

# **Internet Technology Lab Report – Assignment 5**

## **TITLE**

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**Class – BCSE 4<sup>th</sup> year**

**Group – A3**

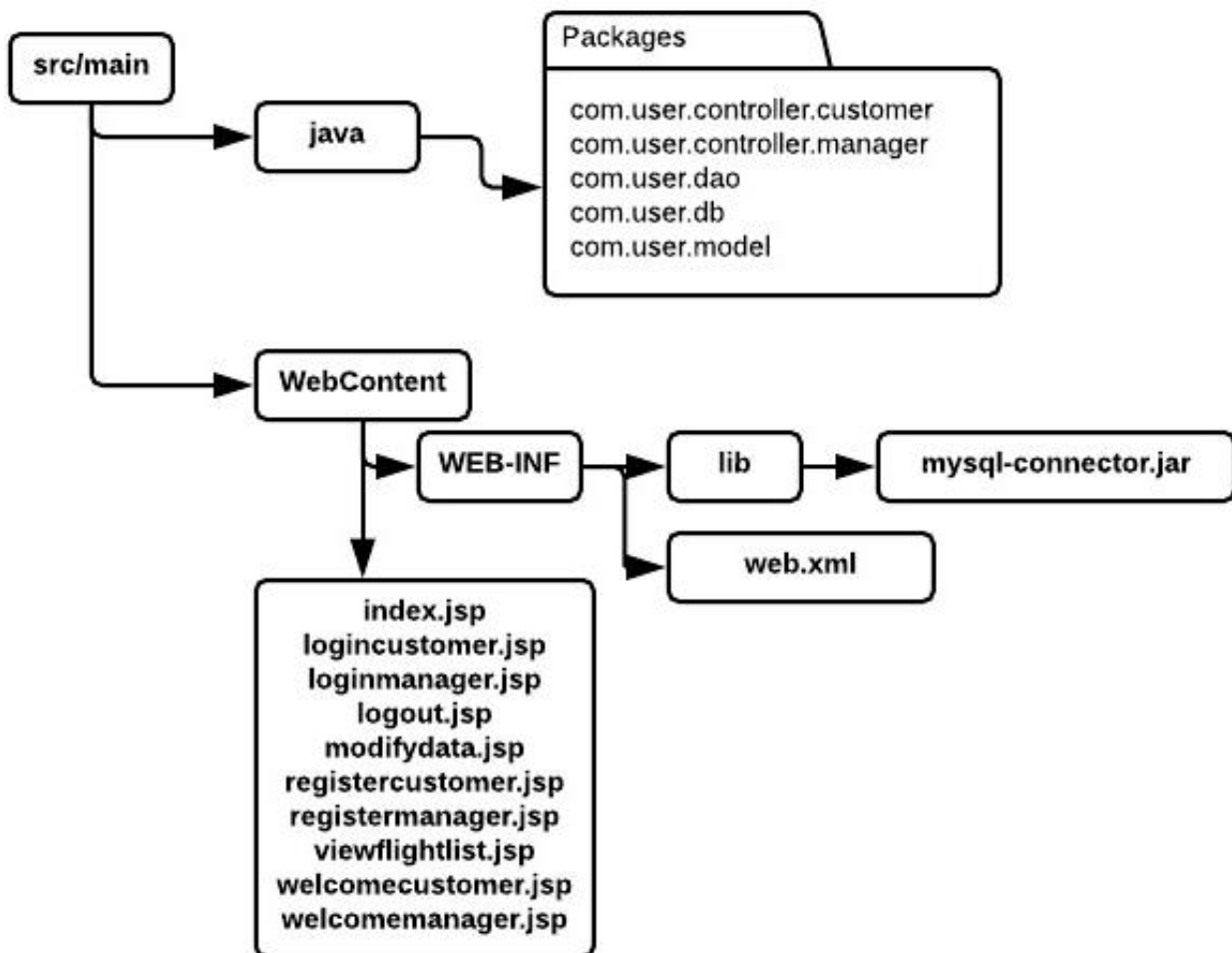
**Assignment Numbers – 5**

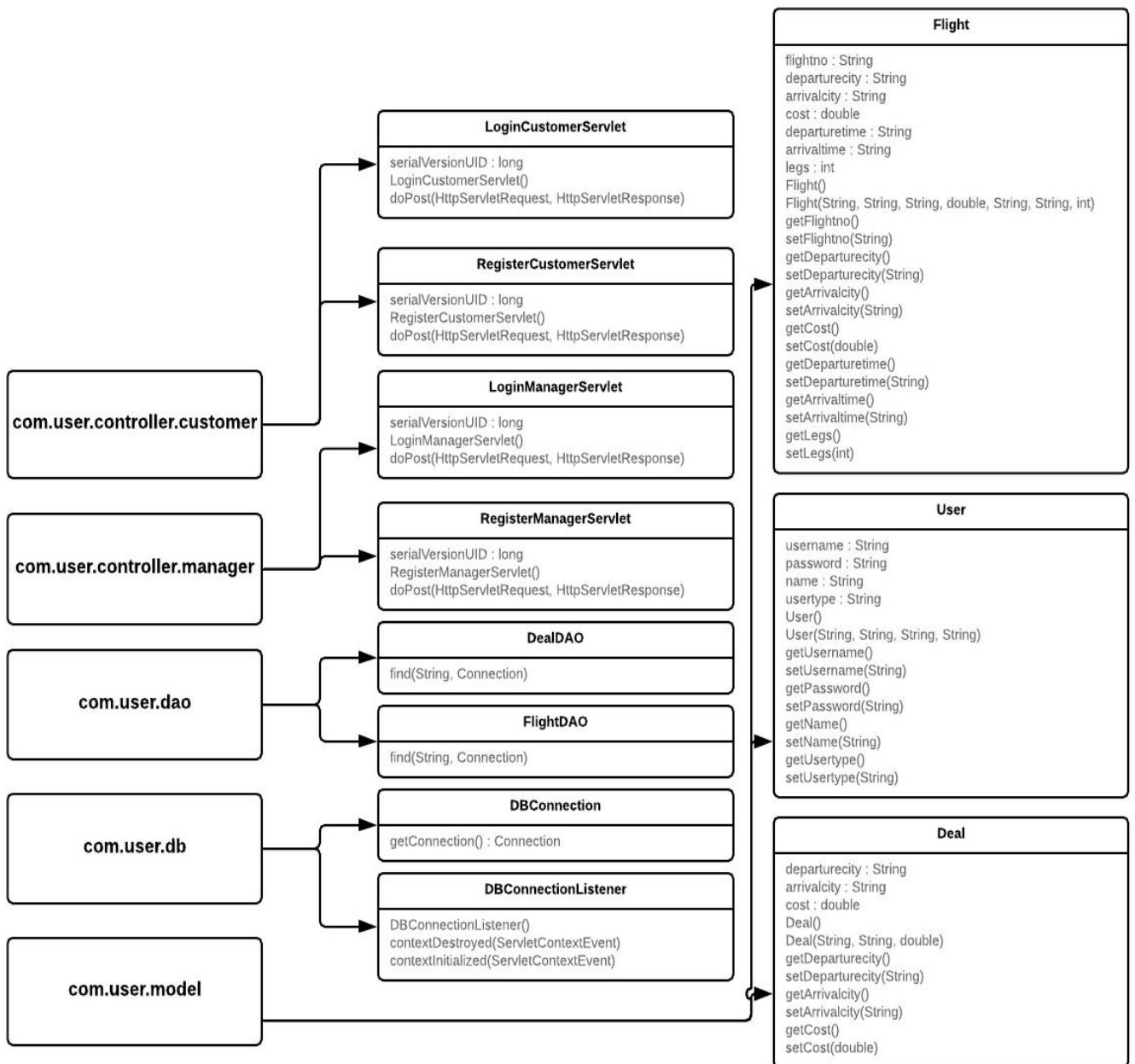
Implement a web application for “Travel Thru Air” using servlets to support the following two use cases

1. A list of current special deals must appear on the home page. Each special deal must display the departure city, the arrival city, and the cost. These special deals are set up by the marketing department and change during the day, so it can't be static. Special deals are only good for a limited amount of time.
2. A user may search for flights, given a departure city, time and an arrival city. The results must display the departure city, the arrival city, the total cost, and how many legs the flight will have.

State and explain why and where you have used design patterns.

## CLASS DIAGRAMS





## CODE SNIPPET

### Deployment Descriptor [web.xml] :

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd" id="WebApp_ID" version="4.0">
    <display-name>ass5_travel_thru_air</display-name>
    <welcome-file-list>
        <welcome-file>index.jsp</welcome-file>
    </welcome-file-list>
</web-app>
```

### index.jsp :

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Travel Thru Air</title>
</head>
<body>
<%
User user = (User) session.getAttribute("user");
if(user != null) {
    if(user.getUserType() == "customer") response.sendRedirect("welcomecustomer.jsp");
    else if(user.getUserType() == "manager")
response.sendRedirect("welcomemanager.jsp");
    return;
}
%>
<h1>Welcome to Travel Thru Air</h1>
<h3>
Are you from management department?
<a href="http://localhost:8080/ass5_travel_thru_air/registermanager.jsp">Management
Portal</a>
</h3>
<br> <br>
<h3>
Are you a customer?
<a href="http://localhost:8080/ass5_travel_thru_air/registercustomer.jsp">Customer
Portal</a>
</h3>

</body>
</html>
```

### logincustomer.jsp :

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
```

```

<title>Customer Portal</title>
</head>
<body>
<%
User user = (User) session.getAttribute("user");
if(user != null) {
    if(user.getUserType() == "customer") response.sendRedirect("welcomecustomer.jsp");
    else if(user.getUserType() == "manager")
response.sendRedirect("welcomemanager.jsp");
    return;
}
%>
<h1>Welcome to Travel Thru Air</h1>
<h2>Customer Portal</h2>
Want to go back to registration page? <a
href="http://localhost:8080/ass5_travel_thru_air/registercustomer.jsp">Customer
Registration</a>
<br>
<h3>Login here!</h3>
<form action="logincustomer" method="post">
<pre>
    Username: <input type="text" name="username" placeholder="Enter username here"
required/>

    Password: <input type="text" name="password" placeholder="Enter password here"
required/>

        <input type="submit" value="LOGIN"/>

</pre>
</form>

</body>
</html>

```

### **loginmanager.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Management Portal</title>
</head>
<body>
<%
User user = (User) session.getAttribute("user");
if(user != null) {
    if(user.getUserType() == "customer") response.sendRedirect("welcomecustomer.jsp");
    else if(user.getUserType() == "manager")
response.sendRedirect("welcomemanager.jsp");
    return;
}
%>
<h1>Welcome to Travel Thru Air</h1>
<h2>Management Portal</h2>
Want to go back to registration page? <a
href="http://localhost:8080/ass5_travel_thru_air/registermanager.jsp">Management
Registration</a>
<br>
<h3>Login here!</h3>

```

```

<form action="loginmanager" method="post">
<pre>
    Username: <input type="text" name="username" placeholder="Enter username here"
required/>

    Password: <input type="text" name="password" placeholder="Enter password here"
required/>

        <input type="submit" value="LOGIN"/>
</pre>
</form>

</body>
</html>

```

### **logout.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Logout</title>
</head>
<body>
<%
session.removeAttribute("user");
session.invalidate();
response.sendRedirect("index.jsp");
%>

</body>
</html>

```

### **registercustomer.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Customer Portal</title>
</head>
<body>
<%
User user = (User) session.getAttribute("user");
if(user != null) {
    if(user.getUserType() == "customer") response.sendRedirect("welcomecustomer.jsp");
    else if(user.getUserType() == "manager")
response.sendRedirect("welcomemanager.jsp");
    return;
}
%>
<h1>Welcome to Travel Thru Air</h1>
<h2>Customer Portal</h2>

Already registered? <a
href="http://localhost:8080/ass5_travel_thru_air/logincustomer.jsp">Customer Login</a>
<br>

```

```

<h3>Register here!</h3>
<form action="registercustomer" method="post">
<pre>
    Username: <input type="text" name="username" placeholder="Enter username here"
required/>

    Password: <input type="text" name="password" placeholder="Enter password here"
required/>

    Name:      <input type="text" name="name" placeholder="Enter name here" required/>

               <input type="submit" value="REGISTER"/>
</pre>
</form>

</body>
</html>

```

#### **registermanager.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Management Portal</title>
</head>
<body>
<%
User user = (User) session.getAttribute("user");
if(user != null) {
    if(user.getUserType() == "customer") response.sendRedirect("welcomecustomer.jsp");
    else if(user.getUserType() == "manager")
response.sendRedirect("welcomemanager.jsp");
    return;
}
%>
<h1>Welcome to Travel Thru Air</h1>
<h2>Management Portal</h2>

```

```

Already registered? <a
href="http://localhost:8080/ass5_travel_thru_air/loginmanager.jsp">Management Login</a>
<br>
<h3>Register here!</h3>
<form action="registermanager" method="post">
<pre>
    Username: <input type="text" name="username" placeholder="Enter username here"
required/>

    Password: <input type="text" name="password" placeholder="Enter password here"
required/>

    Name:      <input type="text" name="name" placeholder="Enter name here" required/>

               <input type="submit" value="REGISTER"/>
</pre>
</form>

```

</body>

```
</html>
```

### welcomecustomer.jsp :

```
<%@
    page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*"
    import="sourav.travelapp.dao.*"
    import="java.sql.*"
    import="java.util.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Welcome Customer</title>

</head>
<body>
<%
User user = (User)session.getAttribute("user");
if(user == null) {
    response.sendRedirect("index.jsp");
    return;
}
out.println("<h2>Hey "+user.getUsertype()+"! Welcome "+user.getName()+"</h2>");
%>
Want to logout?
<a href="http://localhost:8080/ass5_travel_thru_air/logout.jsp">Logout</a>
<br> <br>
<h3>Special Deals</h3>
<table border="1">
    <tbody>
        <%
            Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
DealDAO dealDAO = new DealDAO();
String query = "select * from specialdeals";
List<Deal> deals = dealDAO.find(query, conn);
boolean flag = false;
        %>
        <%
            for(Deal f : deals) {
                if(flag == false) {
                    %>
                    <tr>
                        <th>DEPARTURE CITY</th>
                        <th>ARRIVAL CITY</th>
                        <th>COST</th>
                    </tr>
                    <%
                }
                flag = true;
            %>
            <tr>
                <th><%=f.getDeparturecity() %></th>
                <th><%=f.getArrivalcity() %></th>
                <th><%= "only Rs. "+f.getCost() %></th>
            </tr>
            <%
                }
            %>
        %>
    </tbody>
</table>
```



```

        if(flag == false) out.println("No special deals to display
currently");
        %>
    </tbody>
</table>

<h3>Search flights</h3>
<form name = "searchform" action="viewflightlist.jsp" method="post" onsubmit="return
validate()">
<pre>
    Departure City: <select name="departurecity" >
                                <option
value="Bangalore">Bangalore</option>
                                <option value="Delhi">Delhi</option>
                                <option value="Kolkata">Kolkata</option>
                                <option value="Mumbai">Mumbai</option>
                                </select>
    Arrival City: <select name="arrivalcity" >
                                <option
value="Bangalore">Bangalore</option>
                                <option value="Delhi">Delhi</option>
                                <option value="Kolkata">Kolkata</option>
                                <option value="Mumbai">Mumbai</option>
                                </select>
    Number of persons: <input type="number" name="persons" min="1" max="20"
required>
    Expected Departure Time (Start) : <select name="starttime" >
                                <option value="0000">0000 HRS</option>
                                <option value="0100">0100 HRS</option>
                                <option value="0200">0200 HRS</option>
                                <option value="0300">0300 HRS</option>
                                <option value="0400">0400 HRS</option>
                                <option value="0500">0500 HRS</option>
                                <option value="0600">0600 HRS</option>
                                <option value="0700">0700 HRS</option>
                                <option value="0800">0800 HRS</option>
                                <option value="0900">0900 HRS</option>
                                <option value="1000">1000 HRS</option>
                                <option value="1100">1100 HRS</option>
                                <option value="1200">1200 HRS</option>
                                <option value="1300">1300 HRS</option>
                                <option value="1400">1400 HRS</option>
                                <option value="1500">1500 HRS</option>
                                <option value="1600">1600 HRS</option>
                                <option value="1700">1700 HRS</option>
                                <option value="1800">1800 HRS</option>
                                <option value="1900">1900 HRS</option>
                                <option value="2000">2000 HRS</option>
                                <option value="2100">2100 HRS</option>
                                <option value="2200">2200 HRS</option>
                                <option value="2300">2300 HRS</option>
                                <option value="2359">2359 HRS</option>
                                </select>
    Expected Departure Time (End) : <select name="endtime" >
                                <option value="0000">0000 HRS</option>
                                <option value="0100">0100 HRS</option>
                                <option value="0200">0200 HRS</option>
                                <option value="0300">0300 HRS</option>
                                <option value="0400">0400 HRS</option>
                                <option value="0500">0500 HRS</option>
                                <option value="0600">0600 HRS</option>

```

```

<option value="0700">0700 HRS</option>
<option value="0800">0800 HRS</option>
<option value="0900">0900 HRS</option>
<option value="1000">1000 HRS</option>
<option value="1100">1100 HRS</option>
<option value="1200">1200 HRS</option>
<option value="1300">1300 HRS</option>
<option value="1400">1400 HRS</option>
<option value="1500">1500 HRS</option>
<option value="1600">1600 HRS</option>
<option value="1700">1700 HRS</option>
<option value="1800">1800 HRS</option>
<option value="1900">1900 HRS</option>
<option value="2000">2000 HRS</option>
<option value="2100">2100 HRS</option>
<option value="2200">2200 HRS</option>
<option value="2300">2300 HRS</option>
<option value="2359">2359 HRS</option>
</select>

<input type="submit" value="SEARCH">

</pre>
</form>

<script>
function validate() {
    var departurecity = document.forms["searchform"]["departurecity"].value;
    var arrivalcity = document.forms["searchform"]["arrivalcity"].value;
    var starttime = document.forms["searchform"]["starttime"].value;
    var endtime = document.forms["searchform"]["endtime"].value;
    if(starttime > endtime) {
        alert("Start time cannot be greater than end time!");
        return false;
    }
    if(departurecity == arrivalcity) {
        alert("Departure city and arrival city cannot be same!");
        return false;
    }
    return true;
}
</script>
</body>
</html>

```

### **welcomemanager.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*"
    import="java.sql.*, java.util.*, sourav.travelapp.dao.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Welcome Manager</title>
</head>
<body>
<%
User user = (User)session.getAttribute("user");
if(user == null) {
    response.sendRedirect("index.jsp");

```

```

        return;
    }
    out.println("<h2>Hey "+user.getUsertype()+"! Welcome "+user.getName()+"</h2>");
    %>
    Want to logout?
    <a href="http://localhost:8080/ass5_travel_thru_air/logout.jsp">Logout</a>
    <br> <br>
    <h3>Current Special Deals</h3>
    <table border="1">
        <tbody>
            <%
                Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
DealDAO dealDAO = new DealDAO();
String query = "select * from specialdeals";
List<Deal> deals = dealDAO.find(query, conn);
boolean flag = false;
            %>
            <%
                for(Deal f : deals) {
                    if(flag == false) {
                        %>
                        <tr>
                            <th>DEPARTURE CITY</th>
                            <th>ARRIVAL CITY</th>
                            <th>COST</th>
                        </tr>
                        <%
                            }
                            flag = true;
                        %>
                        <tr>
                            <th><%=f.getDeparturecity() %></th>
                            <th><%=f.getArrivalcity() %></th>
                            <th><%= "only Rs. "+f.getCost() %></th>
                        </tr>
                        <%
                            }
                            if(flag == false) out.println("No special deals to display
currently");
                        %>
                    </tbody>
                </table>
                <br>
                <h3>Current Flights</h3>
                <table border="1">
                    <tbody>
                        <%
                            FlightDAO flightDAO = new FlightDAO();
                            query = "select * from flights order by departurecity, arrivalcity,
departuretime";
                            List<Flight> flights = flightDAO.find(query, conn);
                            flag = false;
                        %>
                        <%
                            for(Flight f : flights) {
                                if(flag == false) {
                                    %>
                                    <tr>
                                        <th>FLIGHT NUMBER</th>
                                        <th>DEPARTURE CITY</th>

```

```

                <th>ARRIVAL CITY</th>
                <th>COST</th>
                <th>DEPARTURE TIME</th>
                <th>ARRIVAL TIME</th>
                <th>LEGS</th>
            </tr>
            <%
                }
                flag = true;
            %>
        <tr>
            <th><%=f.getFlightno() %></th>
            <th><%=f.getDeparturecity() %></th>
            <th><%=f.getArrivalcity() %></th>
            <th><%= "Rs. " + f.getCost() %></th>
            <th><%= f.getDeparturetime() + " HRS" %></th>
            <th><%= f.getArrivaltime() + " HRS" %></th>
            <th><%= f.getLegs() %></th>
        </tr>
    <%
        }
        if(flag == false) out.println("No flights to display currently");
    %>
</tbody>
</table>
<br>
Want to add, delete or update special deals or flights? [Table names are "specialdeals"
and "flights"]
<form action="modifydata.jsp" method="post">
<pre>
    <input type="text" name="query" placeholder="Enter SQL query here"
    style="height:30px;width:600px" required>

    <input type="submit" value="SUBMIT SQL QUERY" />
</pre>
</form>
</body>
</html>

```

### **modifydata.jsp :**

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="sourav.travelapp.model.*, java.sql.*"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Modify Data</title>
</head>
<body>
<%
    User user = (User)session.getAttribute("user");
    if(user == null) {
        response.sendRedirect("index.jsp");
        return;
    }
    out.println("<h2>Hey " + user.getUsertype() + "! Welcome " + user.getName() + "</h2>");
%>
Want to logout?
<a href="http://localhost:8080/ass5_travel_thru_air/Logout.jsp">Logout</a>
<br>

```

Want to go back to Manager Home Page?

```
<a href="http://localhost:8080/ass5_travel_thru_air/welcomemanager.jsp">Home Page</a>
<br> <br>
<%
String query = (String) request.getParameter("query");
out.println("SQL query you entered: " + query + "<br><br>");
try {
    Connection conn = (Connection) getServletContext().getAttribute("DBConnection");
    PreparedStatement statement = conn.prepareStatement(query);
    statement.execute();
    out.println("<b>SQL query executed!</b>");
} catch (Exception e) {
    out.println("<b>Invalid SQL query!</b>");
}

%>
</body>
</html>
```

### viewflightlist.jsp :

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"
    import="java.util.*"
    import="java.sql.*"
    import="sourav.travelapp.model.*"
    import="sourav.travelapp.dao.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Flight list</title>
</head>
<body>
    <%
    User user = (User)session.getAttribute("user");
    if(user == null) {
        response.sendRedirect("index.jsp");
        return;
    }
    out.println("<h2>Hey " + user.getUsertype() + "! Welcome " + user.getName() + "</h2>");
    %>
    Want to logout?
    <a href="http://localhost:8080/ass5_travel_thru_air/logout.jsp">Logout</a>
    <br>
    Want to search flights again?
    <a href="http://localhost:8080/ass5_travel_thru_air/welcomecustomer.jsp">Profile
Page</a>
    <br> <br>
    <h3>Flight list</h3>
    <%
        String departurecity = (String) request.getParameter("departurecity");
        String arrivalcity = (String) request.getParameter("arrivalcity");
        int persons = Integer.parseInt((String)request.getParameter("persons"));
        String starttime = (String) request.getParameter("starttime");
        String endtime = (String) request.getParameter("endtime");

        Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
        FlightDAO flightDAO = new FlightDAO();
        String query = "select * from flights where departurecity='" +
departurecity + "' and arrivalcity='" + arrivalcity + "' order by departurertime";
    %>

```

```

        List<Flight> flights = flightDAO.find(query, conn);
        DealDAO dealDAO = new DealDAO();
        String query2 = "select * from specialdeals where departurecity='" +
departurecity + "' and arrivalcity='" + arrivalcity + "'";
        List<Deal> deals = dealDAO.find(query2, conn);

        boolean flag = false;
        double cost = 9999999.00;
        if(deals.size() > 0) cost = deals.get(0).getCost();

        %>
        <table border="1">
            <tbody>
                <%
                    int i = 0;
                    for(Flight f : flights) {
                        if(Integer.parseInt(f.getDeparturetime()) <
Integer.parseInt(starttime)) continue;
                        if(Integer.parseInt(f.getDeparturetime()) >
Integer.parseInt(endtime)) continue;
                        double totalcost = (double) persons * (cost <
f.getCost() ? cost : f.getCost());
                        i++;
                        if(flag == false) {
                            %>
                            <tr>
                                <th><b>CHOOSE</b></th>
                                <th><b>FLIGHT NUMBER</b></th>
                                <th><b>DEPARTURE CITY</b></th>
                                <th><b>ARRIVAL CITY</b></th>
                                <th><b>TOTAL COST</b></th>
                                <th><b>DEPARTURE TIME</b></th>
                                <th><b>ARRIVAL TIME</b></th>
                                <th><b>LEGS</b></th>
                                <th><b>PERSONS</b></th>

                            </tr>
                            <%
                                }
                                flag = true;

                            %>
                            <tr>
                                <th><input type="radio" name="index" value="<%=i%>"><%=i

%></input></th>

                                <th><%=f.getFlightno() %></th>
                                <th><%=f.getDeparturecity() %></th>
                                <th><%=f.getArrivalcity() %></th>
                                <th><%= "Rs. " + totalcost %></th>
                                <th><%=f.getDeparturetime() + " HRS" %></th>
                                <th><%=f.getArrivaltime() + " HRS" %></th>
                                <th><%=f.getLegs() %></th>
                                <th><%=persons %></th>

                            </tr>
                            <%
                                }
                                if(flag == false) out.println("No flights to display
currently");

                                %>
                                </tbody>
                            </table>
                            <button id="buyButton">BUY</button>
                            <br><br>
                            <div id="Log"></div>

```

```

</body>

<script>
    var log = document.getElementById('log');
    document.getElementById("buyButton").onclick = function() {
        var index = document.getElementsByName('index');
        var flag = 0;
        log.innerHTML = "";
        for(var i=0;i<index.length;i++) {
            if(index[i].checked) {
                flag = 1;
                var idx = parseInt(index[i].value);
                log.innerHTML += "You bought ticket of Flight "+idx;
                break;
            }
        }
        if(flag == 0) log.innerHTML += "You did not choose a flight to buy!";
    };
</script>
</html>

```

### LoginCustomerServlet.java :

```

package sourav.travelapp.controller.customer;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.List;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

import sourav.travelapp.dao.*;
import sourav.travelapp.model.*;

/**
 * Servlet implementation class LoginCustomerServlet
 */
@WebServlet("/logincustomer")
public class LoginCustomerServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public LoginCustomerServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
     response)
     */
}

```

```

        protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
            try {
                PrintWriter out = response.getWriter();
                String username = request.getParameter("username");
                String password = request.getParameter("password");

                String query = "select * from customers where username='" + username
+ "'";

                Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
                PreparedStatement statement = conn.prepareStatement(query);
                ResultSet resultset = statement.executeQuery();
                if (resultset.next()) {
                    if (resultset.getString("password").equals(password)) {
                        HttpSession session = request.getSession();
                        User user = new User(username, password,
resultset.getString("name"), "customer");
                        session.setAttribute("user", user);
                        response.sendRedirect("welcomecustomer.jsp");
                    } else {
                        out.println("<h1>Invalid Password for the given
username!</h1>");
                        out.println("Want to go to home page? \r\n" +
"<a
href=\"http://localhost:8080/ass5_travel_thru_air/registercustomer.jsp\">Home Page</a>
");
                    }
                } else {
                    out.println("<h1>Customer does not exist in the
database!</h1>");
                    out.println("Want to go to home page? \r\n" +
"<a
href=\"http://localhost:8080/ass5_travel_thru_air/registercustomer.jsp\">Home Page</a>
");
                }
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    }
}

```

### **RegisterCustomerServlet.java :**

```

package sourav.travelapp.controller.customer;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class RegisterCustomerServlet
 */

```



```

@WebServlet("/registercustomer")
public class RegisterCustomerServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public RegisterCustomerServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
    response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        try {
            PrintWriter out = response.getWriter();
            String username = request.getParameter("username");
            String password = request.getParameter("password");
            String name = request.getParameter("name");

            String query = "select * from customers where username='" + username
+ "'" ;

            Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
            PreparedStatement statement = conn.prepareStatement(query);
            ResultSet resultset = statement.executeQuery();
            if (resultset.next()) {
                out.println("<h1>Customer already exists in the database.
Please login.</h1>");
                out.println("Want to go to login page? \r\n" +
                    "<a
href=\"http://localhost:8080/ass5_travel_thru_air/logincustomer.jsp\">Customer Login</a>
");
            } else {
                query = "insert into customers
values('" + username + "', '" + password + "', '" + name + "')";
                statement = conn.prepareStatement(query);
                statement.execute();
                out.println("<h1>The customer has been registered!</h1>");
                out.println("Want to go to home page? \r\n" +
                    "<a
href=\"http://localhost:8080/ass5_travel_thru_air/registercustomer.jsp\">Customer Home
Page</a> ") ;
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

```

### **LoginManagerServlet.java :**

```

package sourav.travelapp.controller.manager;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;

```

```

import java.sql.PreparedStatement;
import java.sql.ResultSet;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

import sourav.travelapp.model.User;

/**
 * Servlet implementation class LoginManagerServlet
 */
@WebServlet("/loginmanager")
public class LoginManagerServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public LoginManagerServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
    response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        try {
            PrintWriter out = response.getWriter();
            String username = request.getParameter("username");
            String password = request.getParameter("password");

            String query = "select * from managers where username='" + username +
            ""';

            Connection conn = (Connection)
            getServletContext().getAttribute("DBConnection");
            PreparedStatement statement = conn.prepareStatement(query);
            ResultSet resultset = statement.executeQuery();
            if (resultset.next()) {
                if (resultset.getString("password").equals(password)) {
                    HttpSession session = request.getSession();
                    User user = new User(username, password,
                    resultset.getString("name"), "manager");
                    session.setAttribute("user", user);
                    response.sendRedirect("welcomemanager.jsp");
                } else {
                    out.println("<h1>Invalid Password for the given
                    username!</h1>");
                    out.println("Want to go to home page? \r\n" +
                    "<a
                    href=\"http://localhost:8080/ass5_travel_thru_air/registermanager.jsp\">Home Page</a> ")
                    ;
                }
            } else {

```

```

        out.println("<h1>Manager does not exist in the
database!</h1>");
        out.println("Want to go to home page? \r\n" +
            "<a
href=\"http://localhost:8080/ass5_travel_thru_air/registermanager.jsp\">Home Page</a> ")
;
    }
    } catch (Exception e) {
        e.printStackTrace();
    }
}
}

```

### **RegisterManagerServlet.java :**

```

package sourav.travelapp.controller.manager;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class RegisterManagerServlet
 */
@WebServlet("/registermanager")
public class RegisterManagerServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public RegisterManagerServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
    response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        try {
            PrintWriter out = response.getWriter();
            String username = request.getParameter("username");
            String password = request.getParameter("password");
            String name = request.getParameter("name");

            String query = "select * from managers where username='" + username
+ "'" ;

            Connection conn = (Connection)
getServletContext().getAttribute("DBConnection");
            PreparedStatement statement = conn.prepareStatement(query);

```

```

        ResultSet resultset = statement.executeQuery();
        if (resultset.next()) {
            out.println("<h1>Manager already exists in the database.
Please login.</h1>");
            out.println("Want to go to login page? \r\n" +
                "<a
href=\\"http://localhost:8080/ass5_travel_thru_air/loginmanager.jsp\\">Manager Login</a>
") ;
        } else {
            query = "insert into managers
values('" + username + "','"+password+"','"+name+"')";
            statement = conn.prepareStatement(query);
            statement.execute();
            out.println("<h1>The manager has been registered!</h1>");
            out.println("Want to go to home page? \r\n" +
                "<a
href=\\"http://localhost:8080/ass5_travel_thru_air/registermanager.jsp\\">Manager Home
Page</a> ") ;
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
}
}

```

### **DealDAO.java :**

```

package sourav.travelapp.dao;

import java.sql.*;
import java.util.*;
import sourav.travelapp.model.*;

public class DealDAO {
    public List<Deal> find(String query, Connection conn) {
        List<Deal> offerlist = new ArrayList<Deal>();
        try {
            PreparedStatement statement = conn.prepareStatement(query);

            ResultSet resultset = statement.executeQuery();
            while(resultset.next()) {
                Deal offer = new Deal();
                offer.setDeparturecity(resultset.getString("departurecity"));
                offer.setArrivalcity(resultset.getString("arrivalcity"));
                offer.setCost(resultset.getDouble("cost"));
                offerlist.add(offer);
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
        return offerlist;
    }
}

```

### **FlightDAO.java :**

```

package sourav.travelapp.dao;
import java.sql.*;
import java.util.*;
import sourav.travelapp.model.*;

```

```

public class FlightDAO {
    public List<Flight> find(String query, Connection conn) {
        List<Flight> flightlist = new ArrayList<Flight>();
        try {
            PreparedStatement statement = conn.prepareStatement(query);

            ResultSet resultset = statement.executeQuery();
            while(resultset.next()) {
                Flight flight = new Flight();
                flight.setFlightno(resultset.getString("flightno"));
                flight.setDeparturecity(resultset.getString("departurecity"));
                flight.setArrivalcity(resultset.getString("arrivalcity"));
                flight.setCost(resultset.getDouble("cost"));
                flight.setDeparturetime(resultset.getString("departuretime"));
                flight.setArrivaltime(resultset.getString("arrivaltime"));
                flight.setLegs(resultset.getInt("legs"));
                flightlist.add(flight);
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
        return flightlist;
    }
}

```

#### **DBConnection.java :**

```

package sourav.travelapp.db;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DBConnection {

    public static Connection getConnection() {
        Connection conn = null;
        try {
            Class.forName("com.mysql.jdbc.Driver");
            conn =
DriverManager.getConnection("jdbc:mysql://localhost:3306/traveldb", "root", "root");
        } catch (ClassNotFoundException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        } catch (SQLException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
        return conn;
    }
}

```

#### **DBConnectionListener.java :**

```

package sourav.travelapp.db;

import java.sql.Connection;

import javax.servlet.ServletContext;
import javax.servlet.ServletContextEvent;
import javax.servlet.ServletContextListener;
import javax.servlet.annotation.WebListener;

```

```

/**
 * Application Lifecycle Listener implementation class DBConnectionListener
 *
 */
@WebListener
public class DBConnectionListener implements ServletContextListener {

    /**
     * Default constructor.
     */
    public DBConnectionListener() {
        // TODO Auto-generated constructor stub
    }

    /**
     * @see ServletContextListener#contextDestroyed(ServletContextEvent)
     */
    public void contextDestroyed(ServletContextEvent sce) {
        // TODO Auto-generated method stub
    }

    /**
     * @see ServletContextListener#contextInitialized(ServletContextEvent)
     */
    public void contextInitialized(ServletContextEvent sce) {
        // TODO Auto-generated method stub
        ServletContext context = sce.getServletContext();
        Connection conn = DBConnection.getConnection();
        context.setAttribute("DBConnection", conn);
    }
}

```

### **Deal.java :**

```

package sourav.travelapp.model;

public class Deal {
    private String departurecity;
    private String arrivalcity;
    private double cost;
    public Deal() {

    }
    public Deal(String departurecity, String arrivalcity, double cost) {
        this.departurecity = departurecity;
        this.arrivalcity = arrivalcity;
        this.cost = cost;
    }
    public String getDeparturecity() {
        return departurecity;
    }
    public void setDeparturecity(String departurecity) {
        this.departurecity = departurecity;
    }
    public String getArrivalcity() {
        return arrivalcity;
    }
    public void setArrivalcity(String arrivalcity) {
        this.arrivalcity = arrivalcity;
    }
}

```

```

        public double getCost() {
            return cost;
        }
        public void setCost(double cost) {
            this.cost = cost;
        }
    }
}

```

### **Flight.java :**

```
package sourav.travelapp.model;
```

```

public class Flight {
    private String flightno;
    private String departurecity;
    private String arrivalcity;
    private double cost;
    private String departuretime;
    private String arrivaltime;
    private int legs;
    public Flight() {

    }
    public Flight(String flightno, String departurecity, String arrivalcity, double
cost, String departuretime, String arrivaltime, int legs) {
        this.flightno = flightno;
        this.departurecity = departurecity;
        this.arrivalcity = arrivalcity;
        this.cost = cost;
        this.departuretime = departuretime;
        this.arrivaltime = arrivaltime;
        this.legs = legs;
    }
    public String getFlightno() {
        return flightno;
    }
    public void setFlightno(String flightno) {
        this.flightno = flightno;
    }
    public String getDeparturecity() {
        return departurecity;
    }
    public void setDeparturecity(String departurecity) {
        this.departurecity = departurecity;
    }
    public String getArrivalcity() {
        return arrivalcity;
    }
    public void setArrivalcity(String arrivalcity) {
        this.arrivalcity = arrivalcity;
    }
    public double getCost() {
        return cost;
    }
    public void setCost(double cost) {
        this.cost = cost;
    }
    public String getDeparturetime() {
        return departuretime;
    }
    public void setDeparturetime(String departuretime) {

```

```

        this.departuretime = departuretime;
    }
    public String getArrivaltime() {
        return arrivaltime;
    }
    public void setArrivaltime(String arrivaltime) {
        this.arrivaltime = arrivaltime;
    }
    public int getLegs() {
        return legs;
    }
    public void setLegs(int legs) {
        this.legs = legs;
    }
}

```

### User.java :

```

package sourav.travelapp.model;

public class User {
    private String username;
    private String password;
    private String name;
    private String usertype;
    public User() {

    }
    public User(String username, String password, String name, String usertype) {
        this.username = username;
        this.password = password;
        this.name = name;
        this.usertype = usertype;
    }
    public String getUsername() {
        return username;
    }
    public void setUsername(String username) {
        this.username = username;
    }
    public String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }
    public String getName() {
        return name;
    }
    public void setName(String name) {
        this.name = name;
    }
    public String getUsertype() {
        return usertype;
    }
    public void setUsertype(String usertype) {
        this.usertype = usertype;
    }
}

```



# OUTPUT

**Welcome to Travel Thru Air**

Are you from management department? [Management Portal](#)

Are you a customer? [Customer Portal](#)

---

**Welcome to Travel Thru Air**

**Customer Portal**

Already registered? [Customer Login](#)

**Register here!**

Username:

Password:

Name:

---

**Welcome to Travel Thru Air**

**Customer Portal**

Want to go back to registration page? [Customer Registration](#)

**Login here!**

Username:

Password:

---

**Hey customer! Welcome Sourav Dutta**

Want to logout? [Logout](#)

**Special Deals**

DEPARTURE CITY	ARRIVAL CITY	COST
Delhi	Bangalore	only Rs. 1599.0
Delhi	Mumbai	only Rs. 1999.0
Kolkata	Bangalore	only Rs. 2099.0

**Search flights**

Departure City:

Arrival City:

Number of persons:

Expected Departure Time (Start) :

Expected Departure Time (End) :

View Details
Flight list
http://localhost:8080/ass5\_travel\_thru\_air/viewflightlist.jsp

**Hey customer! Welcome Sourav Dutta**

Want to logout? [Logout](#)  
 Want to search flights again? [Profile Page](#)

**Flight list**

CHOOSE	FLIGHT NUMBER	DEPARTURE CITY	ARRIVAL CITY	TOTAL COST	DEPARTURE TIME	ARRIVAL TIME	LEGS	PERSONS
<input type="radio"/> 1	5WR	Delhi	Mumbai	Rs. 19990.0	1100 HRS	1500 HRS	2	10
<input checked="" type="radio"/> 2	E32	Delhi	Mumbai	Rs. 19990.0	1700 HRS	2245 HRS	4	10

BUY

You bought ticket of Flight 2

View Details
Management Portal
http://localhost:8080/ass5\_travel\_thru\_air/loginmanager.jsp

**Welcome to Travel Thru Air**

**Management Portal**

Want to go back to registration page? [Management Registration](#)

**Login here!**

Username:

Password:

LOGIN

View Details
Welcome Manager
http://localhost:8080/ass5\_travel\_thru\_air/welcomemanager.jsp

**Hey manager! Welcome Sourav Dutta**

Want to logout? [Logout](#)

**Current Special Deals**

DEPARTURE CITY	ARRIVAL CITY	COST
Delhi	Bangalore	only Rs. 1599.0
Delhi	Mumbai	only Rs. 1999.0
Kolkata	Bangalore	only Rs. 2099.0

**Current Flights**

FLIGHT NUMBER	DEPARTURE CITY	ARRIVAL CITY	COST	DEPARTURE TIME	ARRIVAL TIME	LEGS
Y76	Bangalore	Kolkata	Rs. 5499.0	1545 HRS	1855 HRS	4
8YY	Delhi	Bangalore	Rs. 5000.0	1200 HRS	1500 HRS	2
5WR	Delhi	Mumbai	Rs. 5999.0	1100 HRS	1500 HRS	2
E32	Delhi	Mumbai	Rs. 6500.0	1700 HRS	2245 HRS	4
6EW	Kolkata	Bangalore	Rs. 7999.0	1200 HRS	1455 HRS	2
J77	Kolkata	Mumbai	Rs. 3559.0	0045 HRS	0430 HRS	1

Want to add, delete or update special deals or flights? [Table names are "specialdeals" and "flights"]

Enter SQL query here

SUBMIT SQL QUERY