1.INTRODUCTION

1.1Overview and Motivation

Airline Reservation System make the life of passengers very easy as they don't need to stand in queues for getting their seats reserved and they can easily make reservations on any airline just from a single system .

The purpose of Airlines reservation system project is to build an application program which airline could use to manage the reservation of airlines ticket.

1.2Objective

The main objective of the system is to design and develop the software which would automate the major airline operations like providing the facilities for the reservation of online air tickets or any other operations through an effective and yet simple GUI for a normal passenger intending to travel through airways.

SCOPE OF PROJECT

This Project is not only restricted to Computer Reservation Systems , but also other systems dedicated to the optimal performance in the airline industry and their customers. The outcome of this study will provide a basis for developing the appropriate approach to the problems associated with air travelling operations in relation to Airline Reservation Systems. This presentation will be beneficial to all those who make use of Airline Reservation Systems , flight operators , air travelling operators , travel agents and airline agencies .

The project is aimed at exposing the relevance and importance of Airline Reservation Systems. It is projected towards enhancing the relationship between customers and airline agencies through the use of ARSs, thereby easing the flight ticketing and selling process & all air traveling operations.

Need of Airlines system:

A few factors that direct us to develop a new system are given below -:

1) Faster System
2) Accuracy
3) Reliability
4) Informative
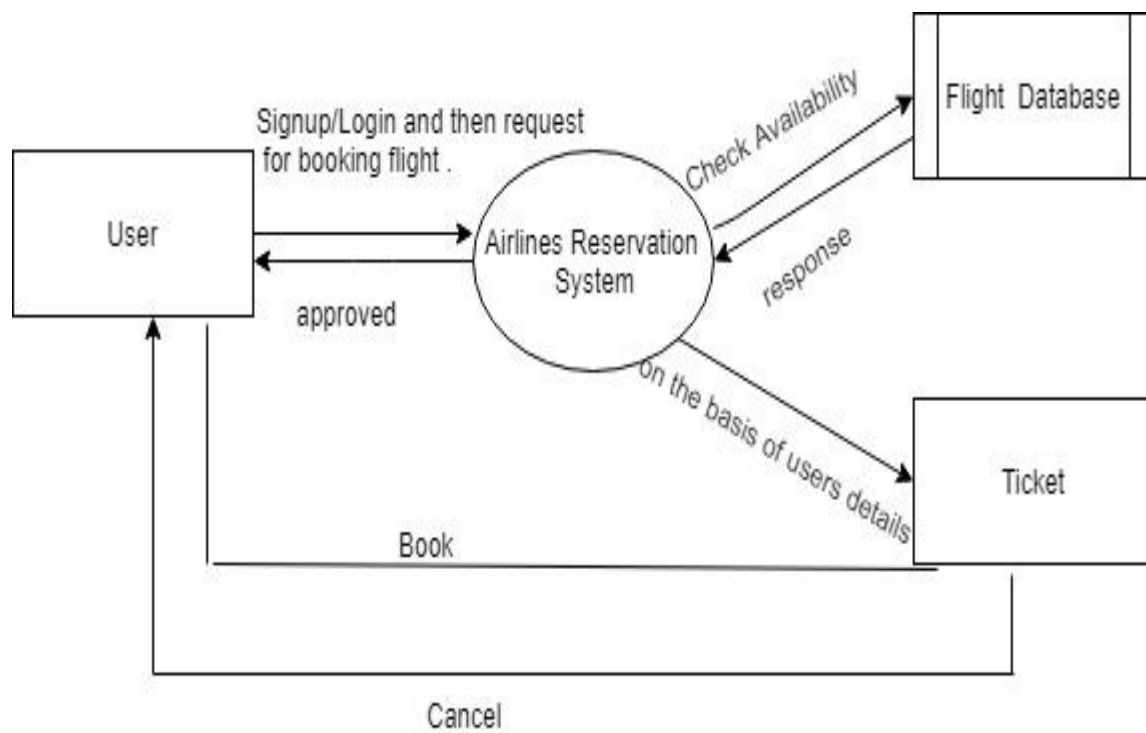5) Reservations and cancellations from anywhere to any place

2.INSTITUTE PROFILE

Motilal Nehru National Institute of Technology Allahabad, Prayagraj (MNNIT) is Institute with total commitment to quality and excellence in academic pursuits. It Established as one of the seventeen Regional Engineering Colleges of India in the Year 1961 as a joint enterprise of Government of Uttar Pradesh and was an associated College of University of Allahabad , which is the third oldest university in India. For a short duration of two years (2000-2002), the institute was affiliated to U.P. Technical University. With over 45 years of experience and achievements in the field of technical education, having traversed a long way on 26 June 2002 MNREC was transformed into National Institute of Technology and Deemed University fully funded by Government of India.
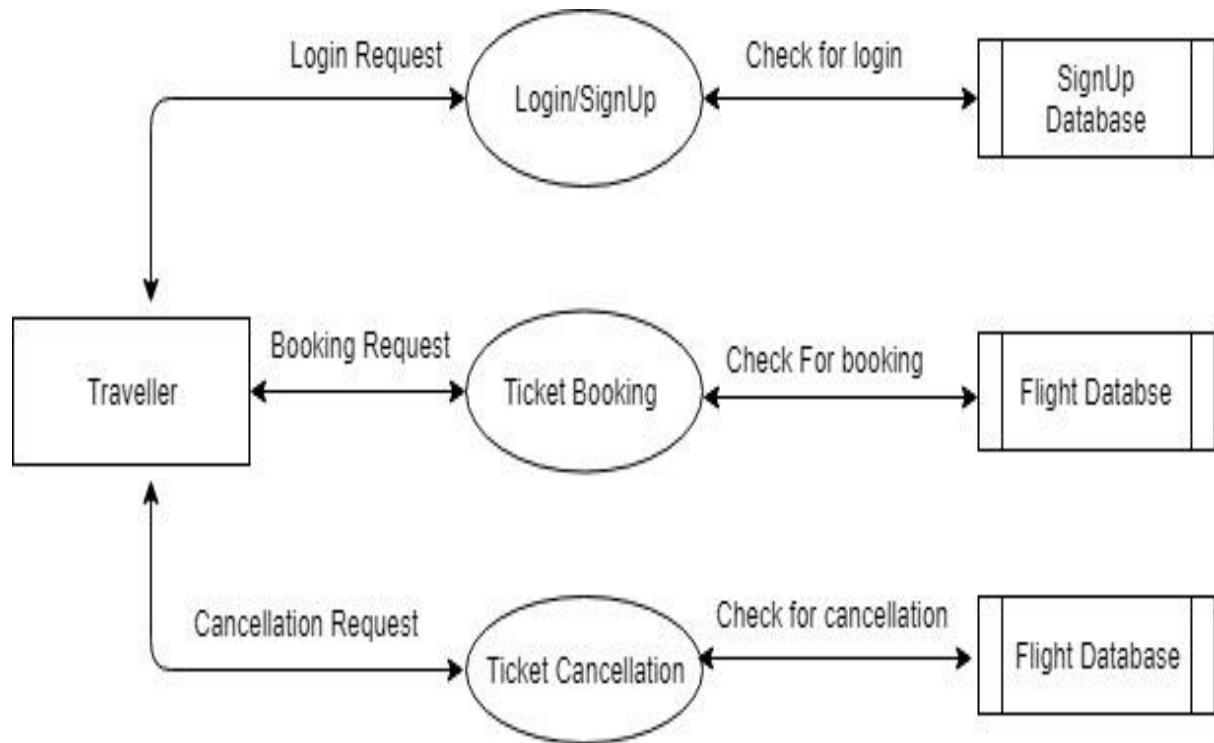
3.PROJECT DESIGN
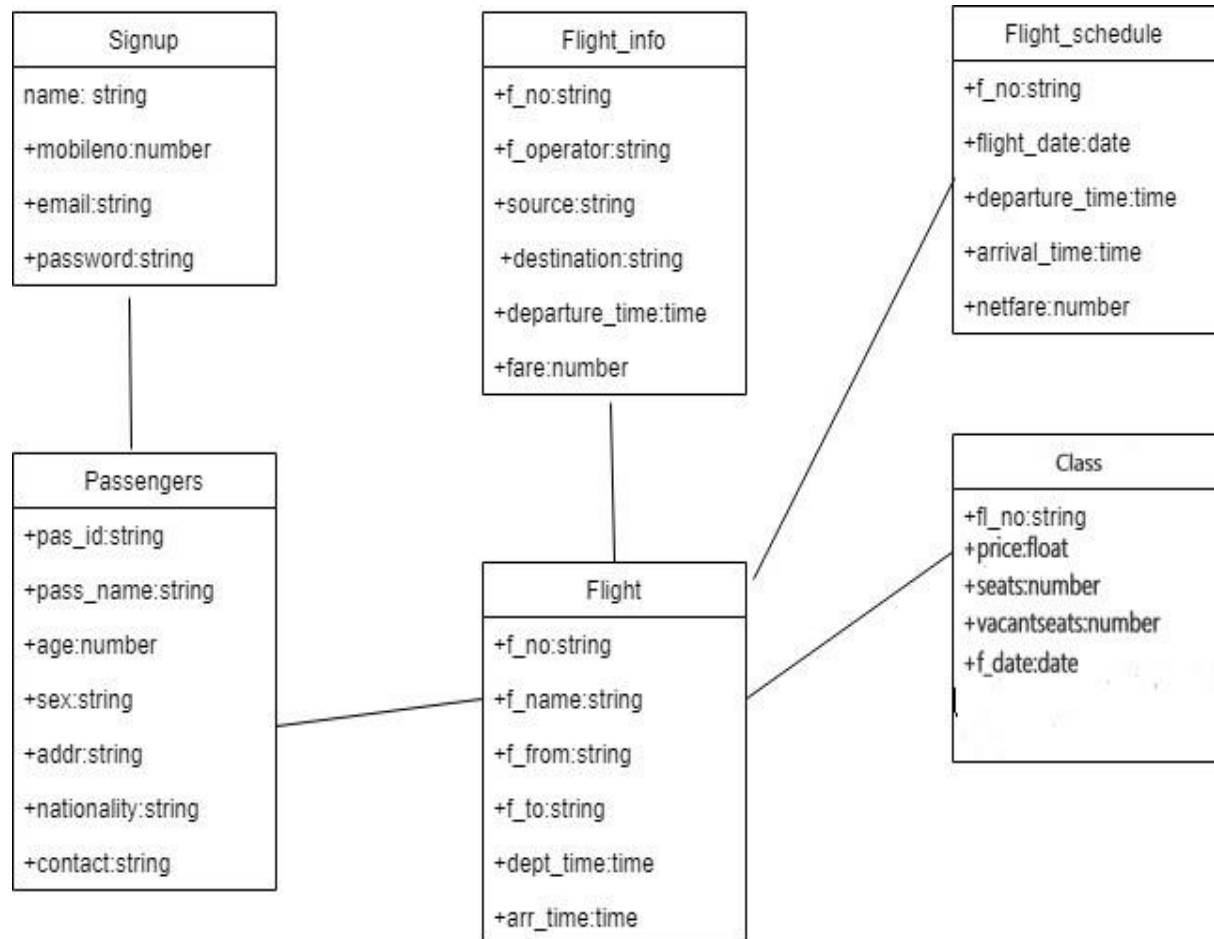
3.1 Data Flow Diagrams
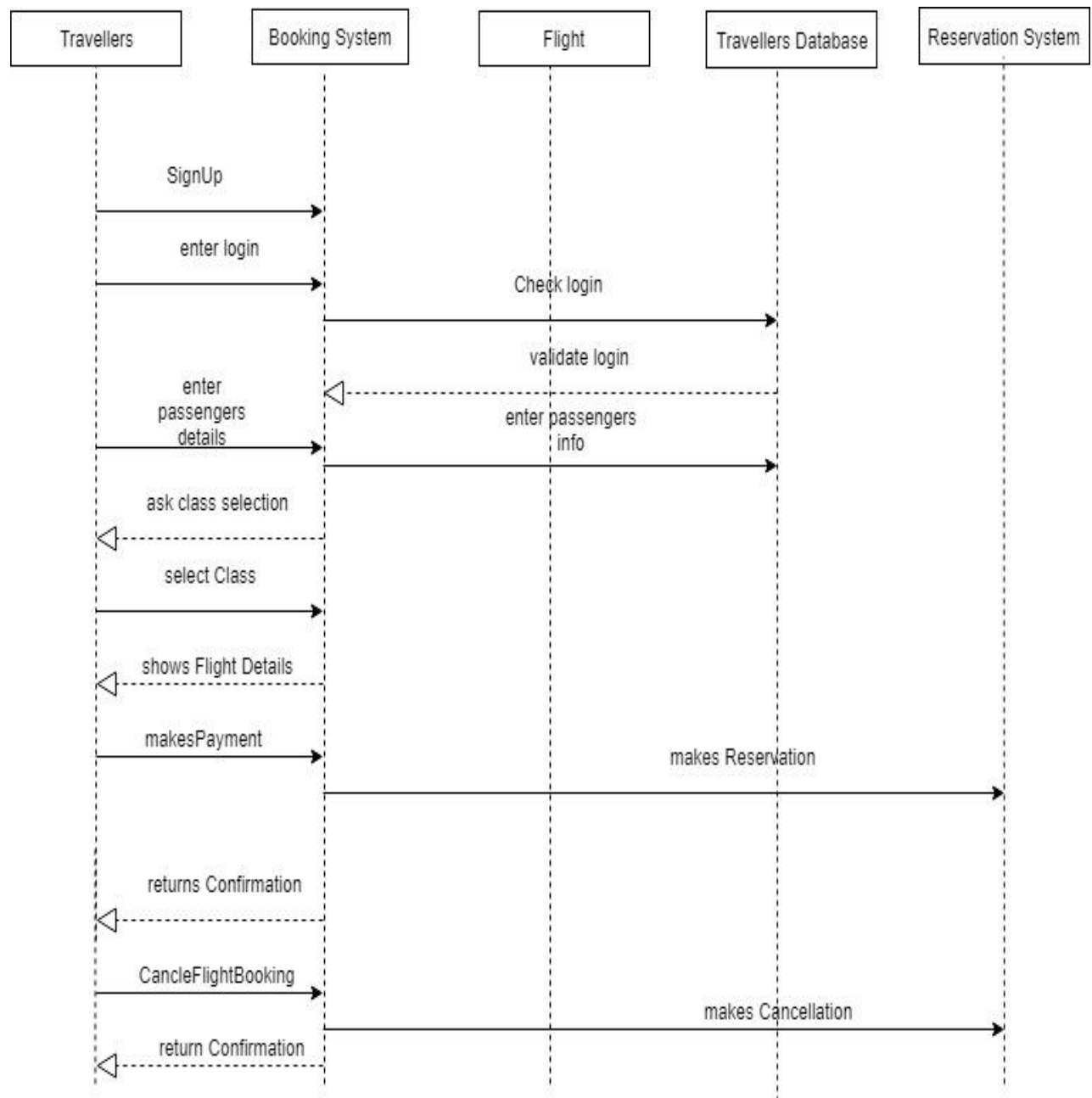
3.1.1.DFD level – 0

3.1.2. DFD level-1

DFD LEVEL 1

3.2 UML DIAGRAMS

3.2.1 Class Diagram
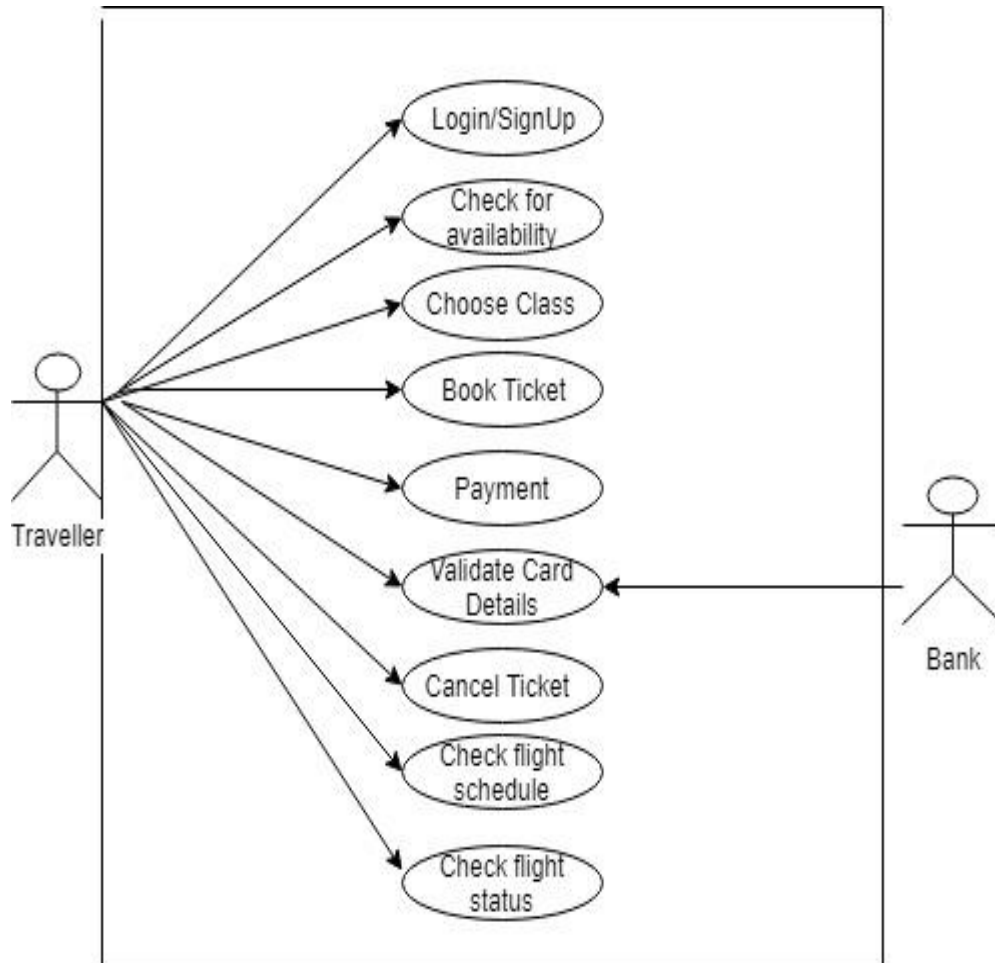

Signup
- name: string
- +mobileno:number
- +email:string
- +password:string

Flight_info
- +f_no:string
- +f_operator:string
- +source:string
- +destination:string
- +departure_time:time
- +fare:number

Flight_schedule
- +f_no:string
- +flight_date:date
- +departure_time:time
- +arrival_time:time
- +netfare:number

Passengers
- +pas_id:string
- +pass_name:string
- +age:number
- +sex:string
- +addr:string
- +nationality:string
- +contact:string

Flight
- +f_no:string
- +f_name:string
- +f_from:string
- +f_to:string
- +dept_time:time
- +arr_time:time

Class
- +fl_no:string
- +price:float
- +seats:number
- +vacantseats:number
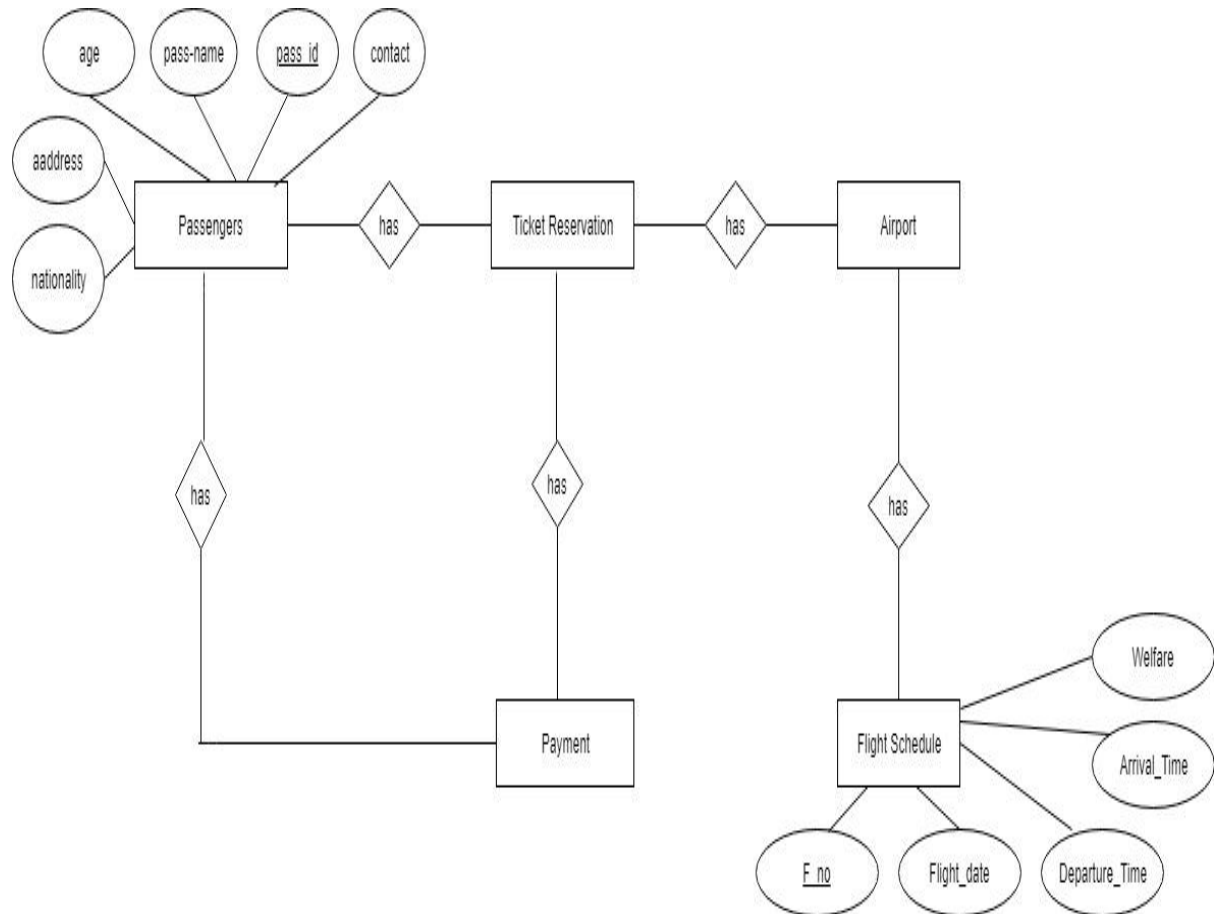- +f_date:date

3.2.2. Sequence Diagram

3.2.3 Use Case Diagram

3.3 <u>DATABASE DESIGN</u>

3.3.1 ER-Diagram

3.3.2 Tables of Database

1 SignUp Table

Name of Field	Datatype	Description
Name	varchar	It contains name of the user who creates the account.
Mobile No	number	Contains mobile no of the user
Email	varchar	Contains email of the user
Password	varchar	User enters his password while creating new password.

2.Flight Table

Name of Field	Datatype	Description
Fl_NO	varchar	It has the flight number.
F_Name	varchar	Contains name of the flight.
F_from	varchar	Tells the source of flight.
F_to	varchar	Tells the destination of flight.
Dept_time	Time	Gives departure time of flight.
Arr_time	Time	Gives arrival time of flight.

3.Flight Schedule Table

Name of Field	Datatype	Description
F_No	varchar	Contains flight no.
Flight_date	Date	It displays all the flights available on the particular date entered by the user.
Departure_time	Time	Contains departure time of flight.
Arrival-time	Time	Contains arrival time of flight.
Netfare	Float	Contains total fare of the flight.

4.Flight_info Table

Name of Field	Datatype	Description
F_no	varchar	Contains flight no .
F_operator	varchar	Tells operator of flight like airindia, indigo etc.
Source	varchar	Tells starting point of the flight.
Destination	varchar	Tells ending point of flight.
Departure_time	Time	Gives start time of flight.
Fare	Float	Gives fare of flight excluding taxes.

5.Class Table (Business and Economy Class)

| Name of Field	Datatype	Description
F_No	varchar	Contains flight no.
Price	Float	Contains price of the flight.
Seats	Number	Tells the total no of seats of particular class.
Vacant_seats	Number	Tells the no of vacant seats of particular class.
Date	Date	Tells the date on which a particular flight is available.

6.Passenger Personal Details Table

Name of Field	Datatype	Description
Pas-id	Varchar	Contains passenger id.
Pass_name	Varchar	Contains passenger name.
Age	Number	Tells age of the passenger.
Sex	Char	Tells sex of passenger.
Addr	Varchar	User enters his/her address.
Nationality	Varchar	Tells nationality of the passenger.
Contact	Varchar	Tells contact no of the passenger.

4.<u>IMPLEMENTATION AND USER INTERFACE</u>
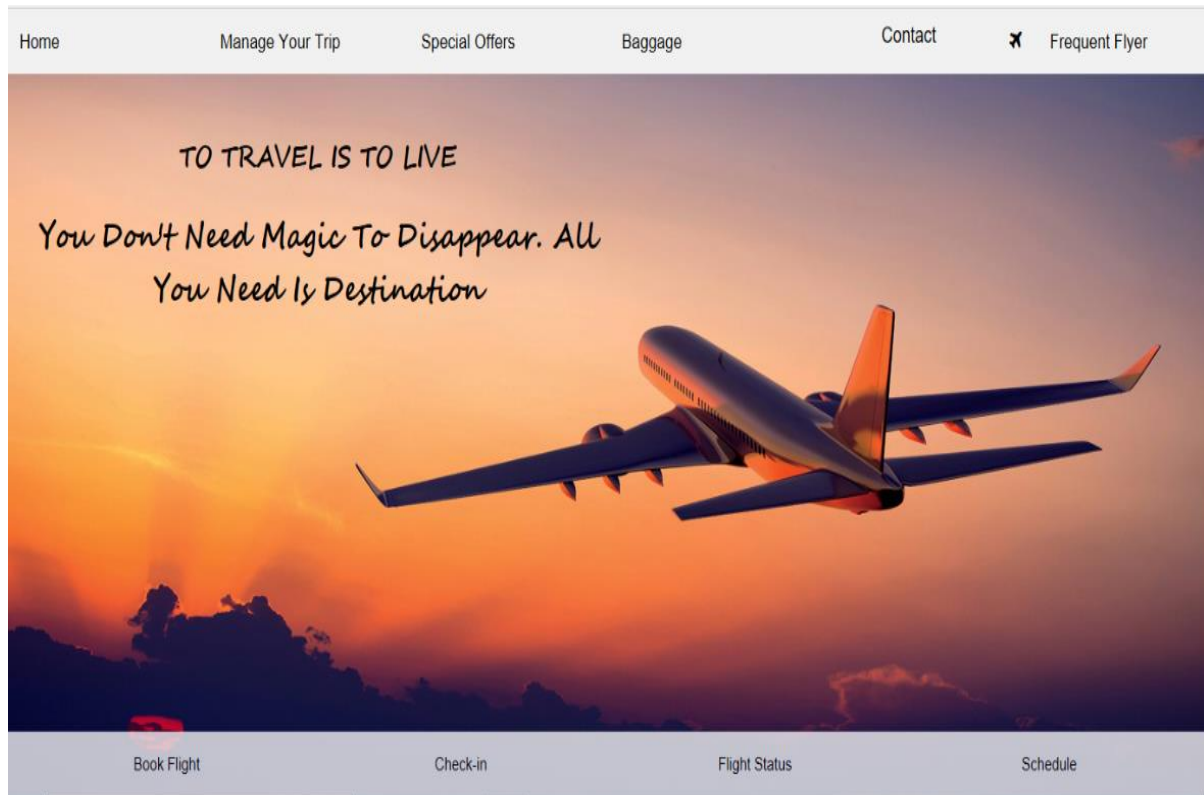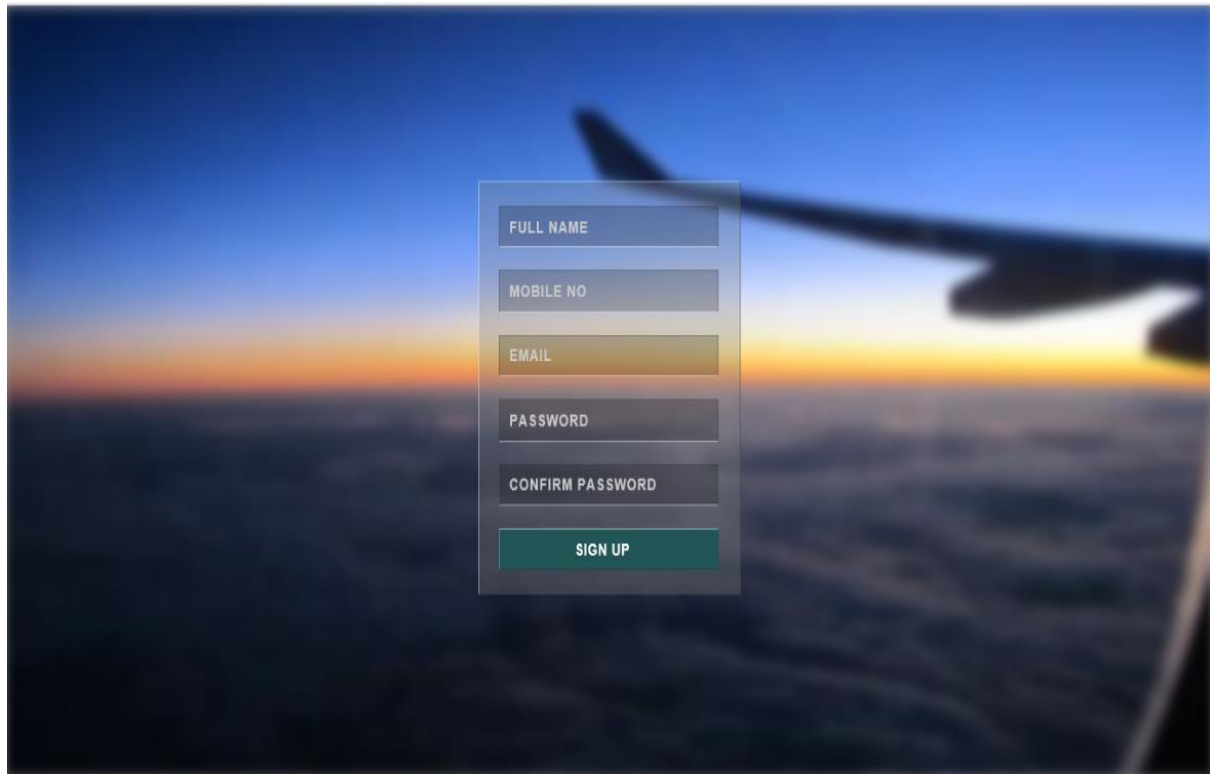
Homepage

This is the first page which is viewed by the user when visit to this website. In this page there are navbars having different functionality. When user visit to frequent flyer navbar it shows two options to choose one is to login another is to sign up. If the user is new then he/she needs to sign up to enroll to this website. If user is not new or member of website then needs to login.
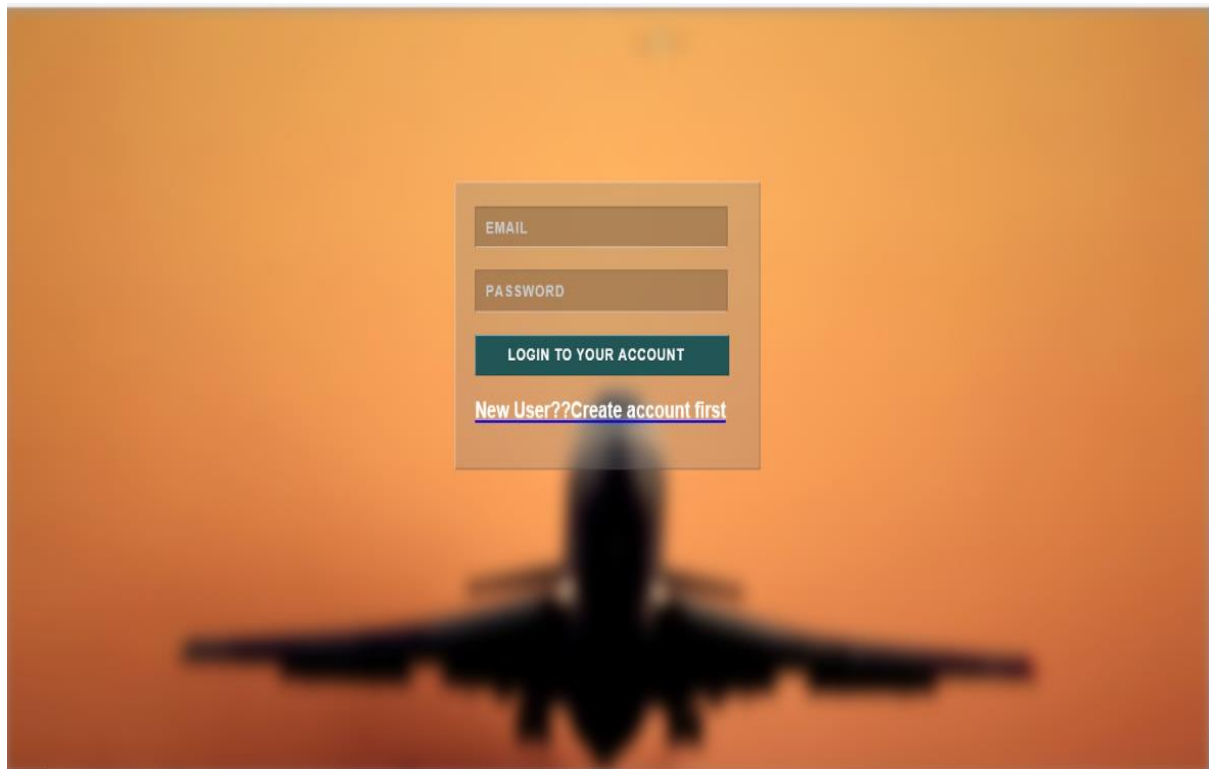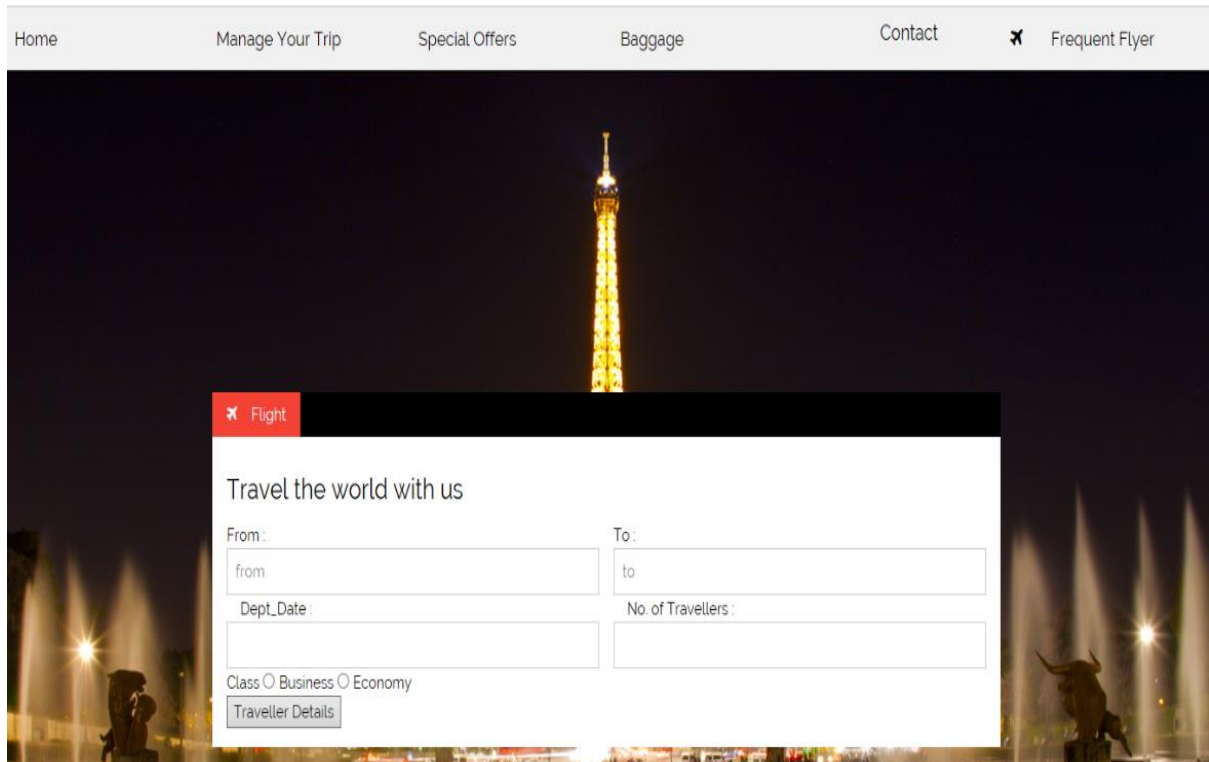
Login Page

This is the page which is to be use by frequent users to login to website and enjoy facilities. If user is new then he/she must create a new account which is available in this page to avail the facilities. When user enters his/her email and password and if it matches to the entries in the database then it allow user to go further otherwise ask him/her to sign up.

Sign Up Page

This is the signup page which ask new users to fill all their details as without it won't proceed further. After filling all details, the details are stored in the database and when the particular user access the website again it is ask to login only no need to again signup.

Flight Availability Page

This is the page shown to user after login or signup. In this page the user/passenger are required to fill the details related to flights as destination , source and class etc. So that available flights as per given details can be shown to passengers.

Traveler Detail Page

This page is shown to passengers once the flight details is filled and by clicking Traveler Details button this page is open . In this passengers are asked to fill its own details like age, passenger's name, id, address, contact, etc. By clicking to submit button all the details stores in the database.
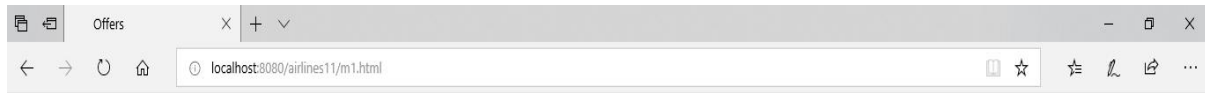
Special Offer Page

This page is for providing users new offers which are going on. After clicking to any of the offers the user can have some interesting surprises.

Baggage Page (1)

This is the page to give passengers information that which types of luggage and how much weight of luggage is allowed in the plane. So that passengers journey be safe and without any risks.

Baggage Page (2)
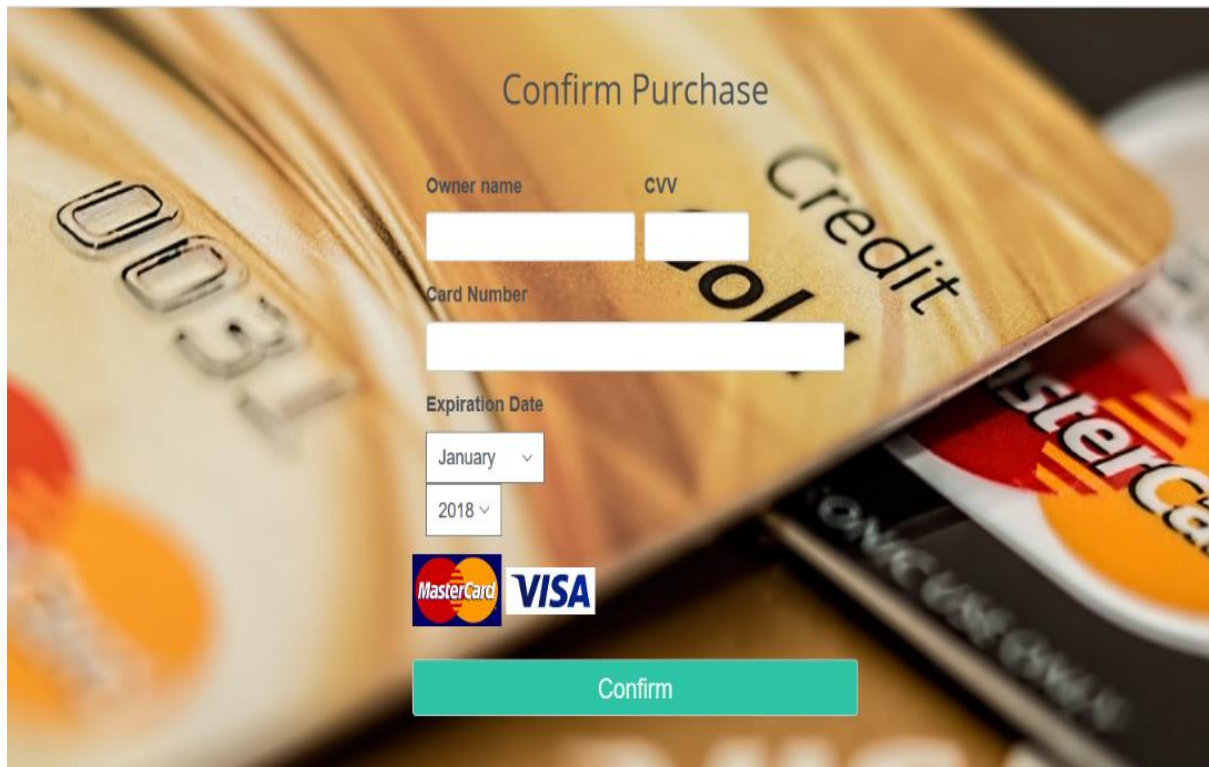
This is the page to inform the passengers that this type of luggage are allowed in the plane with extra cost apart from the usual fare.

Details						
123	Raashi	22	f	9945387527	indian	121/c-nagar Delhi

complete your payment

Confirmation of ticket

This is the page shown to passenger after he/she fills details and click to submit of previous page. Corresponding all details of passengers is shown to him/her in the form of tables so that if there is some correction to be done it can be done again filling all their details.
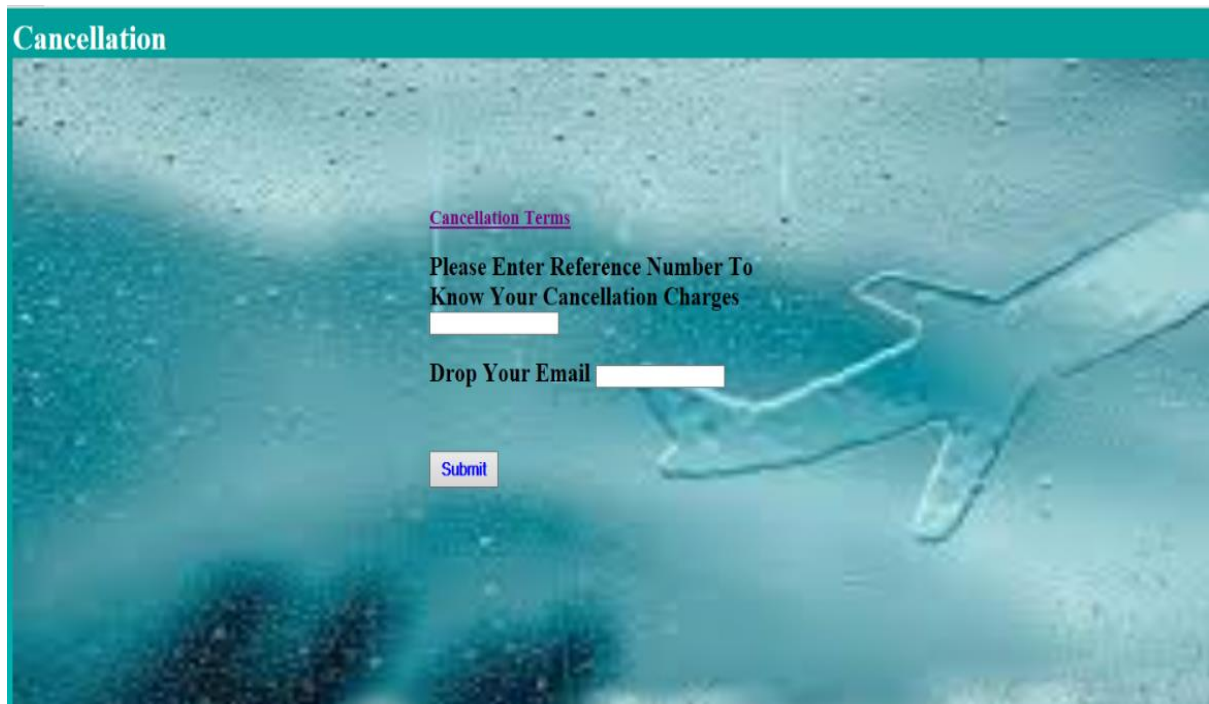
Payment Page

This page is shown when all the details is checked by the passenger and clicking to complete your payment button. In this passenger's card number expiry date to card all are filled so that passenger can make payment and book corresponding ticket and enjoy journey.

Cancellation Terms

Cancellation Fees	INR
Upto 2 Hour Before Schedule Departure	3000 or 100% of airfare charge (whichever is lower)

Changes Fees	INR
Upto 2 Hour Before Schedule Departure	2250 or 100% of airfare charge (whichever is lower)

Baggage(Domestic)	INR
5kg Prepaid	1900
10kg Prepaid	3800
15kg Prepaid	11400
30kg Prepaid	900
At Airport Per Kg	400

Baggage(International)	INR
8kg Prepaid	500
15kg Prepaid	750
30kg Prepaid	1500

Cancellation Details

This page is just to give information about the cancellation fare. When a passenger cancel his/her booked ticket then what will be the charges and what amount is deducted so that passengers will not feel any problem while cancellation and gets their fare back.

Cancellation Confirmation Page

This page is to give details pf passenger cancellation fare to the corresponding mail id which is asked to enter by passengers and the reference number which is in the ticket. This confirms cancellation of ticket.

5.CODE SNIPPETS

log.jsp

```jsp
<%
    if(request.getParameter("b1")!=null)
    {
    Connection con=null;
            Statement st;
            ResultSet rs;
    String en=request.getParameter("t1");
    String pw=request.getParameter("t2");

            try{
                    Class.forName("com.mysql.jdbc.Driver");
                    con = DriverManager.getConnection("jdbc:mysql://localhost:3306/airlines","root","");
                    st=con.createStatement();
            String sql="select * from Signup where Email='"+en+"' and password='"+pw+"'";
            rs=st.executeQuery(sql);
            if(rs.next())
            {       session.setAttribute("email",en);
                    response.sendRedirect("home1.jsp");
            }
            else
                    out.println("Invalid User Name or password");
            }catch(Exception e)
            {
                    out.println(e.toString());
            }
    }
    %>
```

Whenever a frequent flyer (i.e. existing user of our website) logs into the website his/her details gets verified by the database and if it is matched then he/she is allowed to access the facilities of this website like booking ticket, checking flight status , cancelling ticket etc. If details doesn't get matched then the user needs to create his/her account to avail the facilities.

Signup.jsp

```jsp
<%
    if(request.getParameter("b1")!=null)
    {
    Connection con=null;
            Statement st;
            ResultSet rs;
    String name=request.getParameter("t1");
    String mob=request.getParameter("t2");
    String en=request.getParameter("t3");
    String passwrd=request.getParameter("psw");
        try{
                    Class.forName("com.mysql.jdbc.Driver");
                    con = DriverManager.getConnection("jdbc:mysql://localhost:3306/airlines","root","");
                    st=con.createStatement();
                String sql="insert into SignUp values('"+name+"','"+mob+"','"+en+"','"+passwrd+"')";
                int res=st.executeUpdate(sql);
                if(res!=0)
                {out.println("Record Inserted");
                session.setAttribute("email",en);
                response.sendRedirect("home1.jsp");
                }
                else
                {out.println("Record Not Inserted");
                }
                }
                catch(Exception e)
                {
                    out.println(e.toString());
                }}%>
```

Using above jsp code new user can create his/her account and can access the website.

Passenger.jsp

```jsp
<%
    if(request.getParameter("b1")!=null){
Connection con=null;
        Statement st;
        ResultSet rs;
int id1=Integer.parseInt(request.getParameter("p1"));
String name1=request.getParameter("m1");
int age1=Integer.parseInt(request.getParameter("m2"));
String sex1=request.getParameter("m3");
String addr1=request.getParameter("n1");
String nat1=request.getParameter("n2");
String contact1=request.getParameter("n3");
session.setAttribute("id",id1);
session.setAttribute("age",age1);
session.setAttribute("sex",sex1);session.setAttribute("addr",addr1);session.setAttribute("nat",nat1);
session.setAttribute("contact",contact1);
session.setAttribute("name",name1);
 try{
            Class.forName("com.mysql.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/airlines","root","");
            st=con.createStatement();
        String sql="insert into passenger1 values("+id1+",'"+name1+"',"+age1+",'"+sex1+"','"+addr1+"','"+nat1+"','"+contact1+"')";
        int res=st.executeUpdate(sql);
        if(res!=0)
            out.println("Record Inserted");
        else
            out.println("Record Not Inserted");
        }catch(Exception e)
        {
            out.println(e.toString());
        }
        response.sendRedirect("new1.jsp");} %>
```

By using the above code passenger details are inserted in the database which are asked by
the passenger while booking the ticket .

new1.jsp

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<%
    out.println("<table width='500px' border='7' cellpadding='0' cellspacing='0'>");
    out.println("<tr style='background-color:black;color:white'>");
    out.println("<td colspn='7'>Details</td>");
    out.println("</tr><tr style='background-color:black;color:white'>");




%>
<table width="500px" border="7" cellpadding="0" cellspacing="0">
    <tr>
        <td><%=session.getAttribute("id")%></td>
        <td><%=session.getAttribute("name")%></td>
        <td><%=session.getAttribute("age")%></td>
        <td><%=session.getAttribute("sex")%></td>
        <td><%=session.getAttribute("contact")%></td>
        <td><%=session.getAttribute("nat")%></td>
        <td><%=session.getAttribute("addr")%></td>
    </tr>
</table>
    <br>
    <br>
    <a href="payment.html"><input type="button" name="b1" value="complete your payment"></a>
```

Once the traveler successfully fills his details and clicks submit button then he all his details will be displayed on the webpage so that the traveler can check whether the details are correct or not and after that he is redirected to payment page by clicking on complete payment button where he can fill his card details and make the payment to confirm the booking.

REFERENCES/BIBLIOGRAPHY

1. https://tutorialrepublic.com/javascript-tutorial/javascript-strings.php
2. https://www.w3schools.com/howto/howto_css_contact_form.asp
3. https://getbootstrap.com/docs/4.1/getting-started/introduction
4. https://www.javatpoint.com/jsp-tutorial
5. http://www.stackoverflow.com