



# FlyAway.

## (An Air Booking Portal)

*(Sprint Work and Project Specification)*

- **Version History:**

1.	<b>Author Name</b>	Tushar Khillare.
2.	<b>Purpose</b>	Specification of Project and Sprint Work.
3.	<b>Date</b>	29 September 2021
4.	<b>Version</b>	1.0

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## 1. Modules in the Project.

- a. User Registration Page.
- b. Login Page.
- c. Admin Login Page.
- d. User Login.
- e. Change Password.
- f. Dashboard.
- g. Search Flights.
- h. Payment Confirmation/PIN Page.
- i. Booking List/(Add/Delete/Edit).

## 2. JAVA (Core)Technology Used:

- a. Java Server pages and Servlet.
- b. Server request response Object.
- c. HTTP Session, Cookies URL Redirect Hidden field.
- d. Hibernate JPA, Different types of mapping (one to one, one to many etc).
- e. MVC Framework where View (jsp/Html pages) Controller (Servlet pages), Data Model (Classes and interfaces which interact to backend database using hibernate framework), Naming Standards.
- f. Modularity, HTML/CSS to design view.
- g. Web container such as Tomcat server usage deployment of web application and running/configuration.
- h. Collections Framework.
- i. MySQL Database and SQL Query Language.

### 3.Sprint Wise Work.

- FlyAway was divided into 3 Sprints of 1 Week each.

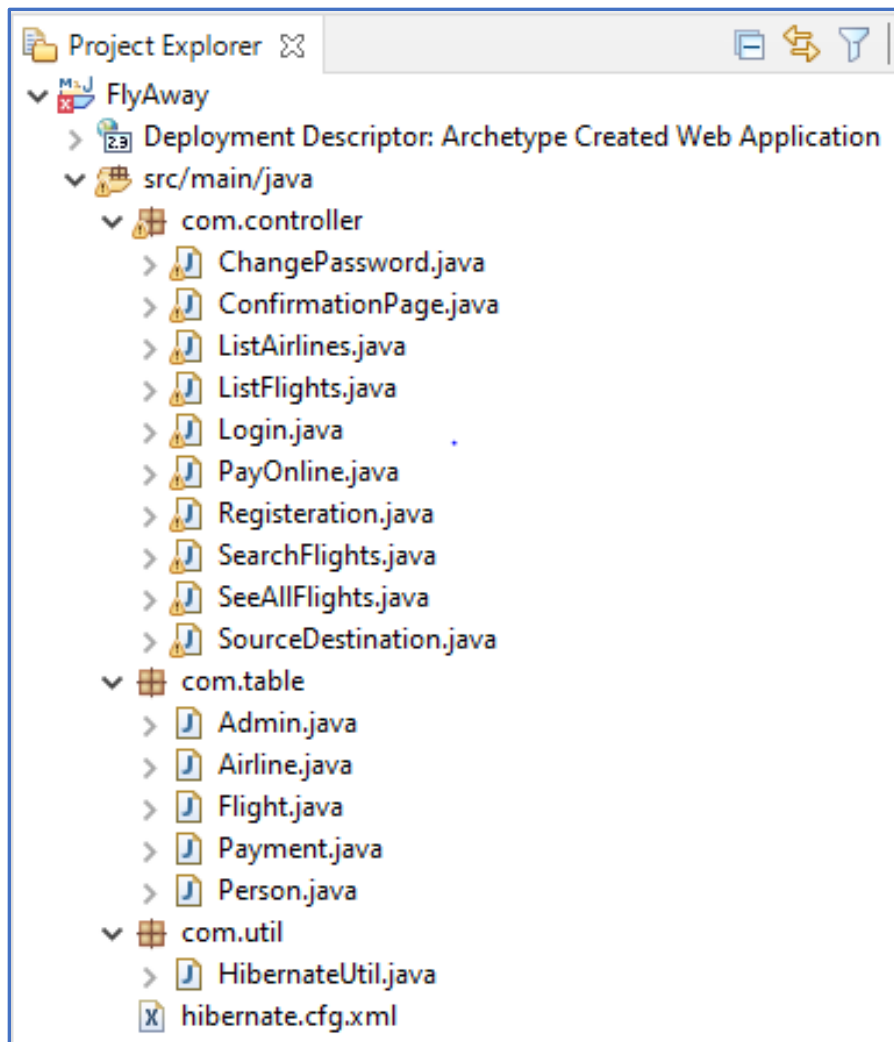
Sr no	Sprint Number	Sprint Module
1.	1	<ul style="list-style-type: none"><li>a. Initialized the project, made it Hibernate project and added dependencies: MySQL Connector, Hibernate libraries.</li><li>b. Setting MySQL database and entities relationship.</li><li>c. Configured hibernate and mapped classes as entities.</li></ul>
2.	2	<ul style="list-style-type: none"><li>a. Planned the structure of the website and navigation across it.</li><li>b. Made a Hibernate util. class to use it across the servlet.</li><li>c. Made a Header and footer jsp pages to include it across every page.</li></ul>
3.	3	<ul style="list-style-type: none"><li>a. Made the master list JSP for master list of places for source and destination, master list of airlines.</li><li>b. Also made a list of files where each flight has a source, destination.</li><li>c. Modified the navigation with the help of buttons and added the navigation to the home page in the Header Tag/Testing of Code.</li></ul>

## 4. Project GitHub Link.

<b>Repository Name.</b>	FlyAway (1.0).
<b>GitHub Link.</b>	<a href="https://github.com/tuskhillare/FlyAway-1.0-">https://github.com/tuskhillare/FlyAway-1.0-</a>

## 5. Project Code.

### A. Folder Structure.



- src/main/resources
- > JRE System Library [J2SE-1.5]
- > Maven Dependencies
- > Deployed Resources
- ▼ src
  - ▼ main
    - ▼ java
      - ▼ com
        - ▼ controller
          - ChangePassword.java
          - ConfirmationPage.java
          - Login.java
          - PayOnline.java
          - Registration.java
          - SearchFlights.java
          - SeeAllFlights.java
          - SourceDestination.java
        - ▼ table
          - Admin.java
          - Airline.java
          - Flight.java
          - Payment.java
          - Person.java
        - ▼ util
          - HibernateUtil.java
        - hibernate.cfg.xml
      - resources
      - ▼ webapp
        - ▼ WEB-INF
          - web.xml
          - ChangePassword.jsp
          - Dashboard.jsp
          - index.jsp
          - Login.jsp
          - Payment.jsp
          - Registration.jsp
    - ▼ target
      - > m2e-wtp
      - pom.xml
  - ▼ Servers
    - > Tomcat v8.5 Server at localhost-config

## B. Com.Controller

---

### 1.ChangePassword.java

```
package com.controller;
```

```
import org.hibernate.query.Query;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import javax.servlet.http.HttpSession;
import java.io.PrintWriter;
import com.util.HibernateUtil;
import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
```

```
public class ChangePassword extends HttpServlet
{
    private static final long serialVersionUID = 1L;

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

```
}
```

```
protected void doPost(final HttpServletRequest
request, final HttpServletResponse response) throws
ServletException, IOException {
    final PrintWriter out = response.getWriter();
    response.setContentType("text/html");
    final String password =
request.getParameter("password");
    final String confirmPassword =
request.getParameter("confirmpassword");
    if (password.equals(confirmPassword)) {
        try {
            final HttpSession httpsession =
request.getSession();
            final SessionFactory sFactory =
HibernateUtil.buildSessionFactory();
            final Session session = sFactory.openSession();
            session.beginTransaction();
            final String email =
(String)httpsession.getAttribute("username");
            final String query = "select id from Admin a
where a.email = '" + email + "'";
            final int resultFromQ1 =
(Integer)session.createQuery(query).getSingleResult();
```



```

        final Query q3 = session.createQuery("update
Admin set password=:n where id=:i");
        q3.setParameter("n",
(Object)confirmPassword);
        q3.setParameter("i", (Object)resultFromQ1);
        final int status = q3.executeUpdate();
        System.out.println(status);
        session.getTransaction().commit();
        session.close();
        out.write("Password Changed Succesfully");
        out.close();
    }
    catch (Exception e) {
        e.printStackTrace();
    }
    }else {
        out.print("Sorry, your passwords do not match");
    }
}
}

```

## *2.ConfirmationPage.java*

```

package com.controller;

import java.io.IOException;
import java.io.PrintWriter;
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;
import javax.servlet.http.HttpSession;

import org.hibernate.Session;
import org.hibernate.SessionFactory;

import com.table.Flight;
import com.util.HibernateUtil;

/**
 * Servlet implementation class ConfirmationPage
 */

public class ConfirmationPage extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public ConfirmationPage() {
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
        // print writer
        PrintWriter out = response.getWriter();
        response.setContentType("text/html");

        HttpSession httpsession = request.getSession();
        String flightid = (String) httpsession.getAttribute("flightid");
        String firstName = (String) httpsession.getAttribute("firstname");
        int flightIdConverted = Integer.parseInt(flightid);
        //open a connection
        try {
            SessionFactory sFactory = HibernateUtil.buildSessionFactory();
            Session session = sFactory.openSession();
            session.beginTransaction();

            String query = "select f from Flight f" +
                " inner join Airline a" +
                " on f.airline=a.id" +
                " and f.numberOfSeats > 0" +
                " and f.id = " + flightIdConverted;
            @SuppressWarnings("unchecked")
            List<Flight> flights = session.createQuery(query).list();

```

```

        if (flights.size() > 0) {
            out.print("<a href=\"index.jsp\">Home</a><br/>");
            out.println("<h1>Congratulations! You're all set, " + firstName + "!</h1><br/><br/>");
            out.println("<h1>List of Confirmed Flights for " + firstName + "</h1><hr>");
            out.println("<style> table,th,td { border : 1px solid black ; padding :15px;} </style>");
            out.println("<table>");
            out.println("<tr>");
                out.println("<th>"); out.println("Flight ID"); out.println("</th>");
                out.println("<th>"); out.println("Airline"); out.println("</th>");
                out.println("<th>"); out.println("Number Of Seats"); out.println("</th>");
                out.println("<th>"); out.println("Source"); out.println("</th>");
                out.println("<th>"); out.println("Desintation"); out.println("</th>");
                out.println("<th>"); out.println("Departure Date"); out.println("</th>");
                out.println("<th>"); out.println("Arrival Date"); out.println("</th>");
                out.println("<th>"); out.println("Price"); out.println("</th>");
            out.println("</tr>");
            for(Flight i:flights) {
                if (i.getNumberOfSeats() > 0) {
                    out.println("<tr>");
                        out.println("<td>"); out.println(i.getId()); out.println("</td>");
                        out.println("<td>");
                            out.println(i.getAirline().getAirline().toString()); out.println("</td>");
                            out.println("<td>"); out.println(i.getNumberOfSeats());
                                out.println("</td>");
                                    out.println("<td>"); out.println(i.getSource()); out.println("</td>");
                                    out.println("<td>"); out.println(i.getDestination());
                                        out.println("</td>");
                                            out.println("<td>"); out.println(i.getDateOfDeparture());
                                                out.println("</td>");
                                                    out.println("<td>"); out.println(i.getDateOfArrival());
                                                        out.println("<td>"); out.println(i.getPrice()); out.println("</td>");
                                                            out.println("</tr>");
                                                        }
                                                    }
                                                out.println("</table>");
                                            } else {
                                                out.print("<a href=\"index.jsp\">Home</a>");
                                                out.print("<h1>Oop's You don't have any flights available currently!<h1>");
                                            }
                                        }
                                    session.close();

                                } catch (Exception e) {
                                    e.printStackTrace();
                                } finally {
                                    out.close();
                                }
                            }

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

```

```

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

    }

}

```

### 3.ListAirline.java

```

package com.controller;

import java.io.IOException;
import javax.servlet.ServletException;
import java.util.List;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import java.io.PrintWriter;
import com.table.Airline;
import com.util.HibernateUtil;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServlet;

public class ListAirlines extends HttpServlet
{
    private static final long serialVersionUID = 1L;

    protected void doGet(final HttpServletRequest request,
final HttpServletResponse response) throws
ServletException, IOException {
        final PrintWriter out = response.getWriter();
        response.setContentType("text/html");
        out.print("<a
href=\"Dashboard.jsp\">Dashboard</a><br/><hr>");
        out.print("<h1>Master View</h1>");
        try {

```

```

        final SessionFactory sFactory =
HibernateUtil.buildSessionFactory();
        final Session session =
sFactory.openSession();
        session.beginTransaction();
        final String query = "from Airline";
        final List<Airline> airlines =
(List<Airline>)session.createQuery(query).list();
        if (airlines.size() > 0) {
            out.println("<h1>List of all Airlines:
</h1>");
            out.println("<style> table,th,td { border
: 1px solid black ; padding :15px;} </style>");
            out.println("<table>");
            out.println("<tr>");
            out.println("<th>");
            out.println("Airline ID");
            out.println("</th>");
            out.println("<th>");
            out.println("Airline Name");
            out.println("</th>");
            out.println("</tr>");
            for (final Airline i : airlines) {
                out.println("<tr>");
                out.println("<td>");
                out.println(i.getId());
                out.println("</td>");
                out.println("<td>");
                out.println(i.getAirline());
                out.println("</td>");
                out.println("</tr>");
            }
            out.println("</table>");
        }
        else {
            out.print("<a
href=\"index.jsp\">Home</a>");

```

```

        out.print("<h1>Sorry there are no airlines
available!<h1>");
    }
    out.close();
    session.close();
}
catch (Exception e) {
    e.printStackTrace();
}
}

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

```

## 4. ListFlights.java

```

package com.controller;

import java.io.IOException;
import javax.servlet.ServletException;
import java.util.List;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import java.io.PrintWriter;
import com.table.Flight;
import com.util.HibernateUtil;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServlet;

public class ListFlights extends HttpServlet
{
    private static final long serialVersionUID = 1L;

```

```

protected void doGet(final HttpServletRequest request,
final HttpServletResponse response) throws
ServletException, IOException {
    final PrintWriter out = response.getWriter();
    response.setContentType("text/html");
    out.print("<a
href=\"Dashboard.jsp\">Dashboard</a><br/><hr>");
    out.print("<h1>Master View</h1>");
    try {
        final SessionFactory sFactory =
HibernateUtil.buildSessionFactory();
        final Session session =
sFactory.openSession();
        session.beginTransaction();
        final String query = "select f from Flight f
inner join Airline a on f.airline=a.id";
        final List<Flight> flights =
(List<Flight>)session.createQuery(query).list();
        if (flights.size() > 0) {
            out.println("<h1>List of all Flights:
</h1>");
            out.println("<style> table,th,td { border
: 1px solid black ; padding :15px;} </style>");
            out.println("<table>");
            out.println("<tr>");
            out.println("<th>");
            out.println("Flight ID");
            out.println("</th>");
            out.println("<th>");
            out.println("Airline");
            out.println("</th>");
            out.println("<th>");
            out.println("Number Of Seats");
            out.println("</th>");
            out.println("<th>");
            out.println("Source");
            out.println("</th>");

```

```
        out.println("<th>");
        out.println("Desintation");
        out.println("</th>");
        out.println("<th>");
        out.println("Departure Date");
        out.println("</th>");
        out.println("<th>");
        out.println("Arrival Date");
        out.println("</th>");
        out.println("<th>");
        out.println("Price");
        out.println("</th>");
        out.println("</tr>");
        for (final Flight i : flights) {
            if (i.getNumberOfSeats() > 0) {
                out.println("<tr>");
                out.println("<td>");
                out.println(i.getId());
                out.println("</td>");
                out.println("<td>");

out.println(i.getAirline().getAirline().toString());
                out.println("</td>");
                out.println("<td>");
                out.println(i.getNumberOfSeats());
                out.println("</td>");
                out.println("<td>");
                out.println(i.getSource());
                out.println("</td>");
                out.println("<td>");
                out.println(i.getDestination());
                out.println("</td>");
                out.println("<td>");

out.println(i.getDateOfDeparture());
                out.println("</td>");
                out.println("<td>");
                out.println(i.getDateOfArrival());
```



```

        out.println("</td>");
        out.println("<td>");
        out.println(i.getPrice());
        out.println("</td>");
        out.println("</tr>");
    }
}
out.println("</table>");
}
else {
    out.print("<a
href=\"Dashboard.jsp\">Home</a>");
    out.print("<h1>Sorry there are no flights
currently!<h1>");
}
session.close();
out.close();
}
catch (Exception e) {
    e.printStackTrace();
}
}

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

```

## 5.Login.java

package com.controller;

import java.util.List;

import javax.servlet.http.HttpSession;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

```

import java.io.PrintWriter;
import com.table.Admin;
import com.util.HibernateUtil;
import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;

public class Login extends HttpServlet
{
    private static final long serialVersionUID = 1L;

    protected void doGet(final HttpServletRequest request, final HttpServletResponse response) throws
ServletException, IOException {
    }

    protected void doPost(final HttpServletRequest request, final HttpServletResponse response) throws
ServletException, IOException {
        final PrintWriter out = response.getWriter();
        response.setContentType("text/jsp");
        final String user = request.getParameter("username");
        final String password = request.getParameter("password");
        try {
            final SessionFactory sFactory = HibernateUtil.buildSessionFactory();
            final Session session = sFactory.openSession();
            session.beginTransaction();
            final String query = "from Admin a where email = '" + user + "'" + " and password = '" + password + "'";
            String usernamedb = "";
            String namedb = "";
            final HttpSession httpsession = request.getSession();
            final List<Admin> admin = (List<Admin>)session.createQuery(query).list();
            if (admin.size() > 0) {
                for (final Admin i : admin) {
                    usernamedb = i.getEmail();
                    namedb = i.getFirstName();
                }
                httpsession.setAttribute("name", (Object)namedb);
                httpsession.setAttribute("username", (Object)usernamedb);
                response.sendRedirect("Dashboard.jsp");
            }
            else {
                out.print("<a href='\"index.jsp\"'>Home</a>");
                out.print("<h1>Sorry that username and password does not exist.</h1>");
            }
            session.close();
            out.close();
        }
        catch (Exception e) {
            e.printStackTrace();
        }
    }
}

```

```
_ }  
}
```

## 6.PayOnline.java

```
package com.controller;
```

```
import java.io.IOException;
```

```
import java.io.PrintWriter;
```

```
import java.sql.Date;
```

```
import java.util.HashSet;
```

```
import java.util.List;
```

```
import java.util.Set;
```

```
import java.util.regex.Pattern;
```

```
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 org.hibernate.Session;
```

```
import org.hibernate.SessionFactory;
```

```
import org.hibernate.query.Query;
```

```
import com.table.Flight;
```

```
import com.table.Payment;
```

```
import com.table.Person;
```

```
import com.util.HibernateUtil;
```

```
/**
```

```
 * Servlet implementation class PayOnline
```

```
 */
```

```
public class PayOnline extends HttpServlet {
```

```
    private static final long serialVersionUID = 1L;
```

```
    /**
```

```
     * @see HttpServlet#HttpServlet()
```

```
     */
```

```
    public PayOnline() {
```

```
    }
```

```
    /**
```

```
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
```

```
     */
```

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

```
        response.sendRedirect("Payment.jsp");
```

```

_____}

_____/**
_____ * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
_____ */
_____@SuppressWarnings({ "unchecked", "rawtypes" })
_____protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
_____    PrintWriter out = response.getWriter();
_____    response.setContentType("text/html");

_____
_____    HttpSession httpsession = request.getSession(false);

_____
_____    String personflightid = (String) httpsession.getAttribute("flightid");
_____    String personfirstname = (String) httpsession.getAttribute("firstname");
_____    String personlastname = (String) httpsession.getAttribute("lastname");
_____    String personemail = (String) httpsession.getAttribute("email");
_____    String personbirthday = (String) httpsession.getAttribute("birthday");
_____    long millis = System.currentTimeMillis();
_____    Date timeBooked = new Date(millis);
_____    Date dateSqlPerson = null;
_____    try {
_____        if ((dateSqlPerson=Date.valueOf(personbirthday)) == null) {
_____            out.println("<h1>You must enter the date correctly into yyyy-MM-dd
format<h1>");
_____            out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
_____        };
_____    } catch (Exception e1) {
_____        out.println("<h1>You must enter the date correctly into yyyy-MM-dd format<h1>");
_____        out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
_____    }

_____
_____    String fName = request.getParameter("firstname");
_____    String lName = request.getParameter("lastname");
_____    String cardNumber = request.getParameter("cardnumber").replaceAll("\\s", "");
_____    System.out.println(cardNumber);
_____    String expiration = request.getParameter("expiration");
_____    Integer securitycode = Integer.parseInt(request.getParameter("securitycode"));
_____    Date dateSqlPayment = null;
_____    try {
_____        dateSqlPayment=Date.valueOf(expiration);
_____    } catch (Exception e1) {
_____        out.println("<h1>You must enter the date correctly into yyyy-MM-dd format<h1>");
_____        out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
_____    }

_____
_____    if (!Pattern.matches("\\d{15,16}", cardNumber)) {
_____        out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
_____        out.print("Make sure you are entering your card number in correctly");
_____    }

```

```

} else if (!Pattern.matches("\\d{3,4}", Integer.toString(securitycode))) {
    out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
    out.print("Make sure you are entering your security code in correctly");
} else if (dateSqlPayment.before(timeBooked)) {
    out.println("<h1>You must ensure your card is not expired<h1>");
    out.print("<a href = \"Payment.jsp\"> Re-enter Information </a><br/>");
}
else {

```

```

//step 1. Confirm Fields Match Criteria

```

```

//Else redirect to payment

```

```

//step 2. insert into person table

```

```

//open a connection

```

```

try {

```

```

    SessionFactory sFactory = HibernateUtil.buildSessionFactory();

```

```

    Session session = sFactory.openSession();

```

```

    session.beginTransaction();

```

```

    Integer personflightidConverted = Integer.parseInt(personflightid);

```

```

    String query1 = " from Flight where id = " + personflightidConverted;

```

```

    List<Flight> list = (List<Flight>) session.createQuery(query1).list();

```

```

    Set<Flight> flights = new HashSet<Flight>(list);

```

```

    Person person = new Person();

```

```

    person.setFirstName(personfirstname);

```

```

    person.setLastName(personlastname);

```

```

    person.setEmail(personemail);

```

```

    //person.setBirthday(dateSqlPerson);

```

```

    //person.setTimeBooked(timeBooked);

```

```

    person.setFlights(flights);

```

```

    Payment payment = new Payment();

```

```

    payment.setFirstNameOnCard(fName);

```

```

    payment.setLastNameOnCard(lName);

```

```

    payment.setCardNumber(cardNumber);

```

```

    payment.setExpiration(dateSqlPayment);

```

```

    payment.setSecurityCode(securitycode);

```

```

    payment.setPerson(person);

```

```

    session.save(person);

```

```

    session.save(payment);

```

```

    String query = "select numberOfSeats from Flight f" +

```

```

        " where id = " + personflightidConverted;

```

```

    Integer resultFromQ1 = (Integer) session.createQuery(query).getSingleResult();

```

```

    Query q3=session.createQuery("update Flight set numberOfSeats=:n where id=:i");

```

```

        q3.setParameter("n", (resultFromQ1 - 1));
        q3.setParameter("i", personflightidConverted);

        int status=q3.executeUpdate();
        System.out.println(status);

        session.getTransaction().commit();
        session.close();
        response.sendRedirect("ConfirmationPage");
        out.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
}
//step 3. insert into payment table
//step 4. reduce person count
//step 5. Redirect to confirmation page
}
}
}

```

## 7.Registration.java

```

package com.controller;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Date;
import java.util.List;
import java.util.regex.Pattern;

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 org.hibernate.Session;
import org.hibernate.SessionFactory;

import com.table.Flight;
import com.util.HibernateUtil;

/**
 * Servlet implementation class Registration
 */

```

```

public class Registration extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public Registration() {
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,
    IOException {

    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    @SuppressWarnings("unchecked")
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
        // print writer
        PrintWriter out = response.getWriter();
        response.setContentType("text/html");

        HttpSession httpsession = request.getSession();
        String flightid = request.getParameter("flightid");
        String firstname = request.getParameter("firstname");
        String lastname = request.getParameter("lastname");
        String email = request.getParameter("email");
        String birthday = request.getParameter("birthday");

        request.setAttribute("firstname", firstname);
        Date dateSqlBirthday = null;
        try {
            dateSqlBirthday = Date.valueOf(birthday);
        } catch (Exception e1) {
            out.print("<a href = \"Registration.jsp\"> Re-Enter Information </a><br/>");
            out.print("Make sure you are entering your date code in correctly (yyyy-MM-dd)");
        }

        //email
        if (!(Pattern.matches("[A-Za-z0-9]+(.)@(.)", email))) {
            out.print("<a href = \"Registration.jsp\"> Re-enter Information </a><br/>");
            out.print("Make sure you are entering in a valid email address");
        } else if (dateSqlBirthday==null){
            out.print("<a href = \"Registration.jsp\"> Re-enter Information </a><br/>");
            out.print("Make sure you are entering in a valid date format (yyyy-MM-dd)");
        } else {
            httpsession.setAttribute("flightid", flightid);
            httpsession.setAttribute("firstname", firstname);

```

```

        httpsession.setAttribute("lastname", lastname);
        httpsession.setAttribute("email", email);
        httpsession.setAttribute("birthday", birthday);
    }

    //open a connection
    try {
        SessionFactory sFactory = HibernateUtil.buildSessionFactory();
        Session session = sFactory.openSession();
        session.beginTransaction();

        String query = "select f from Flight f" +
            " inner join Airline a" +
            " on f.airline=a.id" +
            " and f.numberOfSeats > 0";
        if (flightid != null && flightid.trim().length() > 0) {
            try {
                int flightIdParsed = Integer.parseInt(flightid);
                String flightIdQuery = " and f.id =" + flightIdParsed;
                query = query.concat(flightIdQuery);
            } catch (Exception e){
                out.println("<h1>You must enter a valid flight id<h1>");
            }
        }

        List<Flight> flights = session.createQuery(query).list();

        if (flights.size() > 0) {
            out.print("<a href='\"index.jsp\"'>Home</a>");
            out.println("<h1>Confirm Flight Details: </h1>");
            for(Flight i:flights) {
                if (i.getNumberOfSeats() > 0) {
                    out.println("Flight ID: " + i.getId() + "<br/>");
                    out.println("Airline: " + i.getAirline().getAirline().toString() + "<br/>");
                    out.println("Number Of Seats: " + i.getNumberOfSeats() + "<br/>");
                    out.println("Source " + i.getSource() + "<br/>");
                    out.println("Desintation:" + i.getDestination() + "<br/>");
                    out.println("Departure Date: " + i.getDateOfDeparture() + "<br/>");
                    out.println("Arrival Date: " + i.getDateOfArrival() + "<br/>");
                    out.println("<h1>Your Total is: $" + i.getPrice() + "<h1><br/>");
                    out.println("<hr>");
                }
            }

            request.getRequestDispatcher("Payment.jsp").include(request, response);
        } else {
            out.print("<a href='\"index.jsp\"'>Home</a>");
            out.println("<h1>You must enter a valid flight id!<h1>");
        }

        session.close();
        out.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
}

```



```
_____  
_____  
  
}
```

## 8.SearchFlights.java

```
package com.controller;
```

```
import java.io.IOException;
```

```
import java.io.PrintWriter;
```

```
import java.sql.Date;
```

```
import java.util.List;
```

```
import java.util.regex.Pattern;
```

```
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 org.hibernate.Session;
```

```
import org.hibernate.SessionFactory;
```

```
import com.table.Flight;
```

```
import com.util.HibernateUtil;
```

```
/**
```

```
 * Servlet implementation class Registration
```

```
 */
```

```
public class Registration extends HttpServlet {
```

```
    private static final long serialVersionUID = 1L;
```

```
    /**
```

```
     * @see HttpServlet#HttpServlet()
```

```
     */
```

```
    public Registration() {
```

```
    }
```

```
    /**
```

```
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
```

```
     */
```

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

```
    }
```

```
    /**
```

```

* @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
*/
@SuppressWarnings("unchecked")
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    // print writer
    PrintWriter out = response.getWriter();
    response.setContentType("text/html");

    HttpSession httpsession = request.getSession();
    String flightid = request.getParameter("flightid");
    String firstname = request.getParameter("firstname");
    String lastname = request.getParameter("lastname");
    String email = request.getParameter("email");
    String birthday = request.getParameter("birthday");

    request.setAttribute("firstname", firstname);
    Date dateSqlBirthday = null;
    try {
        dateSqlBirthday = Date.valueOf(birthday);
    } catch (Exception e1) {
        out.print("<a href = \"Registration.jsp\"> Re-Enter Information </a><br/>");
        out.print("Make sure you are entering your date code in correctly (yyyy-MM-dd)");
    }

    //email
    if (!Pattern.matches("[A-Za-z0-9]+(\\.)@(\\.)", email)) {
        out.print("<a href = \"Registration.jsp\"> Re-enter Information </a><br/>");
        out.print("Make sure you are entering in a valid email address");
    } else if (dateSqlBirthday==null){
        out.print("<a href = \"Registration.jsp\"> Re-enter Information </a><br/>");
        out.print("Make sure you are entering in a valid date format (yyyy-MM-dd)");
    } else {
        httpsession.setAttribute("flightid", flightid);
        httpsession.setAttribute("firstname", firstname);
        httpsession.setAttribute("lastname", lastname);
        httpsession.setAttribute("email", email);
        httpsession.setAttribute("birthday", birthday);

        //open a connection
        try {
            SessionFactory sFactory = HibernateUtil.buildSessionFactory();
            Session session = sFactory.openSession();
            session.beginTransaction();

            String query = "select f from Flight f" +
                " inner join Airline a" +
                " on f.airline=a.id" +
                " and f.numberOfSeats > 0";
            if (flightid !=null && flightid.trim().length() > 0) {
                try {
                    int flightIdParsed = Integer.parseInt(flightid);

```

## 9.SeAllFlights.java

```
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 org.hibernate.Session;  
import org.hibernate.SessionFactory;
```

```
import com.table.Flight;  
import com.util.HibernateUtil;
```

```
/**  
 * Servlet implementation class SeeAllFlights  
 */
```

```
public class SeeAllFlights extends HttpServlet {  
    private static final long serialVersionUID = 1L;
```

```
    /**  
     * @see HttpServlet#HttpServlet()  
     */  
    public SeeAllFlights() {  
    }
```

```
    /**  
     * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)  
     */  
    @SuppressWarnings({ "unused", "unchecked" })  
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException,  
IOException {
```

```
        // print writer  
        PrintWriter out = response.getWriter();  
        response.setContentType("text/html");  
  
        String source = request.getParameter("source");  
        String destination = request.getParameter("destination");  
        String price = request.getParameter("price");  
        String date = request.getParameter("date");
```

```
        //open a connection  
        try {  
            SessionFactory sFactory = HibernateUtil.buildSessionFactory();  
            Session session = sFactory.openSession();  
            session.beginTransaction();
```

```
            String query = "select f from Flight f" +  
                            " inner join Airline a" +  
                            " on f.airline=a.id" +  
                            " and f.numberofSeats > 0";
```

```
            List<Flight> flights = session.createQuery(query).list();  
  
            if (flights.size() > 0) {  
                out.print("<a href='\"index.jsp\">Home</a>");
```

```

        out.println("<h1>List of all Flights: </h1>");
        out.println("<style> table,th,td { border : 1px solid black ; padding :15px;}
</style>");
        out.println("<table>");
        out.println("<tr>");
            out.println("<th>"); out.println("Flight ID"); out.println("</th>");
            out.println("<th>"); out.println("Airline"); out.println("</th>");
            out.println("<th>"); out.println("Number Of Seats");
        out.println("</th>");
            out.println("<th>"); out.println("Source"); out.println("</th>");
            out.println("<th>"); out.println("Desintation");
        out.println("</th>");
            out.println("<th>"); out.println("Departure Date");
        out.println("</th>");
            out.println("<th>"); out.println("Arrival Date");
        out.println("</th>");
            out.println("<th>"); out.println("Price"); out.println("</th>");
        out.println("</tr>");
        for(Flight i:flights) {
            if (i.getNumberOfSeats() > 0) {
                out.println("<tr>");
                    out.println("<td>"); out.println(i.getId());
                out.println("</td>");
                    out.println("<td>");
                out.println(i.getAirline().getAirline().toString()); out.println("</td>");
                    out.println("<td>");
                out.println(i.getNumberOfSeats()); out.println("</td>");
                    out.println("<td>"); out.println(i.getSource());
                out.println("</td>");
                    out.println("<td>"); out.println(i.getDestination());
                out.println("</td>");
                    out.println("<td>");
                out.println(i.getDateOfDeparture()); out.println("</td>");
                    out.println("<td>");
                out.println(i.getDateOfArrival()); out.println("</td>");
                    out.println("<td>"); out.println(i.getPrice());
                out.println("</td>");
            out.println("</tr>");
        }
    }
    out.println("</table>");
    request.getRequestDispatcher("Registration.jsp").include(request,
response);
    } else {
        out.print("<a href='\"index.jsp\"'>Home</a>");
        out.print("<h1>Sorry there are no flights currently!<h1>");
    }

    session.close();
    out.close();

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

```

```

        }
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
    }
}

```

## 10.SourceDestination.java

package com.controller;

import java.io.IOException;  
import javax.servlet.ServletException;  
import java.util.List;  
import org.hibernate.Session;  
import org.hibernate.SessionFactory;  
import java.io.PrintWriter;  
import com.util.HibernateUtil;  
import javax.servlet.http.HttpServletResponse;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.annotation.WebServlet;  
import javax.servlet.http.HttpServlet;

public class SourceDestination extends HttpServlet

```

{
    private static final long serialVersionUID = 1L;

    protected void doGet(final HttpServletRequest request, final HttpServletResponse response) throws
ServletException, IOException {
        final PrintWriter out = response.getWriter();
        response.setContentType("text/html");
        out.print("<a href=\"Dashboard.jsp\">Dashboard</a><br/><hr>");
        out.print("<h1>Master View</h1>");
        try {
            final SessionFactory sFactory = HibernateUtil.buildSessionFactory();
            final Session session = sFactory.openSession();
            session.beginTransaction();
            final String query = "select source, destination from Flight";
            final List<Object[]> flights = (List<Object[]>)session.createQuery(query).list();
            if (flights.size() > 0) {
                out.println("<h1>List of all Source/Destinations: </h1>");
                out.println("<style> table,th,td { border : 1px solid black ; padding :15px;} </style>");
                out.println("<table>");

```

```

        out.println("<tr>");
        out.println("<th>");
        out.println("Source");
        out.println("</th>");
        out.println("<th>");
        out.println("Destination");
        out.println("</th>");
        out.println("</tr>");
        for (final Object[] i : flights) {
            out.println("<tr>");
            out.println("<td>");
            out.println((String)i[0]);
            out.println("</td>");
            out.println("<td>");
            out.println((String)i[1]);
            out.println("</td>");
            out.println("</tr>");
        }
        out.println("</table>");
    }
    else {
        out.print("<a href=\"Dashboard.jsp\">Home</a>");
        out.print("<h1>Sorry there are no flights currently!</h1>");
    }
    session.close();
    out.close();
}
catch (Exception e) {
    e.printStackTrace();
}
}

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

```