VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A Database Management System Mini Project Report on

"AIRLINE RESERVATION SYSTEM"

Submitted in Partial fulfillment of the Requirements for the V Semester of the Degree of

Bachelor of Engineering

In

Computer Science & Engineering

By

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CERTIFICATE

This is to certify that the Database Management System Project work entitled "Airline Reservation System" has been carried out by Dadireddy Sai Kumar Reddy (1CR19CS035) and Darshan R (1CR19CS037) bonafide students of CMR Institute of Technology in partial fulfillment for the award of Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belgaum during the year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. This DBMS Project Report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

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Name of the examiners

Signature of HOD

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Professor, Head
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Signature with date

2.

ABSTRACT

Our Project 'Airline reservation System' is a computerized system used to store and retrieve information and conduct transactions related to air travel. The aim the project is to expose the relevance and importance of Airline Reservation Systems.

The system allows the airline passenger to search for flights that are available between the two travel cities, namely the "Departure city" and "Arrival city" for a particular departure date. The system is designed such that flights are available on all days. The system displays all the flight's details such as flight no, name, price etc.

Then the system checks for the availability of seats on the flight. If the seats are available then the system allows the passenger to book a seat. Otherwise it asks the user to choose another flight.

The system asks the customer to enter his details such as name, age, email and contact number to book a flight.

The main purpose of this software is to reduce the manual errors involved in the airline reservation process and make it convenient for the customers to book the flights as and when they require. The software allows admin to add a flight, cancel a flight, modify the timings of a flight. It also allows customer to book a ticket, view the ticket details and also the modified timings of a particular flight booked if any.

ACKNOWLEDGEMENT

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TABLE OF CONTENTS

1.	Introduction1			
	1.1	Introduction		
	1.2	Purpose		
	1.3	Scope		
2.	Syste	System Requirements		
	2.1	Software System Requirements		
	2.2	Operating Requirements		
3.	Desig	Design3		
	3.1	Schema		
	3.2	ER Diagram		
	3.3	Tables		
4.	Imple	ementationS9		
	4.1	Database		
	4.2	PHP		
5.	Discussion and Screenshots			
	5.1	Admin		
	5.2	Customer		
6.	Conc	lusion and Future Scope23		
7.	Bibilography24			



CHAPTER 1

INTRODUCTION

1.1 Introduction

Considering the volumes of data that needs to be tracked and accessed, it would be very difficult to manage the accuracy and quality of data manually and deliver them accordingly. It would be almost impossible to get the details required in case of manual maintenance of data. The TWC (Travel With Comfort) is an innovative solution that helps in managing huge loads of flight orders. The Airline Reservation System simplifies the manual work and allows smooth administration of the operations of transportation.

1.2 Purpose

This project is aimed to reduce the manual work involved in data maintenance in the Flight Booking and automates the Airline Reservation System. This project is developed mainly to simplify the manual work and allows smooth administration of the operations of airlines. The purpose of the project is to computerize the administrative operations of a Flight Booking and to develop software which is user friendly, simple, fast, and cost – effective. It deals with the collection of Users, Employees, Flights and Booking information, Fare details, etc. Traditionally, it was done manually. The main function of the system is to enter and book Flights and retrieve these details as and when required, and also to manipulate these details meaningfully.

1.3 Scope

The project provides a very simple application which simplifies the manual work done by the operation team of Airline Reservation System. This application saves the data of employees and users in the database. Allows users to search for flights, book or cancel the existing flights. Our project allows users to view the booked flights data stored in the database and to see the statistics.



CHAPTER 2

SYSTEM REQUIREMENTS

2.1 Software System Requirements

The Airline Reservation System operates with a client-server architecture, and as such, must have minimum hardware and software to run the server/browser along with all its dependencies.

The system is used by Admins who can add or remove an aircraft or manipulates data using a computer with a HTML compatible browser. The system is also used by the customers of the Airline who can book tickets based on their preference using a computer at his/her home, with a HTML/php compatible browser.

The server software runs in a dedicated centralised server hosting center for the Airline database. The scripts and http server run on the server, and require a Php interpreter, along with the dependencies for the scripts, as well as the MySQL server.

2.2 Operating Environment

The production ready software is meant to run on a variety of verified hardware and software. As such, many of the required dependencies are available cross platform, both for the front end as well as the backend. Some of the verified software and hardware are specified below, along with software and hardware that are supposed to be compatible.

2.2.1 <u>Hardware Requirements</u>

The Hardware requirements are very minimal and the program can be run on most of the machines.

Processor
 Intel 486/Pentium processor or better

Processor Speed - 500 MHz or above

Hard Disk - 20GB(approx)
 RAM - 64MB or above





• Storage Space - Approx. 2MB

2.2.2 <u>Software Requirements</u>

• Technology Implemented : Apache Server, MySQL Server

• Language Used : PHP

• Database : My SQL

• User Interface Design : HTML, CSS

• Web Browser : Google Chrome



Chapter 3

DESIGN

3.1 <u>SCHEMA DIAGRAM</u>

ADMIN

Admin_ID	Name	Pswd	
			1

AIRCRAFT

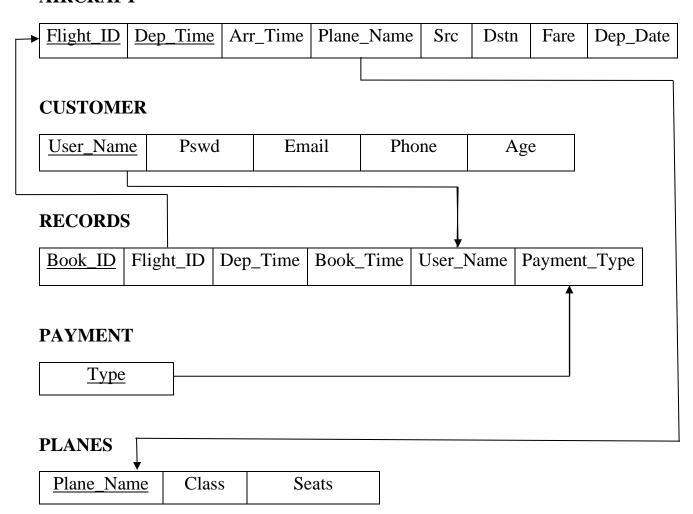


Fig:3.1.1



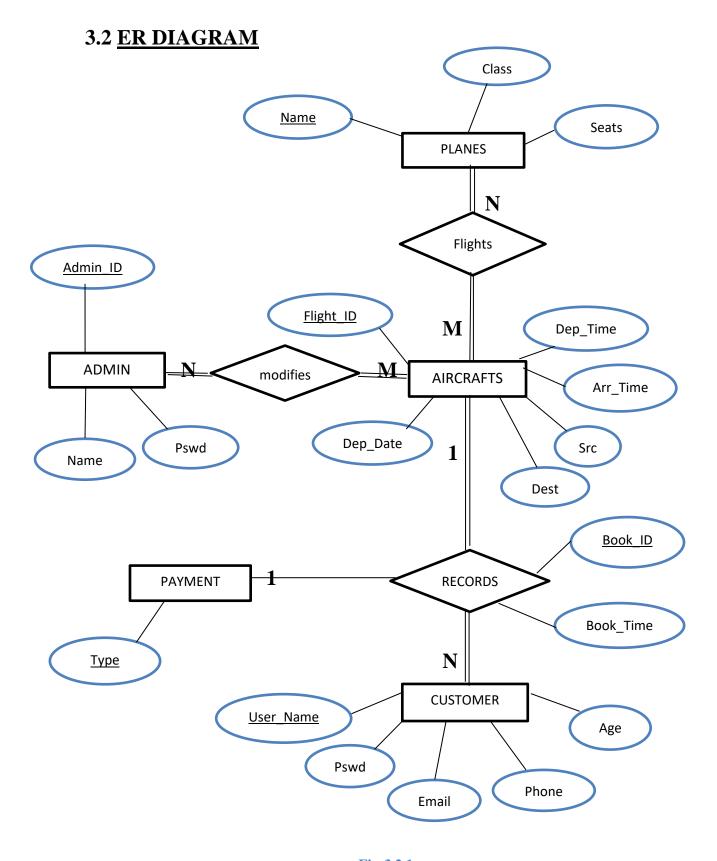


Fig:3.2.1



3.3 TABLES

ADMIN

MariaDB [aim	rline]> desc ad	dmin;			.
Field	Туре	Null	Key	Default	Extra
Name	varchar(20) varchar(20) varchar(20)	YES YES		NULL NULL NULL	
+					
MariaDB [airline]> select * from admin; ++ Admin_ID Name Pswd					
+ 1 +	 admin admir 				

Fig:3.3.1

CUSTOMER

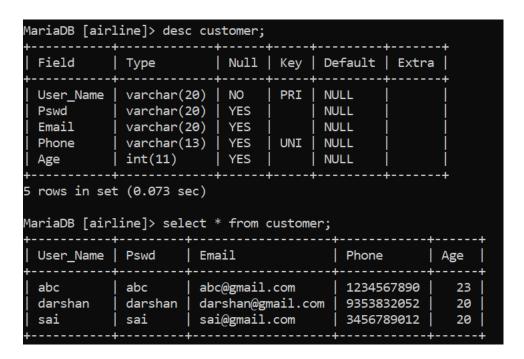


Fig:3.3.2



PLANES

MariaDB [airli	ine]> desc pla	nes;	.		.
Field	Туре	Null	Key	Default	Extra
: -	varchar(20) varchar(10) int(11)	NO YES YES	PRI	NULL NULL NULL	
+					
Plane_Name	Class	Seats			
AirIndia emirates indigo Kingfisher SpiceJet	Bussiness General bussiness Bussiness Bussiness	30 10 3 20 5			

Fig:3.3.3

AIRCRAFT

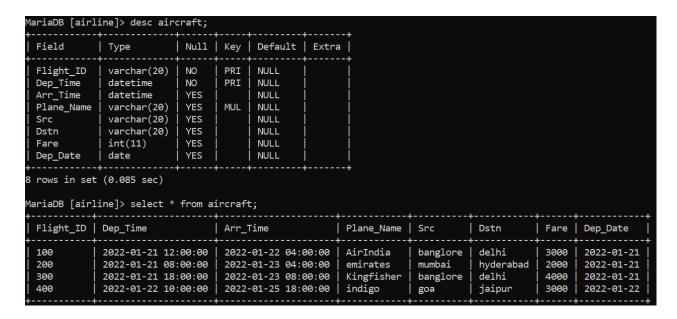


Fig:3.3.4



PAYMENT

Fig:3.3.5

RECORDS

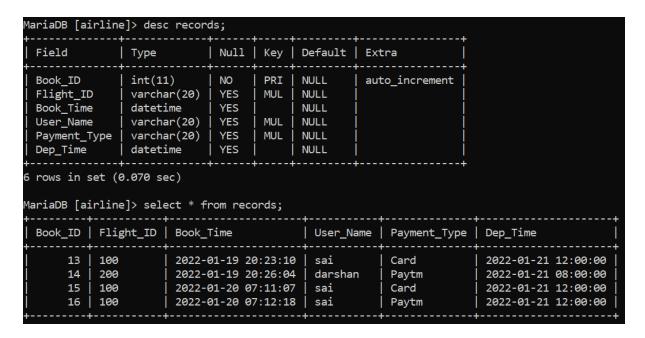


Fig:3.3.6



CHAPTER 4

IMPLEMENTATION

4.1 DATABASE

1.	Create database airline;
2.	Create table Admin (
	Admin_ID varchar(20) primary key,
	Name varchar(20),
	Pswd varchar(20));
3.	Create table Customer (
	User_Name varchar(20) primary key,
	Pswd varchar(20),
	Email varchar(20),
	Phone varchar(13) unique,
	Age int);
4.	Create table Planes (
	Plane_Name varchar(20) primary key,
	Class varchar(10),
	Seats int);



```
5. Create table Aircraft (
  Flight_ID varchar(20),
  Dep_Time DateTime,
   Arr_Time DateTime,
  Plane_Name varchar(20),
  foreign key (Plane_Name) references Planes(Plane_Name) on
  update cascade on delete cascade,
  Src varchar(20),
  Dstn varchar(20),
  Fare int,
  primary key(Flight_ID,Dep_Time) );
6. Create table Records (
  Book_ID varchar(20) primary key AUTO_INCREMENT,
  Flight_ID varchar(20),
  foreign key(Flight_ID) references Aircraft(Flight_ID) on update
  cascade,
  Book_Time DateTime,User_Name varchar(20),
  foreign key(User_Name) references Customer(User_Name) on
  delete cascade on update cascade,
  Payment_Type varchar(20),
  foreign key(Payment_Type) references Payment(Type)on update
  cascade,Dep_Time datetime );
```

7. Create table Payment (



Type varchar(20) primary key);

```
8. DELIMITER //
    CREATE TRIGGER UPDATE_RECORDS AFTER UPDATE
    ON Aircraft
    FOR EACH ROW BEGIN
    UPDATE RECORDS SET Dep_Time=new.Dep_Time WHERE
    Flight_ID = new.Flight_ID AND
    Dep_Time=old.Dep_Time;
    END //
    DELIMITER;
```

4.2 PHP

4.2.1 <u>index.php</u>

```
<title>AIRLINE RESERVATION SYSTEM</title>
</head>
<body style="</pre>
   height: 100%;
   background-position: center;
   background-repeat: no-repeat;
   background-size: cover;" >
<div align="CENTER" >
<h1 style="color: black;">AIRLINE RESERVATION SYSTEM</h1>
<div>
<!-- <br><a href="login.php" >User Login </a><br> -->
<br><a href="login.php">User Login</a><br>
<!-- <br><a href="adminlogin.php">Admin Login </a><br> -->
<br><a href="adminlogin.php">Admin Login </a><br><</h2>
</div>
</body>
</html>
```

Fig:4.2.1



4.2.2 adminhome.php

```
<center><h1><u> AIRLINE RESERVATION SYSTEM </u></h1></center>
<br><h2>Welcome</h2>
<div class="right"><button class="button">
    <a href="adminlogin.php" style="color:black">Logout</a></button>
</div><br><br><br></div><br>><br>></pr>
</form>
<form action="" method="POST">
<legend>
    <fieldset>
<form action="enter.php" method="POST">
    <div class="right">
    <input type="button" value="Add Flight"</pre>
onclick="location.href='enter.php';" /><br><br>
</div><br>
<form action="viewflights.php" method="POST">
    <div class="right">
    <input type="button" value="View Flights"</pre>
onclick="location.href='viewflights.php';" /><br><br>
</div><br>
<div class="right"><button class="button">
    <a href="Updatetimings.php" style="color:black">Update
Timings</a></button>
<form action="view.php" method="POST">
    <div class="right">
    <input type="button" value="Bookings" onclick="location.href='view.php';"</pre>
/><br><br>
</div><br>
    </fieldset>
</legend>
</form>
<?php
</body>
</html>
<!doctype html>
```

Fig:4.2.2



4.2.3 page1.php (User Home)

```
<?php
session_start();
if(!isset($_SESSION["sess_user"])){
    header("location:userlogin.php");
} else {
<!doctype html>
<html>
<head>
<title>Welcome</title>
<style>
        body{
   background-image: url("page2.jpg");
       margin-top: 100px;
    margin-bottom: 100px;
    margin-right: 150px;
    margin-left: 80px;
    background-size: 100%;
    background-attachment: fixed;
    color: #261A15;
    font-family: 'Yantramanav', sans-serif;;
    font-size: 110%;
         h1 {
    color: black;
    font-family: verdana;
    font-size: 120%;
         h2 {
    color: black;
    font-family: verdana;
    font-size: 100%;
    color: rgb(102, 51, 153);
fieldset {
  background-color: black;
  color: white;
  opacity: 0.7;
</style>
<link rel="stylesheet" type="text/css" href="page.css">
```



```
</head>
<body>
 <center><h1><u> AIRLINE RESERVATION SYSTEM </u></h1></center>
    <br> Thank you.. Successfully Logged In..
<h2>Welcome, <?php echo $_SESSION["sess_user"]; ?></h2><br>
<div class="right">
</div><br><br>>
<div class="right"><button class="button">
    <a href="logout1.php" style="color:black">Logout</a></button>
</div><br>
<div class="right"><button class="button">
    <a href="view1.php" style="color:black">My Bookings</a></button>
</div><br>
<form method="POST" action="" >
   <legend>
    <fieldset>
    <center>
    <br/>b> Depart On: </b>
    <input type="date" name="depdate" value="Today"/><br>
<b> From: </b><input type="text" name="from1"> &nbsp; &nbsp; &nbsp; &nbsp; <b>
To: </b><input type="text" name="to1"><br>
<br>
<br><input type="submit" value="Proceed" name="proceed" />
</center>
 Page 1 
<?php
if(isset($_POST["proceed"])){
if(!empty($_POST['from1']) && !empty($_POST['to1']) &&
!empty($_POST['depdate'])) {
   $from=$_POST['from1'];
   $to=$_POST['to1'];
   $depdate=$_POST['depdate'];
    //$var = '20/04/2012';
    $date = str_replace('/', '-', $depdate);
    $depdate= date('Y-m-d', strtotime($date));
  $con=@mysqli_connect('localhost','root','','airline') or
die(mysql_error());
    $user=$_SESSION["sess_user"];
    $today = strtotime('today');
```



```
$date_timestamp = strtotime($depdate);
if ($date_timestamp < $today) {</pre>
        <script>
            window.alert('Enter Valid Date!!..');
            window.history.back();
        </script>
        <?php
    } else{
    if ($from==$to){
        <script>
            window.alert('Pickup and Destination cannot be same');
            window.history.back();
        </script>
        <?php
        else{
    //$sql="INSERT INTO airport(pick,dest,depdate,airportid)
VALUES('$from','$to','$depdate','')";
    if (mysqli_connect('localhost','root','','airline')) {
    //$last_id = mysqli_insert_id($con);
    $ SESSION['sess depdate']=$depdate;
    $_SESSION['sess_user']=$user;
    $_SESSION['sess_from']=$from;
    $ SESSION['sess to']=$to;
   header("Location: page2.php");
} else {
    echo "Error: " . $sql . "<br>" . mysqli_error($con);
mysqli_close($con);}}}
else {
    echo "All fields are required!";
}}
</fieldset>
</legend>
</form>
</body>
</html>
```

Fig:4.2.3



CHAPTER 5

DISCUSSION AND SCREENSHOTS

5.1 <u>ADMIN</u>

5.1.1 <u>Admin Login Page</u>: Admin needs to enter his/her login credentials to login to the website.

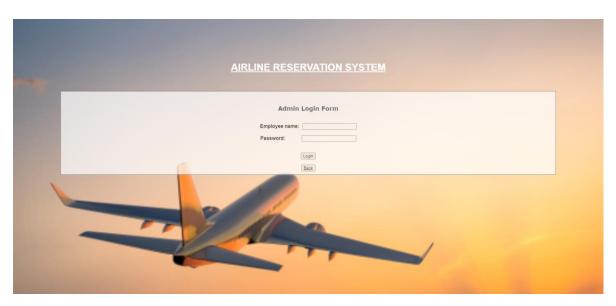


Fig:5.1.1

5.1.2 <u>Admin Home Page</u>: Various options like Adding Flight, View Flights, Update Flight Timings and View the Booked Details are available.



Fig:5.1.2



5.1.3 Add Flight: Admin can add a new flight between a source and destination along with other details like timings, fare etc...

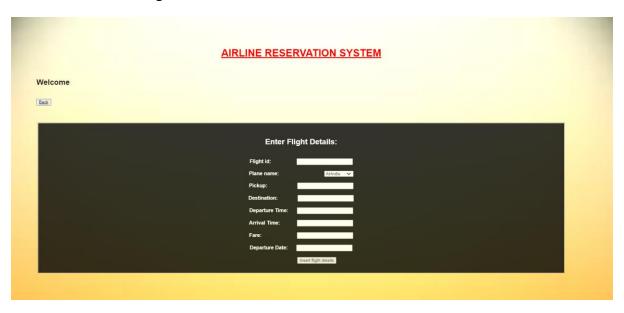


Fig:5.1.3

5.1.4 <u>View Flight</u>: All the added flights and its details are available here. Also the admin can delete an added flight by opting delete button next to the flight details of a particular flight.

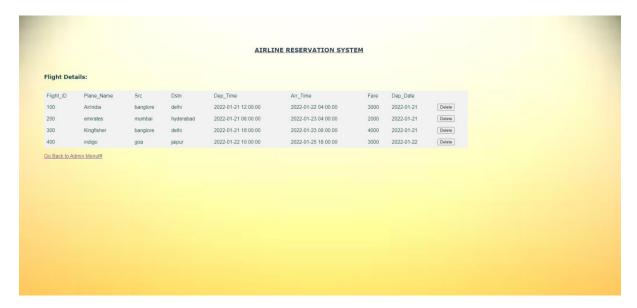


Fig:5.1.4



5.1.5 <u>Update Timings</u>: Admin can update the Departure Timings of a particular flight in this page. On clicking the update button leads to another page where the admin needs to enter the timings to be updated and click submit button.



Fig:5.1.5.1



Fig:5.1.5.2



5.1.6 Bookings: The admin can see all the booking details of the Customers in this page.



Fig:5.1.6

5.2 CUSTOMER

5.2.1 <u>Customer Login Page</u>: The customer entering his login credentials will get logged in to the website. If he/she is a new customer, then needs to register first by clicking signup button and entering the required details.



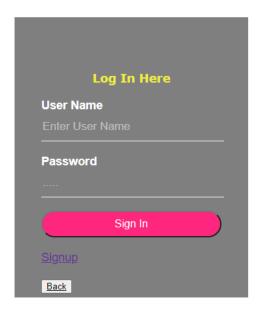


Fig:5.2.1

5.2.2 <u>Customer Home Page</u>: Customer can select a date on which he/she wants to travel and also enter the source and destination, so that the website shows the available flights for their travel. Also Home page has a button named, My Bookings where the booked ticket details of the customer are available.



Fig:5.2.2



5.2.3 <u>Available Flight Details</u>: On searching for a flight for travel, the Customer is leaded to a page where all available flights with the Plane name, Timings, Fare, Available Seats are displayed. The Customer needs to enter Flight ID, Departure Time and Mode of Payment to book a ticket. The Customer is allowed to book a single ticket on each transaction.

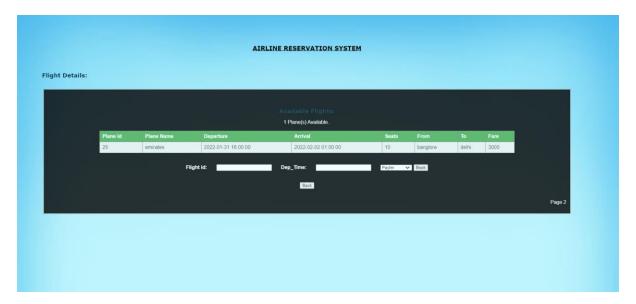


Fig:5.2.3

5.2.4 Booking Confirmation: Once the ticket is successfully booked, the customer receives the Booked Flight Details with a Confirmation message on the window.



Fig:5.2.4



 $5.2.5 \ \underline{\text{View Bookings}}$: In this page the customer gets all the booking details for each journey.



Fig:5.2.5



CHAPTER 6

CONCLUSION AND FUTURE SCOPE

The Airline Reservation System is a great improvement over the manual system which uses lots of manual work and paper. The computerization of the system speeds up the process. This system was thoroughly checked and tested with dummy data and found to be very reliable.

Thus, we have implemented a fully comprehensive and minimalistic efficient system for use by admins and customers without any additional training.

The Airline Reservation System can be further enhanced by including more functionality like entering Seat details, Track the number of trips, maintain Customers Feedback, Reports, Billing etc. We can further add an improvised booking system which is far more efficient and reliable.



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