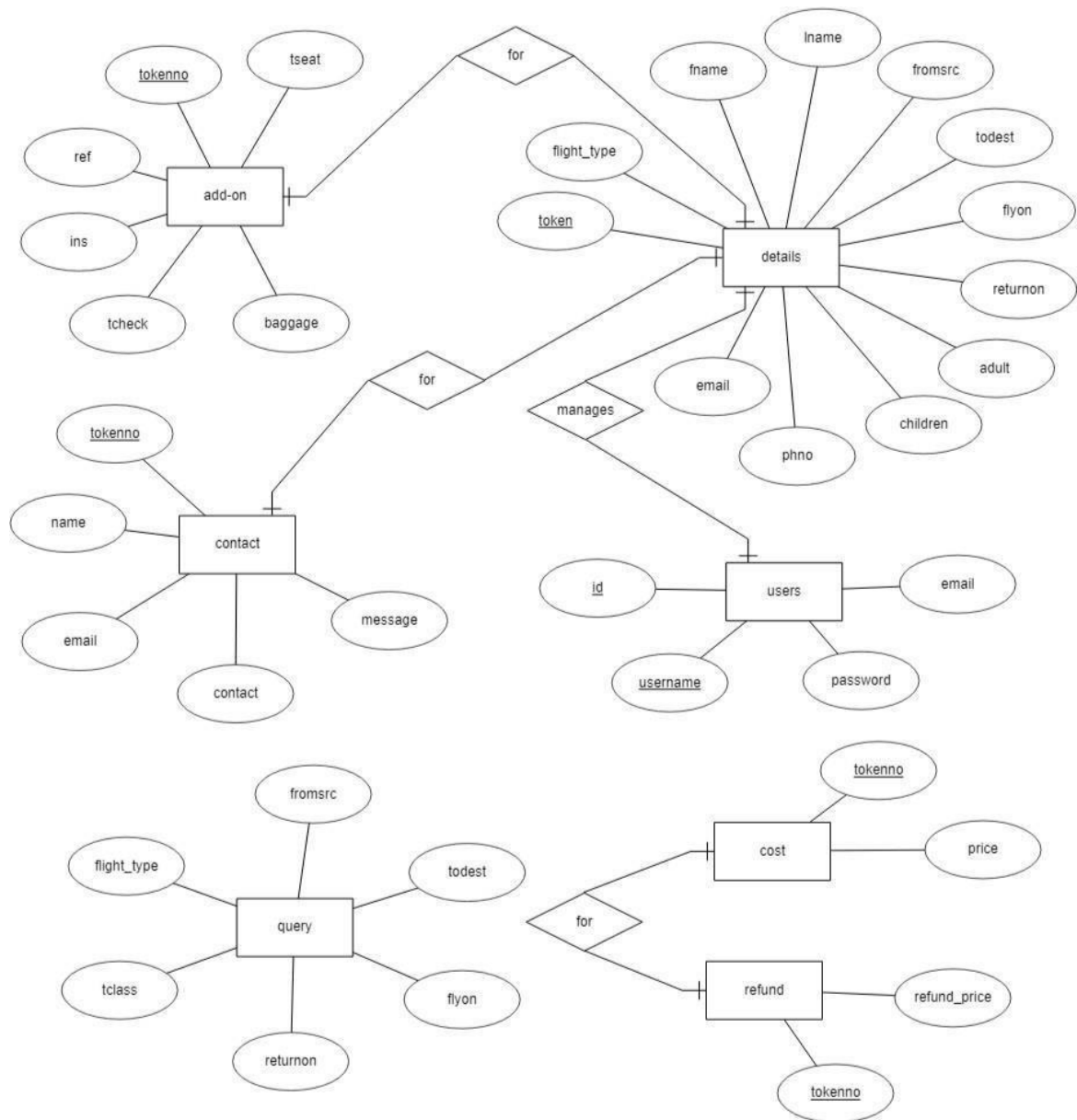


Figure 2.2: ER Diagram

An Entity-Relationship Diagram (ERD) is a data modelling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.

The above ER Diagram consists of following entities name.

- **Details Entity:**

Attributes of details are token, fname, lname, flyon, returnon, fromsrc, todest, children, adult, flight\_type, phno and email.

- **Add-on Entity:**

Attributes of Add-on are tokenno, tseat, tcheck, ref, ins and baggage.

- **Contact Entity:**

Attributes of contact are tokenno, name, email, contact, and message.

- **Cost Entity:**

Attributes of cost are tokenno and price.

- **Refund Entry:**

Attributes of refund are tokenno and refund\_price.

- **Query Entity:**

Attributes of Query are flyon, returnon, fromsrc, todest, flight\_type and tclass.

- **Users Entry:**

Attributes of users are id, username, password and email.

## 2.3 SCHEMA DIAGRAM:

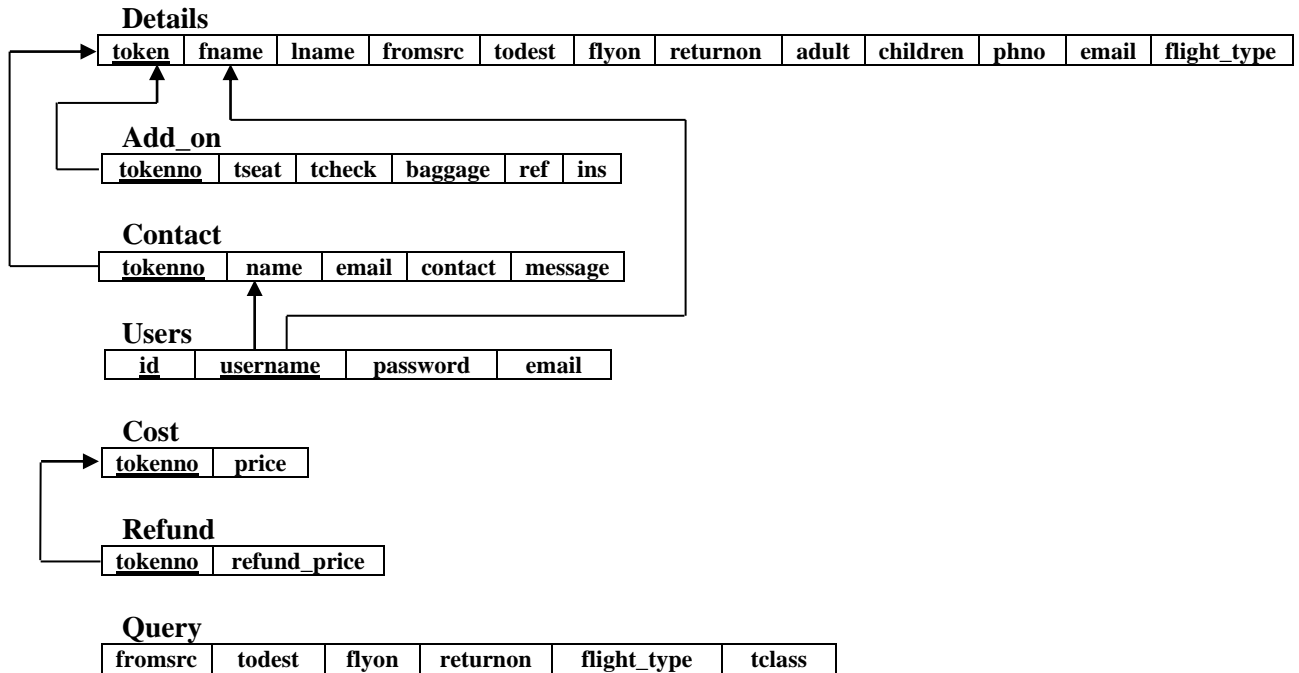


Figure 2.3: Schema Diagram

## **CHAPTER 3**

### **SYSTEM SPECIFICATION**

#### **3.1 SYSTEM REQUIREMENTS**

To run this project on various platforms, we need some hardware and software requirements to support this project.

##### **3.1.1 HARDWARE CONFIGURATION**

- Intel i3 Processor or higher processor
- 1GB or more RAM.

##### **3.1.2 SOFTWARE CONFIGURATION**

- Programming Language(s): JavaScript , HTML, CSS, PHP
- Version: HTML 5,PHP 7,JavaScript 1.8.5,CSS
- Text Editor : Sublime Text
- Server: Apache , MySQL
- Database: PhpMyAdmin
- UI: Bootstrap , JavaScript
- Front-End: PHP, CSS



## CHAPTER 4

### SYSTEM IMPLEMENTATION

#### 4.1 Module Description

We have used Php, MySQL and Photoshop to design and implement our airline reservation system using web services approach. The web services will then be published clients may invoke and compose the services. HTML, JSP, CSS, JavaScript, AJAX and XML technologies are being integrated in creating the client interfaces. The main business scenarios which are being implemented are described in details as below.

1. The business scenario (Airport Authority) is as follows:

- The Airport Authority should register himself in order to get details of booked ticket service.
- The Airport Authority needs to input all the required particular details during the registration process.
- The web service will perform validation checks on Airport Authority input and length constraints.
- Upon successful login, the Airport Authority will be granted unique Identification from which he will be registered officially to the web service and he can login using his username and password.
- The customer is directly permitted to check flight availability and booking.

2. The business scenario (Update Profile) is as follows:

- The customer submit request himself in order to perform update any change process.
- The customer will only change those fields that need to be updated.
- Then, any changes will be updated respectively.

3. The business scenario (Check Flight) is as follows:

- The customer is permitted to search available flights based on the origin city, city, departure date and return date.
- The web service will display any matching records based on the search criteria entered.
- The web service will notify the customer about the flight availability.

- If the searched flights are available, then web service will display flights which are within a week. Otherwise, the web service will prompt to ask the user to re-enter new searching criteria.

4. The business scenario (Book Ticket) is as follows:

- From the Check Flight, the customer is required to book in and the web service will prompt the customer to confirm the flights.
- The web service will then ask the customer whether to update his profile details or not.
- Subsequently, the customer will be asked to purchase and confirm the selected flights.

5. The business scenario (Cancel Ticket) is as follows:

- The customer is required to valid ticket details to cancel his confirmed tickets.
- The customer will select which ticket to be cancelled in the booking history.
- Once the given data has been verified then the web service will delete the data off from the database.

6. The business scenario (View Booking Status) is as follows:

- The customer is required valid token number in before he has privilege to cancel his confirmed tickets.
- The customer will search details in the search field to view booking status.

## CHAPTER 5

### RESULTS AND SCREENSHOTS

#### 5.1 : MAIN PAGE



Figure 5.1: Home Page

The above figure shows the home interface provided to the user after entering in system.

#### 5.2 : ENQUIRY PAGE

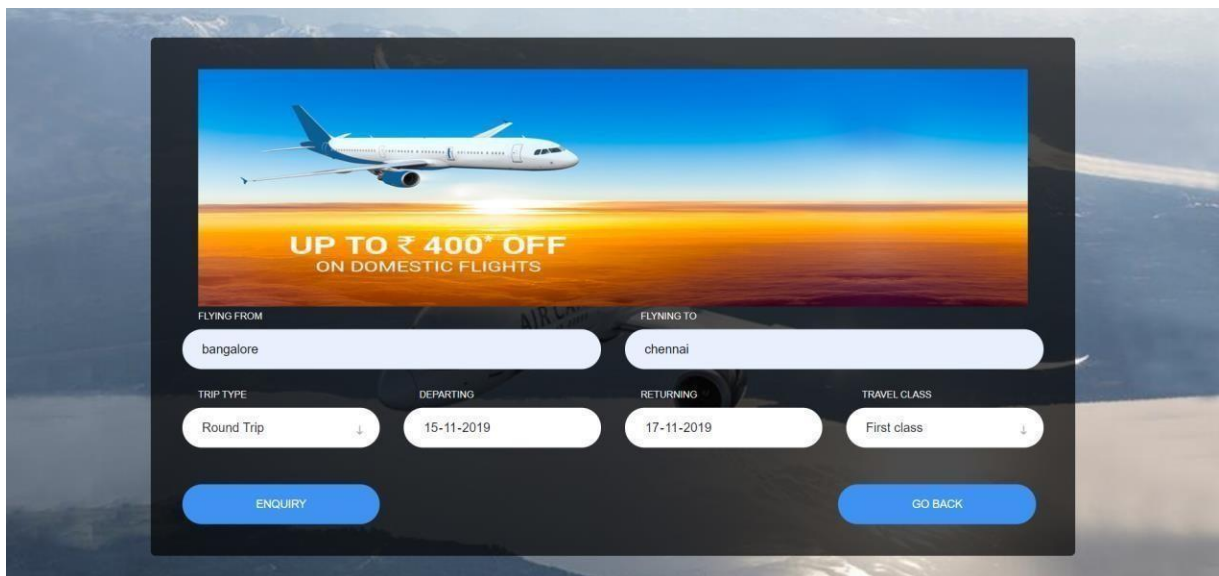


Figure 5.2: Enquiry Page

The above figure shows the query page where user can search their respective flights.

### 5.3 : BOOKING PAGE

FIRST NAME: harsha

LAST NAME: gowda

FLYING FROM: bangalore

FLYING TO: chennai

DEPARTING: 15-11-2019

RETURNING: 17-11-2019

PHONE NO: +918050820271

WITH ADULTS (18+): 1

WITH CHILDREN (0-17): 0

EMAIL: harshagowdah163@gmail.com

CHOOSE FLIGHTS: Emirates-6000

Thank You ! Your Ticket Token Number is : 41

BOOK GO BACK

Figure 5.3: Booking Page

The above figure shows final booking details submission form for the client.

### 5.4 : ABOUT PAGE:

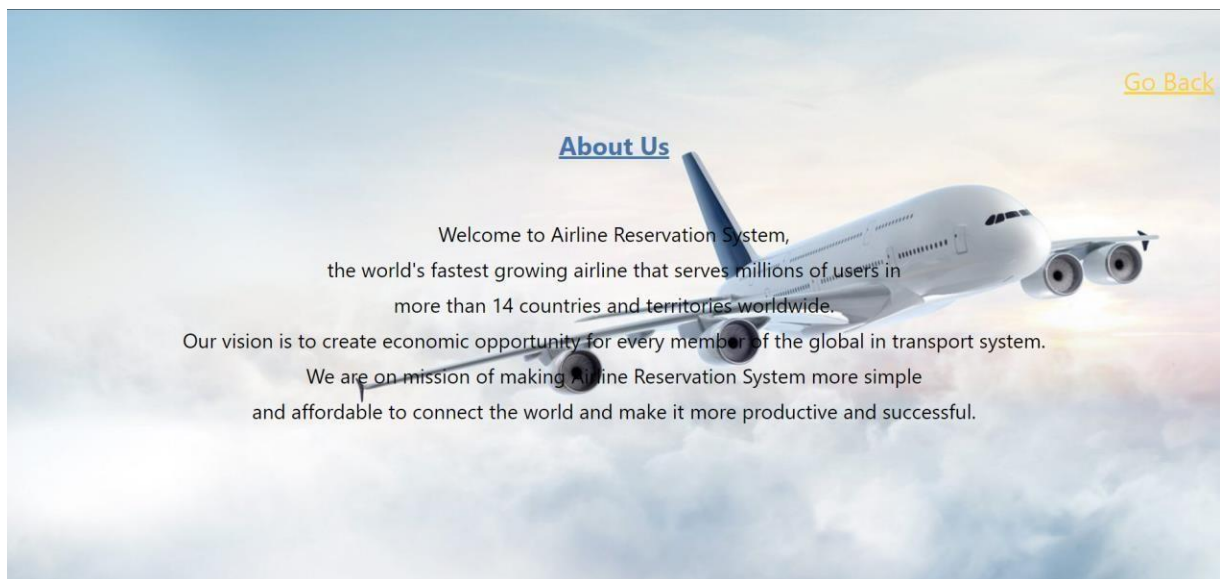


Figure 5.4: About Page

The above figure shows the information about the Airline Reservation System.

## 5.5 : STATUS ENQUIRY PAGE

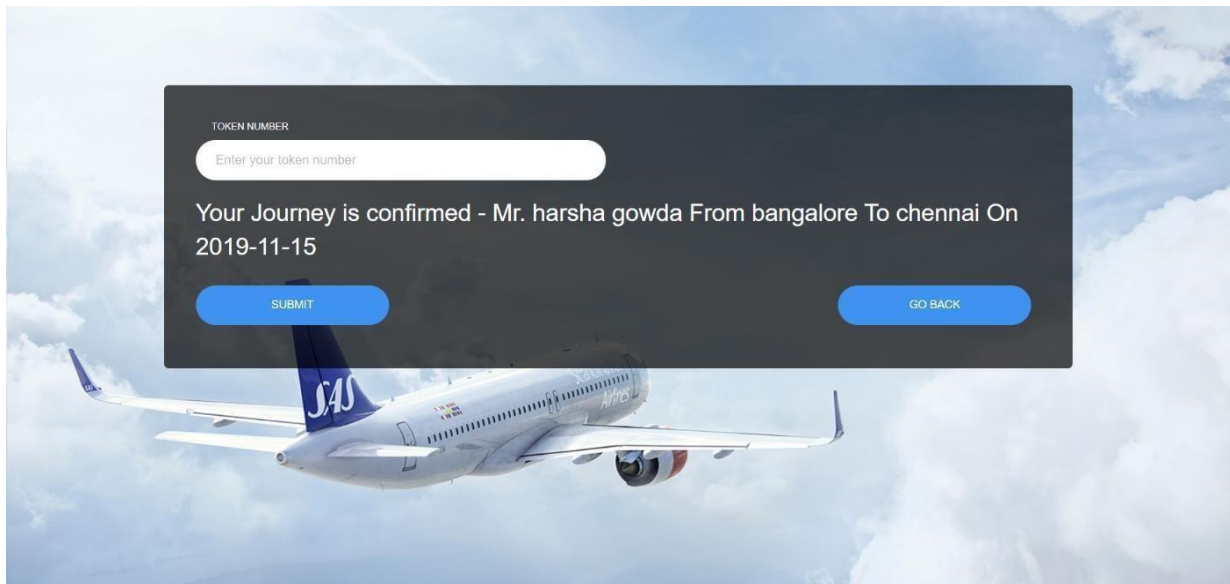


Figure 5.5: Status Enquiry Page

The above figure shows token number enquiry for the user after booking of ticket.

## 5.6 : ADD-ON PAGE

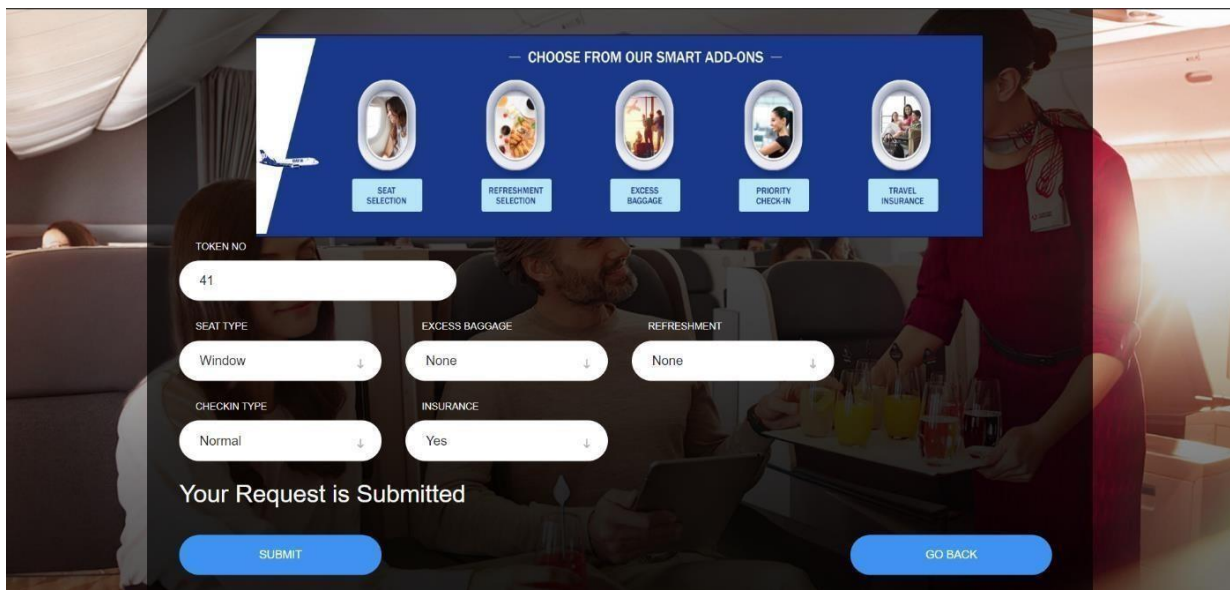
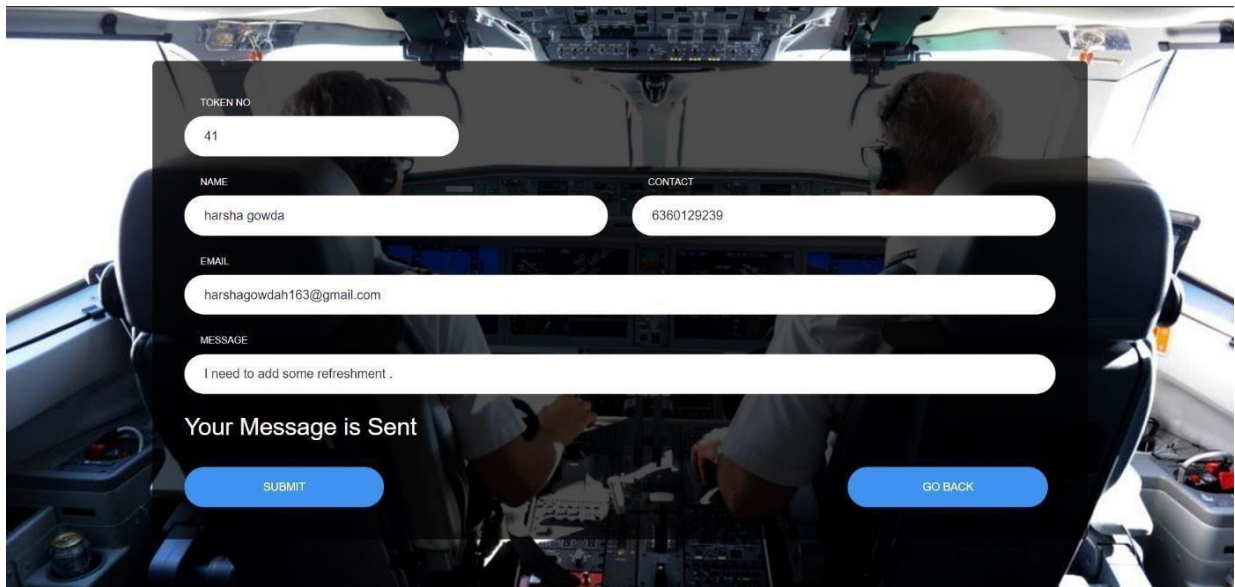


Figure 5.6: Add-On Page

The above figure shows add-on page for adding extra utility for passengers after booking.



### 5.7 : CONTACT PAGE:



TOKEN NO  
41

NAME  
harsha gowda

CONTACT  
6360129239

EMAIL  
harshagowdah163@gmail.com

MESSAGE  
I need to add some refreshment .

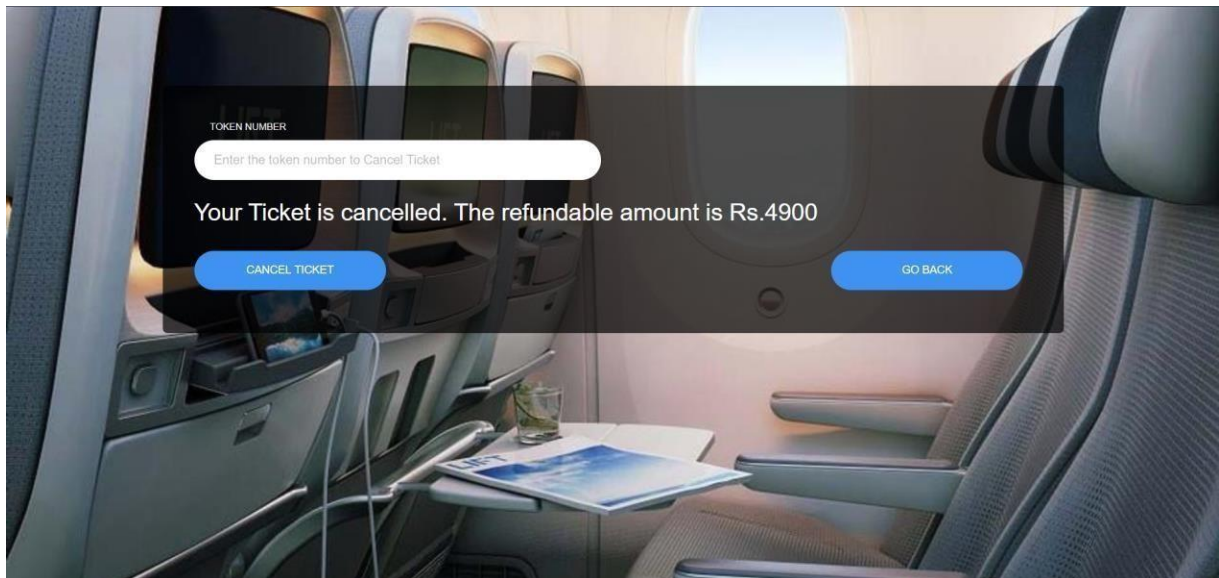
Your Message is Sent

SUBMIT GO BACK

Figure 5.7: Contact Page

The above figure shows contact page for users if any issue is generated in booking.

### 5.8 : CANCEL-TICKET PAGE:



TOKEN NUMBER  
Enter the token number to Cancel Ticket

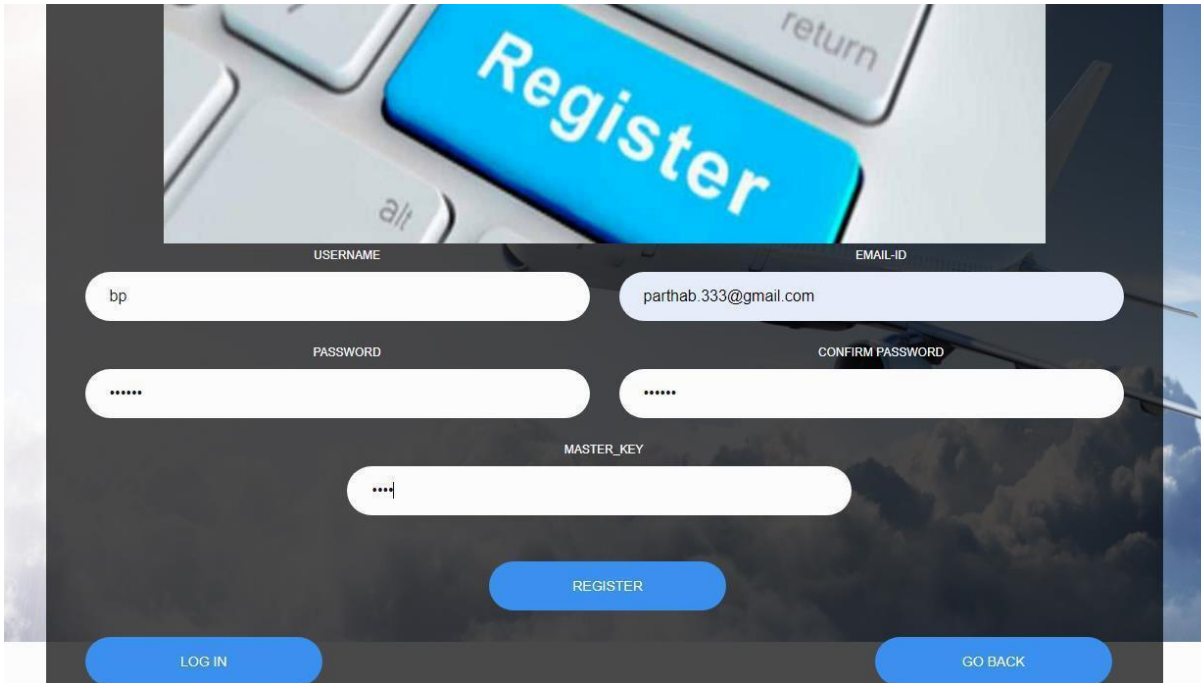
Your Ticket is cancelled. The refundable amount is Rs.4900

CANCEL TICKET GO BACK

Figure 5.8: Cancel-Ticket Page

The above figure shows cancel-ticket page to the user who wants to cancel their already booked ticket.

## 5.9 : REGISTRATION PAGE



The registration page features a dark background with a blue 'Register' button at the top. Below it, there are input fields for USERNAME (containing 'bp'), EMAIL-ID (containing 'parthab.333@gmail.com'), PASSWORD (masked with '\*\*\*\*\*'), CONFIRM PASSWORD (masked with '\*\*\*\*\*'), and MASTER\_KEY (masked with '\*\*\*\*'). A blue 'REGISTER' button is centered below the input fields. At the bottom, there are blue buttons for 'LOG IN' and 'GO BACK'.

Figure 5.9: Registration Page

The above figure shows registration form for airport authority for receiving entered data.

## 5.10 : LOGIN PAGE:



The login page features a dark background with a blue 'LOGIN' button at the top. Below it, there are input fields for USERNAME (containing 'harsha') and PASSWORD (masked with '\*\*\*\*\*'). A blue 'LOGIN' button is centered below the input fields. At the bottom, there are blue buttons for 'SIGN UP' and 'GO BACK'.

Figure 5.10: Login Page

The above figure shows login page for airport authority for receiving entered data.

## 5.11 : ADMIN DATA

Registered Data

Refresh

Passengers Details

Token No	F.Name	L.Name	From	To	Departing	Returning	Adults	Children	PhNo	Booking Time	Actions
59	B	Prashanth	Banglore	Chennai	2019-11-16	2019-11-19	1	0	8456125795	2019-11-16 19:32:00	<a href="#" style="color: blue; text-decoration: underline;">Delete</a>

Query Asked

Token	Name	Email	Contact No	Message	Action
59	B Prashnath	parthab.333@gmail.co	8456123548	I need to add some refreshment.	<a href="#" style="color: blue; text-decoration: underline;">Delete</a>

Add On Requested

Token No	Seat Type	Baggage	Checkin Type	Insurance	Refereshment	Action
59	Window	20 Kg	Priority	Yes	Milk	<a href="#" style="color: blue; text-decoration: underline;">Delete</a>

Query Searched

From	To	Class	Fly On
Bangalore	Delhi	Business class	2019-10-20
hyd	chennai	Economy class	2019-11-16
bangalore	chennai	First class	2019-11-15
bangalore	chennai	First class	2019-11-16

Logout

Figure 5.11: Admin Data Page

The above figure shows all the details and query including trigger submitted by the respective users. Here admin can check and delete the entries once the data is retrieved.



## **CHAPTER 6**

### **CONCLUSION AND FUTURE WORKS**

#### **Conclusion:**

This work is a humble venture to satisfy all the needs of a Ticket Booking customer and an Airport Authority as well to manage customer details. Several user-friendly codes have been adopted. This system is powerful package which satisfies all the requirements of a customer.

#### **Future works:**

- a) The system shall host the platform on online servers to make is accessible worldwide.
- b) The system shall integrate multiple load balancers to distribute loads on system.
- c) The system shall include a master-slave database structure to reduce overload on databases on regular basis on different servers.

## Bibliography

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