FlyAway(An airline Booking Portal (Sprint work and project Specification)

Version history:

Author	Atul Mourya
Purpose	Sprint work and Project Specifications
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version	1.0

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1. Module in the Project:

- An admin login page where the admin can change the password after login, if he wishes
- A master list of places for source and destination
- A master list of airlines
- A list of flights where each flight has a source, destination, airline, and ticket price
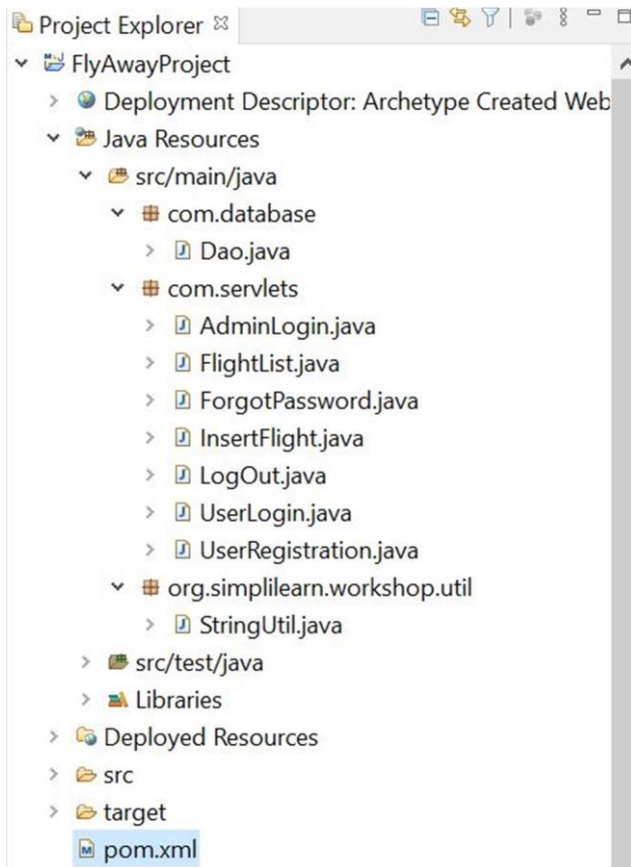
2. Sprint wise work:

Sprint.no	Modules
1	- An admin login page where the admin can change the password after login, if he wishes - A master list of places for source and destination - A master list of airlines - A list of flights where each flight has a source, destination, airline, and ticket price
2	Testing Deployment

3. GitHub Link:

GitHub Link	https://github.com/Naruto13133/FlyAway-Simplilearn-

. 3. Algorithms and flowcharts of the application:

1.0: Folder structure:

4. Source Code:

4.1(a): DataBase(Dao.Java):

```java
package com.database;

import java.sql.Connection;
import java.sql.DriverManager;

import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
import java.util.HashMap;
```

```java
import java.util.List;

import org.simplilearn.workshop.util.StringUtil;

public class Dao
{
        public Connection con=null;
        public Statement st=null;

        public Dao() throws ClassNotFoundException, SQLException{
                Class.forName("com.mysql.cj.jdbc.Driver");

        con=DriverManager.getConnection("jdbc:mysql://localhost:3306/flyaway","root","
usha");
                System.out.println("connection established with database");
                st=con.createStatement();
        }
public List<String[]> getAvailableFlights(String f, String t, String d) {

                List<String[]> flights=new ArrayList<>();
                String query="SELECT * FROM flyaway.flights where fromf='"+f+"' and
tof='"+t+"' and datef='"+d+"'";
                try {
                        ResultSet rs=st.executeQuery(query);

                        if(rs.next()) {
                                String[] flight=new String[3];
                                flight[0]=rs.getString("name");
                                flight[1]=rs.getString("timef");
                                flight[2]=rs.getString("price");
                                flights.add(flight);
                                return flights;
                        }


                } catch (SQLException e) {
                        e.printStackTrace();
                }

                return null;
        }

public HashMap<String, String> checkUser(String email, String password) {

        HashMap<String,String> user=null;
        String query="select * from user where email='"+email+"' and
password='"+password+"'";
        try {
                ResultSet rs=st.executeQuery(query);
                if(rs.next()) {
                        user=new HashMap<>();
                        user.put("name", rs.getString("name"));
                        user.put("email",rs.getString("email"));
                        user.put("phno",rs.getString("phno"));
                        user.put("adno",rs.getString("adno"));
```

```java
			}
			return user;
		} catch (SQLException e) {
			e.printStackTrace();
		}

		return user;
}

public boolean insertUser(HashMap<String, String> user) {

	String query="INSERT INTO user (email, password, name, phno, adno)
values('"+user.get("email")+"','"+user.get("password")+"','"+user.get("name")+"','"+u
ser.get("phno")+"','"+user.get("adno")+"')";

	try {
		st.execute(query);
		return true;
	} catch (SQLException e) {
		e.printStackTrace();
	}
	return false;
}

public boolean checkAdmin(String email, String password) {

	try {
		ResultSet rs=st.executeQuery("select * from admin where
email='"+email+"' and password='"+password+"'");
		if(rs.next())
			return true;
	} catch (SQLException e) {
		e.printStackTrace();
	}
	return false;
}

public boolean changeAdminPassword(String email, String password) {

	try {
		ResultSet rs=st.executeQuery("select * from admin where
email='"+email+"'");
		if(!rs.next()) {
			return false;
		}
		st.execute("update admin set password='"+password+"' where
email='"+email+"'");
		return true;
	} catch (SQLException e) {
		e.printStackTrace();
	}
	return false;
}

public boolean insertFlight(HashMap<String, String> flight) throws SQLException {
```

```java
    //PreparedStatement stm=con.prepareStatement("INSERT INTO 'flyaway.flights'
('name', 'from', 'to', 'date', 'time', 'price') values(?,?,?,?,?,?)");
    //String sql="INSERT INTO flights ('name','from','to','date','time','price')
values('"+flight.get("name")+"','"+flight.get("from")+"','"+flight.get("to")+"','"+fl
ight.get("date")+"','"+flight.get("time")+"','"+flight.get("price")+"');";
    String query1 = "INSERT INTO flights (name, fromf, tof, datef, timef, price)
VALUES" + " ('"
                + StringUtil.fixSqlFieldValue(flight.get("name")) + "'," + " '" +
StringUtil.fixSqlFieldValue(flight.get("from")) + "'," + " '"
                + StringUtil.fixSqlFieldValue(flight.get("to")) + "'," + " '" +
StringUtil.fixSqlFieldValue(flight.get("date")) + "'," + " '"
                + StringUtil.fixSqlFieldValue(flight.get("time")) + "'," + " '" +
StringUtil.fixSqlFieldValue(flight.get("price")) + "')";

    //String sql="INSERT INTO `flyaway`.`flights` (`name`, `fromf`, `tof`,
`datef`, `timef`, `price`) VALUES ('indigo', 'hyd', 'viz', '2021-04-08', '10:00',
'2000');";
    System.out.println(flight.get("date"));
    System.out.println(flight.get("time"));
    //String query1="INSERT into flyaway.flights (name,from,to,date,time,price)
values('indigo','hyd','viz','24-02-2022','10:30','2000')";
    try {
        //stm.execute();
        st.execute(query1);
        return true;
    } catch (SQLException e) {
        System.out.print("error");
        e.printStackTrace();
    }
    return false;
}
}
```

4.1(b):Servlets (AdminLogin.java)

```java
package com.servlets;

import java.io.IOException;
import java.sql.SQLException;
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 com.database.Dao;
```

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

protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

        String email=request.getParameter("email");
            String password=request.getParameter("password");

            try {
                    Dao dao=new Dao();

                    if(dao.checkAdmin(email,password)) {
                            response.sendRedirect("AdminHome.jsp");
                    }
                    else {
                            HttpSession session=request.getSession();
                            session.setAttribute("message", "Invalid Details");
                            response.sendRedirect("AdminPage.jsp");
                    }
            } catch (ClassNotFoundException | SQLException e) {
                    // TODO Auto-generated catch block
                    e.printStackTrace();
            }

    }

}
```

4.1(c): FirstFlight.Java:

```
package com.servlets;


import java.io.IOException;
import
java.sql.SQLException;
import java.util.List;

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

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

        protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

                String
                from=request.getParameter("from");
                String to=request.getParameter("to");
                String departure=request.getParameter("departure");

                try {
                        Dao dao = new Dao();
                        List<String[]> flights=dao.getAvailableFlights(from, to, departure);

                        HttpSession session=request.getSession();
                        session.setAttribute("flights", flights);

                } catch (ClassNotFoundException | SQLException e) {
                        // TODO Auto-generated catch
                        block e.printStackTrace();
                }
                response.sendRedirect("FlightList.jsp");
        }
}
```

4.1(D): ForgotPassword.Java:

```java
package com.servlets;

import
javax.servlet.annotation.WebServlet;
import java.io.IOException;
import java.sql.SQLException;

import
javax.servlet.ServletException;
import
javax.servlet.http.HttpServlet;
import
javax.servlet.http.HttpServletRequest;
import
javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
```

```
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

            String email=request.getParameter("email");
            String password=request.getParameter("password");

            try {
                    Dao dao=new Dao();
                    HttpSession session=request.getSession();
                    if(dao.changeAdminPassword(email,password
                    )) {
                            session.setAttribute("message", "Password Changed
                            Successfully");
                    }
                    else {
                            session.setAttribute("message", "Invalid Details");
                    }
            } catch (ClassNotFoundException | SQLException e) {
                    // TODO Auto-generated catch
                    block e.printStackTrace();
            }
            response.sendRedirect("AdminPage.jsp");

    }
```

4.1(e): Insert Flight.Java:

```
package com.servlets;

import
javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import java.io.IOException;
import
java.sql.SQLException;
import java.util.HashMap;

import javax.servlet.ServletException;
import
javax.servlet.http.HttpServletRequest;
import
javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

import com.database.Dao;
```

```
        private static final long serialVersionUID = 1L;
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

                String
                name=request.getParameter("name");
                String
                from=request.getParameter("from");
                String to=request.getParameter("to");
                String departure=request.getParameter("departure");
                String time=request.getParameter("time");
                String price=request.getParameter("price");

                HashMap<String,String> flight=new
                HashMap<>(); flight.put("name", name);
                flight.put("from", from);
                flight.put("to", to);
                flight.put("date",
                departure);
                flight.put("time", time);
                flight.put("price", price);

                try {
                        Dao dao=new Dao();
                        HttpSession session=request.getSession();
                        if(dao.insertFlight(flight)) {

                                session.setAttribute("message", "Flight Added Successfully");
                        }
                        else {
                                session.setAttribute("message", "Invalid Details");
                        }
                } catch (ClassNotFoundException | SQLException e) {
                        // TODO Auto-generated catch
                        block System.out.print("error");
                        e.printStackTrace();
                }
                response.sendRedirect("AdminHome.jsp");

        }
```

4.1(F): LogOut.Java:

```
package com.servlets;

import
javax.servlet.annotation.WebServlet;
import java.io.IOException;
```

```
import
javax.servlet.ServletException;
import
javax.servlet.http.HttpServlet;
import
javax.servlet.http.HttpServletRequest;
import
javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;


@WebServlet("/LogOut")
public class LogOut extends HttpServlet {
        private static final long serialVersionUID = 1L;
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

                HttpSession session=request.getSession();
                session.setAttribute("user", null);
                response.sendRedirect("HomePage.jsp");
```

4.1(g): UserLogin.Java:

```java
package com.servlets;

import javax.servlet.annotation.WebServlet;
import java.io.IOException;
import java.sql.SQLException;
import java.util.HashMap;

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

import com.database.Dao;
@WebServlet("/UserLogin")
public class UserLogin extends HttpServlet {
        private static final long serialVersionUID = 1L;
protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

                String email=request.getParameter("email");
                String password=request.getParameter("password");

                try {
                        Dao dao=new Dao();
                        HashMap<String,String> user=dao.checkUser(email,password);
                        HttpSession session=request.getSession();
```

```java
                    if(user!=null) {
                            session.setAttribute("user", user);
                            response.sendRedirect("HomePage.jsp");
                    }
                    else {
                            session.setAttribute("message", "Invalid Details");
                            response.sendRedirect("UserPage.jsp");
                    }
            } catch (ClassNotFoundException | SQLException e) {
                    // TODO Auto-generated catch block
                    e.printStackTrace();
            }

}
}
```

4.1(g): UserRegistration.Java:

```java
package com.servlets;

import
javax.servlet.annotation.WebServlet;
import java.io.IOException;
import
java.sql.SQLException;
import java.util.HashMap;

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

import com.database.Dao;

@WebServlet("/UserRegistratio

n")
public class UserRegistration extends HttpServlet {
        private static final long serialVersionUID =
        1L;
        protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
                String email=request.getParameter("email");
                String
```

```
            user.put("phno", phno);
            user.put("adno", adno);

            try {
                    Dao dao=new Dao();
                    boolean result=dao.insertUser(user);
                    HttpSession session=request.getSession();
                    if(result) {
                            session.setAttribute("message", "User Added Successfully");
                    }
                    else {
                            session.setAttribute("message","Invalid Details");
                    }
            } catch (ClassNotFoundException | SQLException e) {
                    // TODO Auto-generated catch
                    block e.printStackTrace();
            }
            response.sendRedirect("UserPage.jsp");
    }

}
```

4.1(h): Simplilearn Workshop(StringUtill.Java):

```java
package org.simplilearn.workshop.util;

public class StringUtil {

    public static String fixSqlFieldValue(String value) {
        if (value == null) {
            return null;
        }
        int length = value.length();
        StringBuffer fixedValue = new StringBuffer((int)(length*1.1));
        for(int i = 0 ; i < length ;i++) {
            char c = value.charAt(i);
            if ( c == '\'') {
                fixedValue.append("''");
            }else {
                fixedValue.append(c);
            }
        }
        return fixedValue.toString();
    }

    public static String encodeHtmlTag(String tag) {
        if (tag==null)
```

```java
                        return null;
                int length = tag.length();
                StringBuffer encodedTag = new StringBuffer(2 * length);
                for(int i = 0 ; i < length;i++) {
                        char c = tag.charAt(i);
                        if(c=='<')
                                encodedTag.append("<");
                        else if(c=='>')
                                encodedTag.append(">");
                        else if(c=='&')
                                encodedTag.append("&amp;");
                        else if(c=='"')
                                encodedTag.append("&quot;");
                        else if(c==' ')
                                encodedTag.append(" ");
                        else
                                encodedTag.append(c);
                }
                return encodedTag.toString();
        }
}
```

4.2: Web Folder:

4.2(A): AdminHome.Jsp:

```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>Admin Home</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-
size:35px;font-weight:bold;">FlyAway</a>
<br><br>
<center>
<h1>Insert New Flight Details</h1>

<div style="border:3px solid black;width:25%;border-radius:20px;padding:20px"
align="center">
<form action=InsertFlight method=post>
        <label for=name>Name :-</label> <input type="text" name=name id=name
/><br><br>
        <label for=from>From :-</label> <input type="text" name=from id=from
```

```
/><br><br>
        <label for=to>To :-</label> <input type="text" name=to id=to /><br><br>
        <label for=departure>Departure :-</label> <input type="date" name=departure
id=departure /><br><br>
        <label for=time>Time :-</label> <input type="time" name=time id=time
/><br><br>
        <label for=price>Price :-</label> <input type="text" name=price id=price
/><br><br>
        <input type=submit value=submit /> <input type=reset />
</form>
</div>
</center>
<%
        String message=(String)session.getAttribute("message");
        if(message!=null){
%>
<p style="color:silver;"><%=message %></p>
<%
                session.setAttribute("message", null);
        }
%>
</body>
</html>
```

4.2(b): AdminPage.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>Admin Page</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-
size:35px;font-weight:bold;">FlyAway</a>
<br><br>
<center>
<h2>Admin Login</h2>
<div style="border:3px solid black;width:25%;border-radius:20px;padding:20px"
align="center">
<form action=AdminLogin method=post>
        <label for=email>Email :-</label> <input type="email" name=email id=email
/><br><br>
        <label for=pass>Password :-</label> <input type="password" name=password
id=pass /><br><br>
```

```
        <input_type=submit value=submit /> <input_type=reset />
</form>
</div>
</center><br>
<a href=ForgotPassword.jsp style="font-size:25;color:red;">Forgot Password</a>

<%
      String message=(String)session.getAttribute("message");
      if(message!=null){
%>
<p style="color:silver;"><%=message %></p>
<%
            session.setAttribute("message", null);
      }
%>
</body>
</html>
```

4.2 (c): BookFlight.jsp:

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ page import="java.util.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>FlyAway</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-
size:35px;font-weight:bold;">FlyAway</a>
<br><br>

<%
      @SuppressWarnings("unchecked")
      HashMap<String,String>
user=(HashMap<String,String>)session.getAttribute("user");
      if(user==null){
            response.sendRedirect("UserPage.jsp");
      }
%>
<p align="center"  style="color:green;font-size:40px;font-weight:bold">Flight
Booked Successfully</p>
</body>
</html>
```

4.2 (d): FlightList.Jsp:

```jsp
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>
<%@ page import="java.util.*" %>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Flight List</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none;font-size:35px;font-
weight:bold;">FlyAway</a>
<br><br>
<%
        @SuppressWarnings("unchecked")
        List<String[]> flights=(List<String[]>)session.getAttribute("flights");
        if(flights!=null){
%>

<h1>Available Flights</h1>

<center>
<table border="1">
<tr>
        <th>Name</th>
        <th>Time</th>
        <th>Price</th>
</tr>



<%
        for(String[] flight:flights){
%>

<tr>
<td><%=flight[0]%></td>
<td><%=flight[1]%></td>
<td><%=flight[2]%></td>
</tr>
</table>
</center>
<center><a href=BookFlight.jsp>Book Now</a> </center>
<%
        }
%>


<%
        }
        else{
%>
<h1>There are no available flights</h1>
<%
```

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

4.2 (e): ForgotPassword.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>Insert title here</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-
size:35px;font-weight:bold;">FlyAway</a>
<br><br>
<center>
<div style="border:3px solid black;width:25%;border-radius:20px;padding:20px"
align="center">
<form action=ForgotPassword method=post>
        <label for=email>Email :-</label> <input type="email" name=email id=email
/><br><br>
        <label for=pass>New Password :-</label> <input type="password"
name=password id=pass /><br><br>
        <input type=submit value=submit /> <input type=reset />
</form>
</div>
</center>
</body>
</html>
```

4.2 (f): HomePage.jsp:

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

```
</head>
<body >
<h1>FlyAway</h1>

<div align="right">
<a href="AdminPage.jsp">Admin Login</a>
</div>

<%
        @SuppressWarnings("unchecked")
        HashMap<String,String>
user=(HashMap<String,String>)session.getAttribute("user");
        if(user!=null){
%>
<p>Welcome <%=user.get("name") %></p>
<a href="Logout">Logout</a>
<%
        }else{
%>
<a href=UserPage.jsp>User Login</a>
<%
        }
%>
<br><br>
<center>
<div style="border:5px solid black;width:25%;border-radius:20px;padding:20px"
align="center">
<form action=FlightList method=post>
        <label for=from>From :-</label> <input type=text name=from
id=from/><br><br>
        <label for=to>To :-</label> <input type=text name=to id=to/><br><br>
        <label for=departure>Departure :-</label> <input type=date name=departure
id=departure/><br><br>
        <label for=travellers>Travellers :-</label> <input type=number
name=travellers id=travellers/><br><br>
        <input type=submit value=Search /> <input type=reset />
</form>
</div>
</center>
</body>
</html>
```

4.2 (g): UserPage.Jsp:

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

```html
<title>Insert title here</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-
size:35px;font-weight:bold;">FlyAway</a>
<br><br>
<center>
<h2>User Login</h2>
<div style="border:2px solid black;width:25%;border-radius:20px;padding:20px"
align="center">
<form action=UserLogin method=post >
    <table >
    <tr>
    <td><label for=email>Email</label><br></td>
    <td><input type="email" name=email id=email /></td>
    </tr>
    <tr>
    <td><label for=pass>Password</label><br></td>
    <td><input type="password" name=password id=pass /></td>
    </tr>

    <tr>
    <td><input type=submit value=submit /></td>
    <td><input type=reset /></td>
    </tr>
    </table>

</form>
</div>
</center>
<br><br>
<i>New User-Create account</i>
<h4><a href=UserRegistration.jsp style="font-size:25;color:red;">Create
Account</a></h4>

<%
    String message=(String)session.getAttribute("message");
    if(message!=null){
%>
<p style="color:silver;"><%=message %></p>
<%
        session.setAttribute("message", null);
    }
%>
</body>
</html>
```

4.2 (h): UserRegistration.jsp:

```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>Insert title here</title>
</head>
<body >
<br>
<a href=HomePage.jsp style="color:black;text-decoration:none ;font-size:35px;font-weight:bold;">FlyAway</a>
<br><br>
<center>
<div style="border:3px solid black;width:25%;border-radius:20px;padding:20px" align="center">
<form action=UserRegistration method=post>
        <label for=email>Email :-</label> <input type="email" name=email id=email /><br><br>
        <label for=pass>Password :-</label> <input type="password" name=password id=pass /><br><br>
        <label for=name>Name :-</label> <input type="text" name=name id=name /><br><br>
        <label for=phno>Phone No. :-</label> <input type="text" name=phno id=phno /><br><br>
        <label for=adno>Aadhaar No. :-</label> <input type="text" name=adno id=adno /><br><br>
        <input type=submit value=submit /> <input type=reset />
</form>
</div>
</center>
</body>
</html>
```