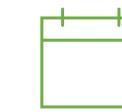




# FlyAway



Phase 2 Project

**Project Documentation**

Nia Kelley Jester

February 2023

Instructor: Sonam Soni

# CLICKABLE TABLE OF CONTENTS

CLICK ON ANY OF THE ICONS TO JUMP TO A PARTICULAR SECTION OF THIS PRESENTATION



PROJECT  
OVERVIEW

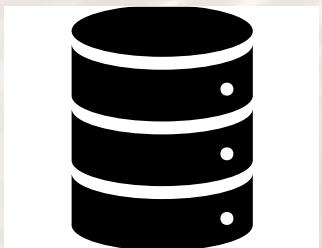
FlyAway



PROJECT  
MANAGEMENT



HIGH LEVEL  
DESIGN



DATABASE  
DESIGN



SOURCE CODE



SCREENSHOTS



PROJECT  
CONCLUSION

# Project Overview

- **FlyAway** is an airline ticket-booking portal that lets people book flights on their website. They decided to hire a Full Stack Developer to design and develop the portal. The goal of the company is to deliver a high-end quality product as early as possible.
- This project focuses on developing a backend project using JDBC, JSP, and Servlets, although a minimal frontend should be implemented. You can create frontend forms on your own or use online resources. It should include a search form to allow entries of travel details, list the available flights with ticket prices, and a confirmation of ticket and the journey details.
- **Technical Components – Backend & Database Management**



IDE: Eclipse



Programming Language:  
Java



Java Server Pages



Java Servlets



Java JDBC



Database:  
MySQL



Hibernate (*optional*)



# Core Concepts Demonstrated

- JSPs, Servlets, and JDBC to implemented a fully connected application to a MySQL Database
- Implement frontend Form Design
- Implement Database CRUD features using JDBC
- Database design and scripting
  - Designed a normalized database structure
  - Created a database initialization script
  - Populated tables via script



# Core Concepts Demonstrated

- Form Design

All Users	Admin User
<ul style="list-style-type: none"><li>• Search Form</li><li>• Register New User</li><li>• Book Flight</li><li>• Update User information</li><li>• Change Password</li></ul>	<p>Ran out of time to implement these forms:</p> <ul style="list-style-type: none"><li>• Add/Delete/Update Source/Destination City</li><li>• Add/Delete/Update Airline</li><li>• Update Flight Information (flight number, source/destination city, airline, and ticket price)</li></ul>



# Features: Admin User Role

## Admin with the following features:

- See list of all Users
- Able to update User information
- An admin login page where the admin can change the password after login, if he wishes
- Backend database control to add/update/delete:
  - Source/destination airports
  - Flight fares
  - Flight operational days
  - Airline companies

## Features that were not implemented

(ran out of time)

Frontend forms and logic for the following:

- A master list of cities/airports for source and destination
- A master list of airline companies
- A list of flights where each flight has a source, destination, airline, and ticket price



# Features: General User Role

## General User with the following features:

- A User can register for the system
- A search form in the homepage to allow entry of travel details, like the date of travel, source, destination, and the number of persons.
- Based on the travel details entered, it will show the available flights with their ticket prices.

*Once a User is verified:*

- The User can change their profile information
- The User can book select a fare for purchase
- The User can confirm flight details booking before payment is remitted
- Upon successful payment, the User is shown a confirmation page with the details of the booking





# FlyAway



# FlyAway

## Application Logos



# Project Management

## Project Overview

Client	Simplilearn
Consultant	Nia Kelley Jester Full Stack Java Developer
Application Name	FlyAway
Application Phase	Prototype
Phase 2 Project Deliverable	Flyaway is a ticket-booking portal that lets people book flights on their website. It should include a search form to allow entries of travel details, list available flights with ticket prices, and a confirmation of ticket/journey details.

## Requirements Development

- For this project, we were given a requirements document to code from, which included screenshots. Hence, I didn't need to develop User Stories from scratch. I included the requirements document in [Appendix A](#).
- We were permitted to use front end forms from w3schools. However, I created my own forms to have the learning experience. I also integrated style sheets and minimal JavaScript in this prototype.

## Project Summary

	Planned	Actual
Total Project Days	7 Days	27 Days
Total Project Hours	42 Hours	106 Hours

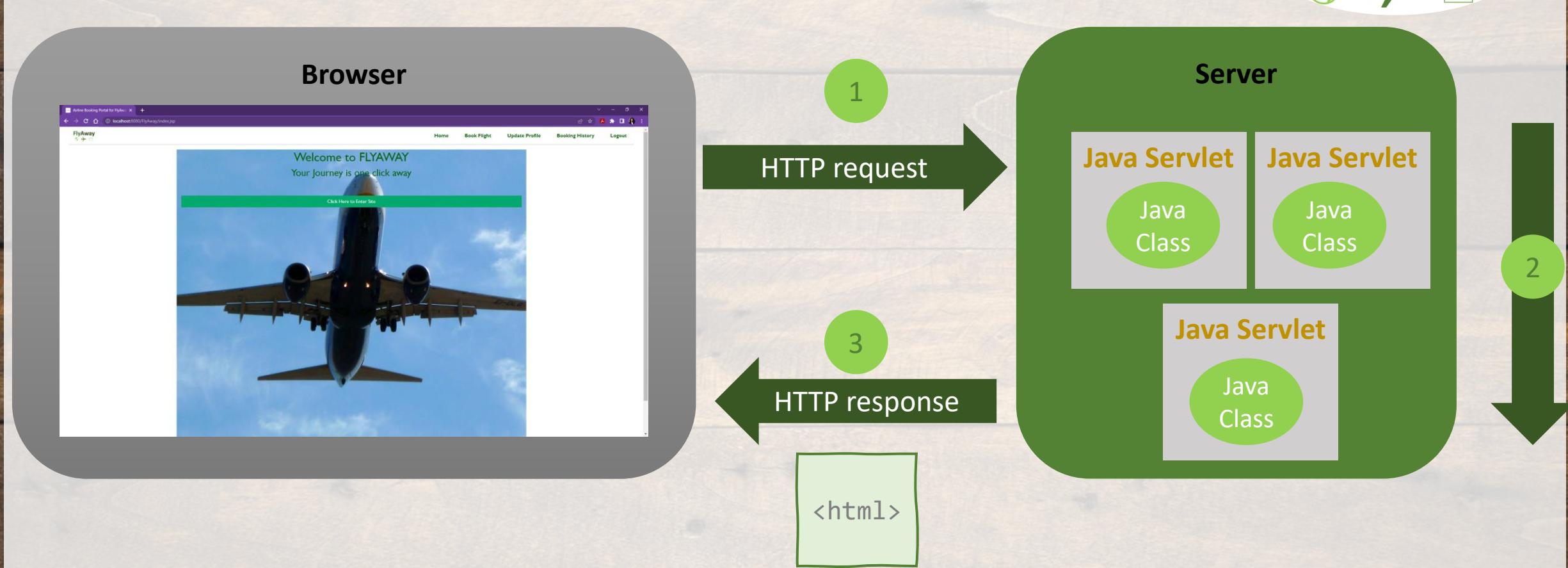




# High Level Design



# HIGH LEVEL DESIGN

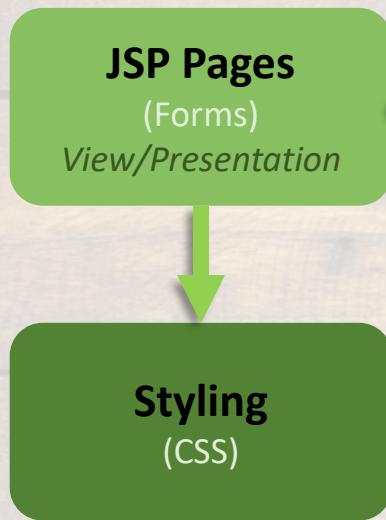


1. User wants to load the Flyaway application. The Browser will send an HTTP request over to the server for the Flyaway landing page.
2. Servlet will execute and generate HTML code on the fly (dynamically), and
3. Servlet will send the HTML file back to the browser as a HTTP response.

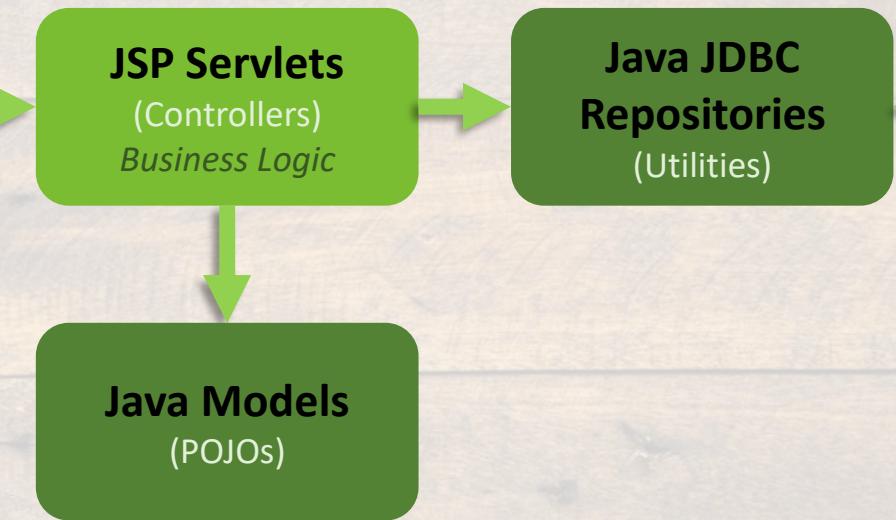
# HIGH LEVEL DESIGN



## FRONTEND



## BACKEND



**MySQL**  
Database



# Code Project Explorer: Frontend

src/main/java/webapp/

Styling (CSS, Images)	Configuration Related	Views (JSPs)
<ul style="list-style-type: none"><li>✓  css<ul style="list-style-type: none"><li>flyawaystyles.css</li><li>style.css</li></ul></li><li>✓  images<ul style="list-style-type: none"><li>Another_Airplane.jpg</li><li>favicon.ico</li><li>Flyaway Logo.jpg</li><li>Flyaway Logo 2.jpg</li></ul></li></ul>	<ul style="list-style-type: none"><li>✓  META-INF<ul style="list-style-type: none"><li>context.xml</li><li>MANIFEST.MF</li></ul></li><li>✓  WEB-INF<ul style="list-style-type: none"><li>lib</li><li>web.xml</li></ul></li></ul>	<ul style="list-style-type: none"><li>admin-login-form.jsp</li><li>book-flight.jsp</li><li>booking-details.jsp</li><li>booking-history.jsp</li><li>customer-login-form.jsp</li><li>fare-details.jsp</li><li>index.jsp</li><li>list-users.jsp</li><li>navbar.jsp</li><li>payment-confirmation.jsp</li><li>payment-form.jsp</li><li>register-new-user-form.jsp</li><li>search-results-page.jsp</li><li>update-user-form.jsp</li></ul>



# Code Project Explorer: Backend

src/main/java/

Controllers (Servlets)	Database Access (DAOs)	Models
<ul style="list-style-type: none"><li>✓ com.flyaway.controller<ul style="list-style-type: none"><li>&gt; BookFlightControllerServlet.java</li><li>&gt; LoginControllerServlet.java</li><li>&gt; LogoutControllerServlet.java</li><li>&gt; PaymentServlet.java</li><li>&gt; UserControllerServlet.java</li></ul></li></ul>	<ul style="list-style-type: none"><li>✓ com.flyaway.jdbc.utilities<ul style="list-style-type: none"><li>&gt; BookingDbUtil.java</li><li>&gt; DBUtil.java</li><li>&gt; UserDbUtil.java</li></ul></li></ul>	<ul style="list-style-type: none"><li>✓ com.flyaway.model<ul style="list-style-type: none"><li>&gt; Airline.java</li><li>&gt; Airport.java</li><li>&gt; BookingHistory.java</li><li>&gt; BookingStatus.java</li><li>&gt; Country.java</li><li>&gt; FareDetails.java</li><li>&gt; FlightDirection.java</li><li>&gt; SearchResult.java</li><li>&gt; Ticket.java</li><li>&gt; TravelClass.java</li><li>&gt; User.java</li></ul></li></ul>

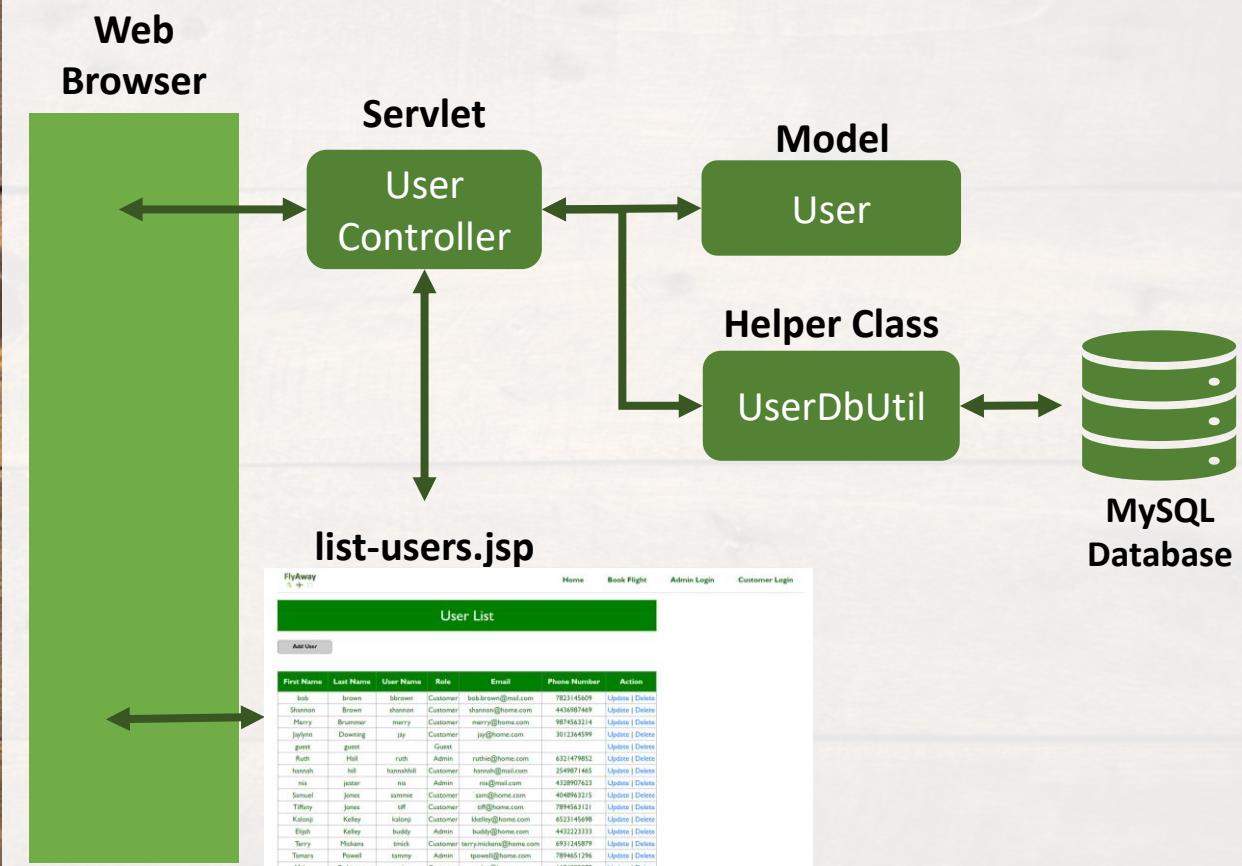


# List Users

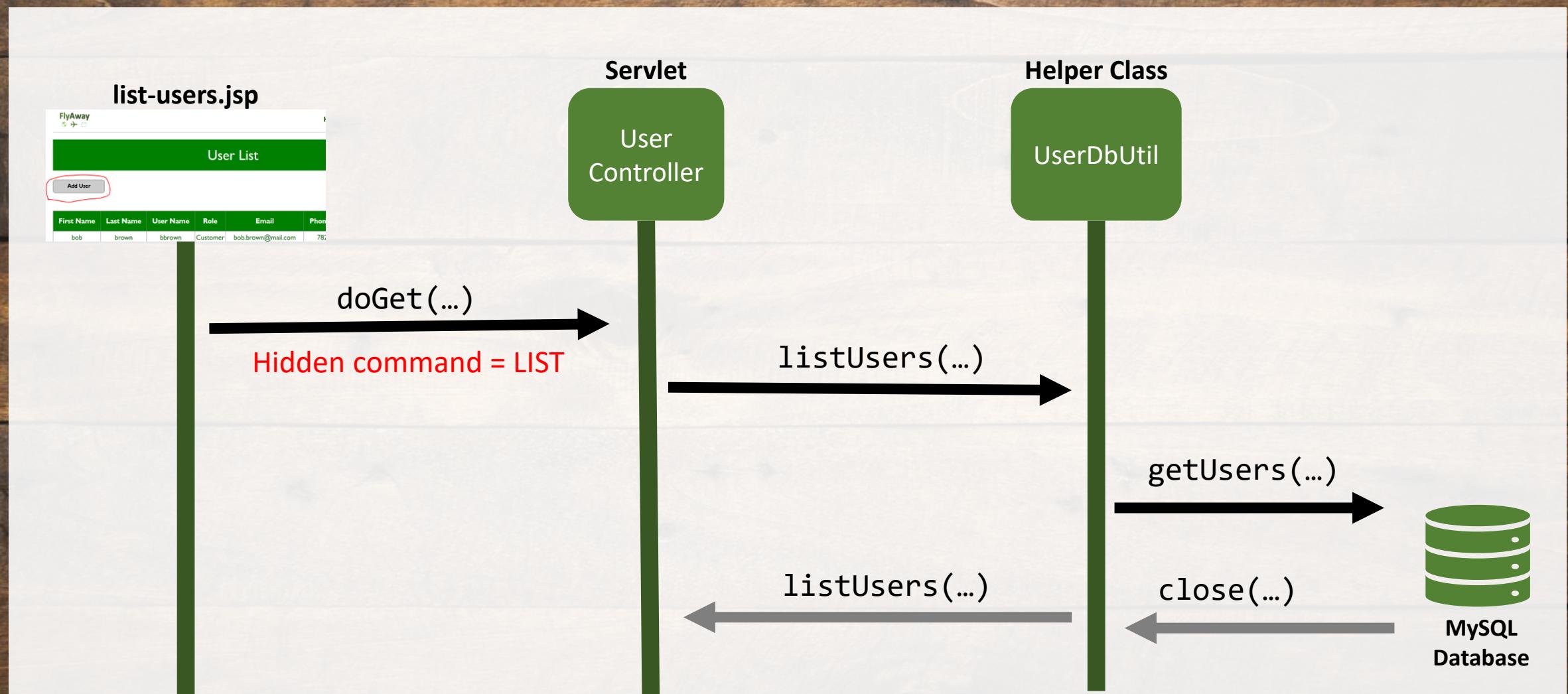
## To Do List

1. Create **User.java**
2. Update **UserControllerServlet.java** to handle the request to add a User (using **LIST** command)
3. Create **UserDbUtil.java** to add a JDBC getUsers() method
4. Create JSP page: **list-users.jsp**

## Diagram



# List Users: Sequence Diagram

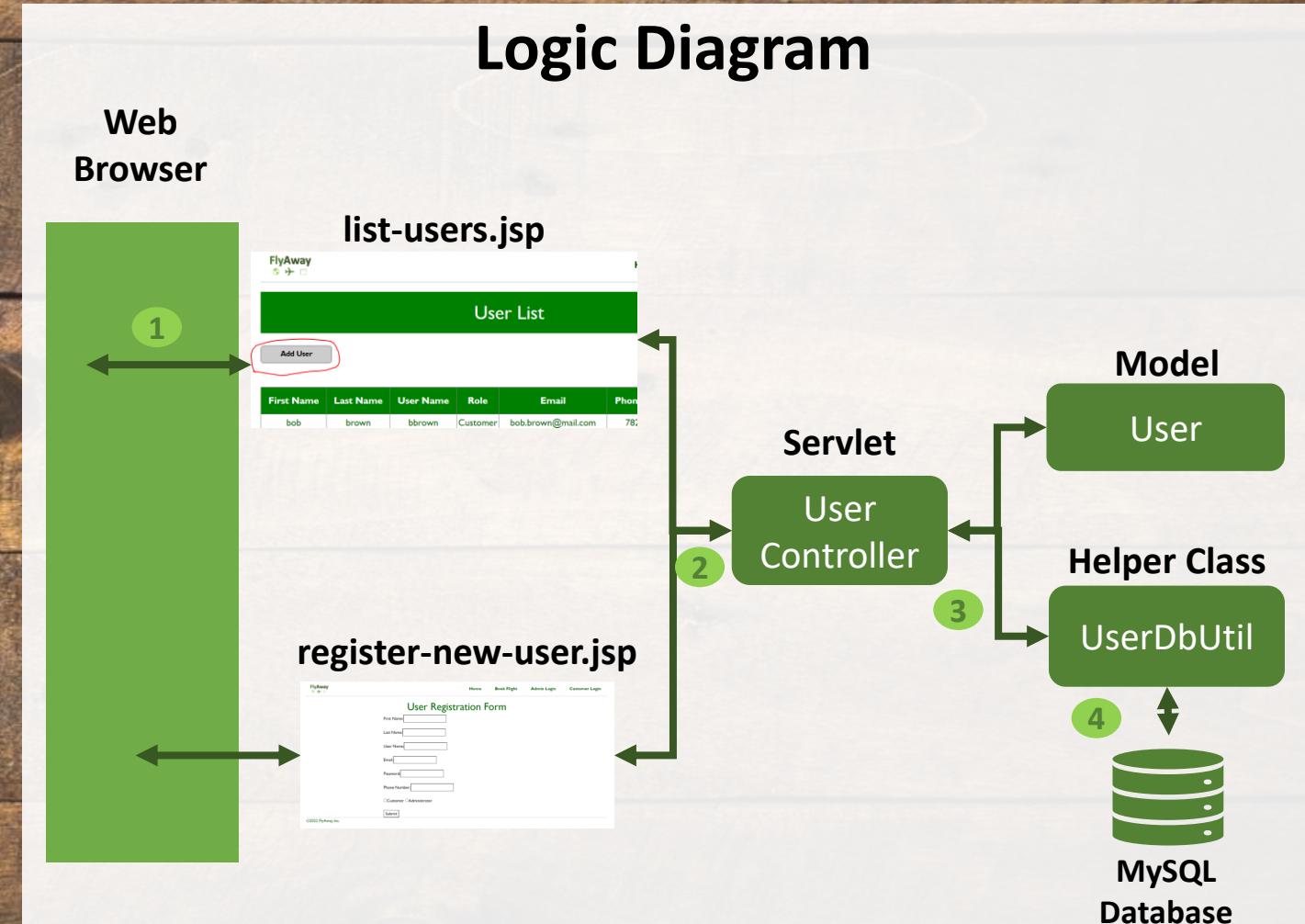


# Add New User

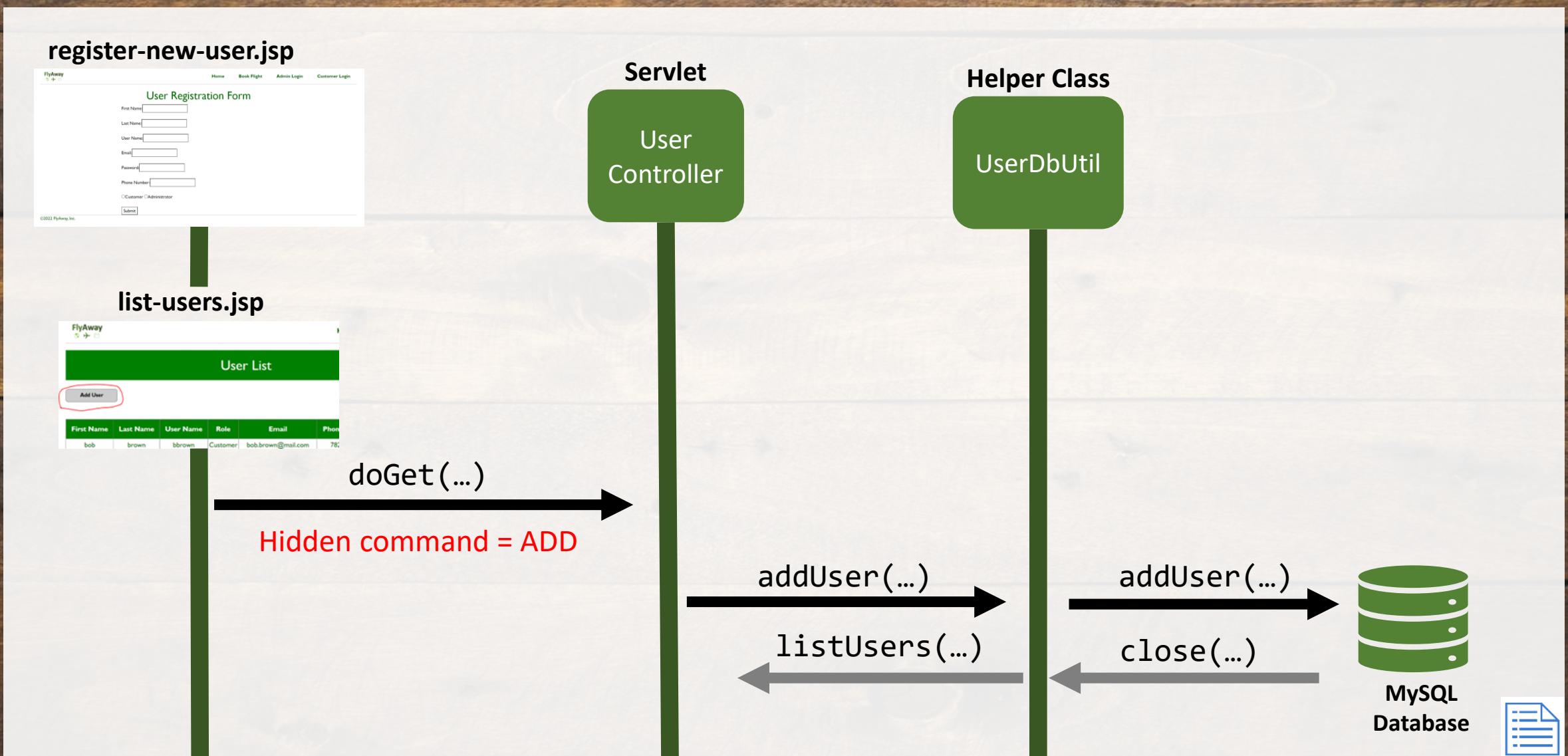
## To Do List

1. Update **list-users.jsp** to add the “Add User” button
2. Update Landing Page to include a link to the “Add User/Register” form
3. Create Form (JSP page) : **register-new-user.jsp**
4. Update **UserControllerServlet.java** to handle the request to add a User (using **ADD** command)
5. Update **UserDbUtil.java** to add a JDBC addUser() method

## Logic Diagram



# Add New User: Sequence Diagram

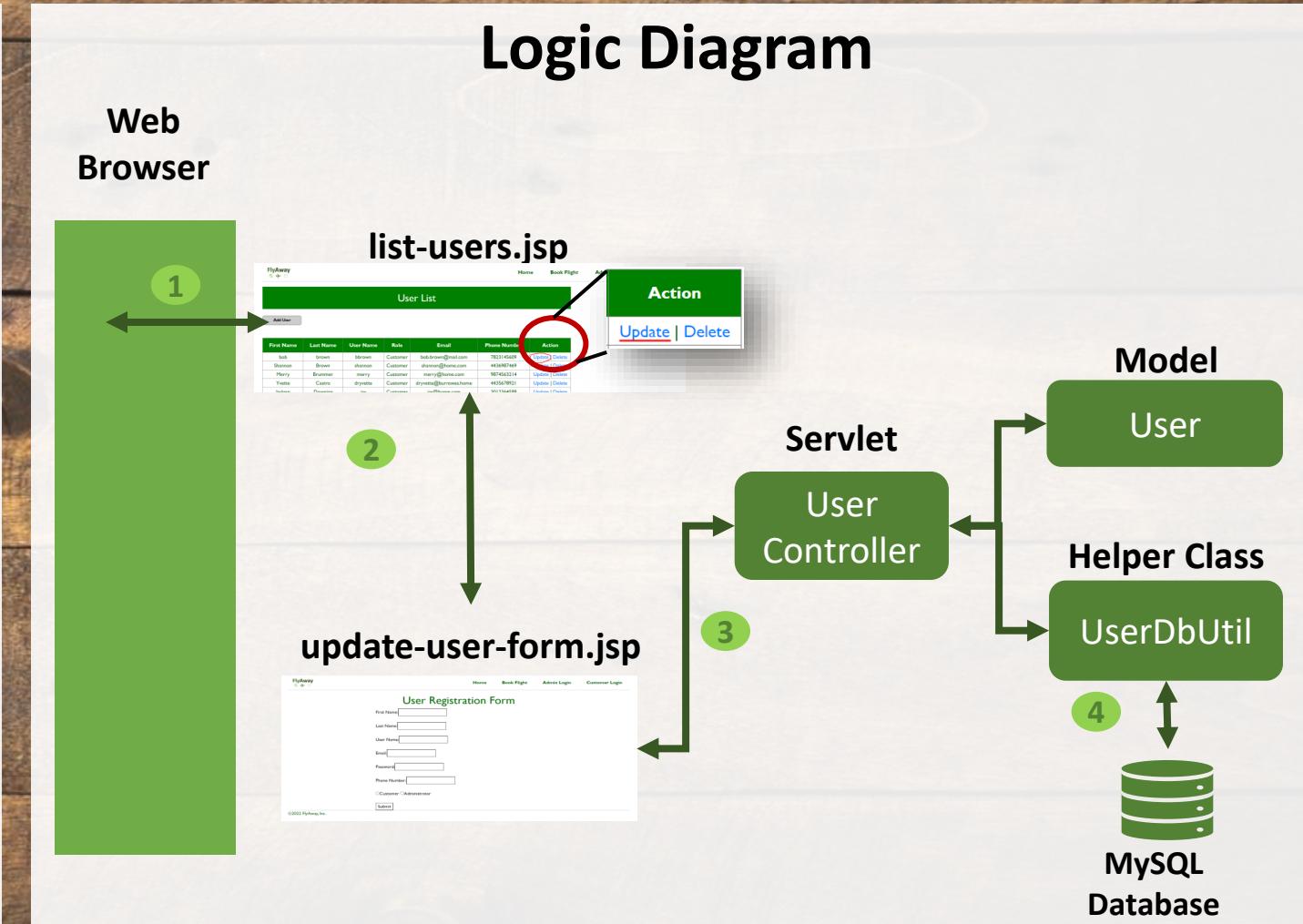


# Update Existing User

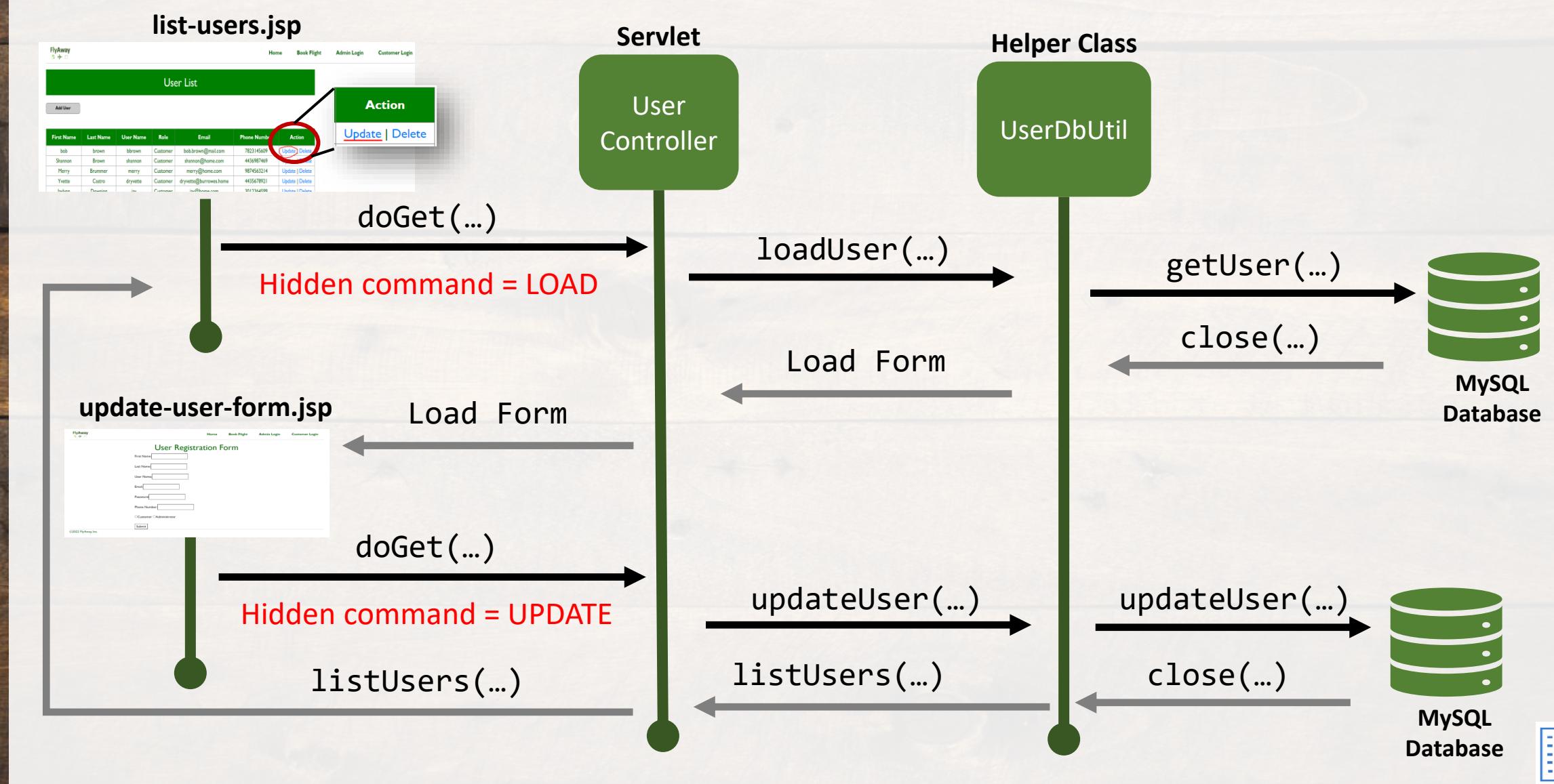
## To Do List

1. Update **list-users.jsp** to add “Update” link
2. Create Form (JSP page) : **update-user-form.jsp**
3. Update **UserControllerServlet.java** to handle the update request
  - Pre-populate the **update-user-form** with existing database information (using **LOAD** command)
  - Add logic to update the requested User, using the form data (using **UPDATE** command)
4. Update **UserDbUtil.java** to add a JDBC method for updating a User

## Logic Diagram



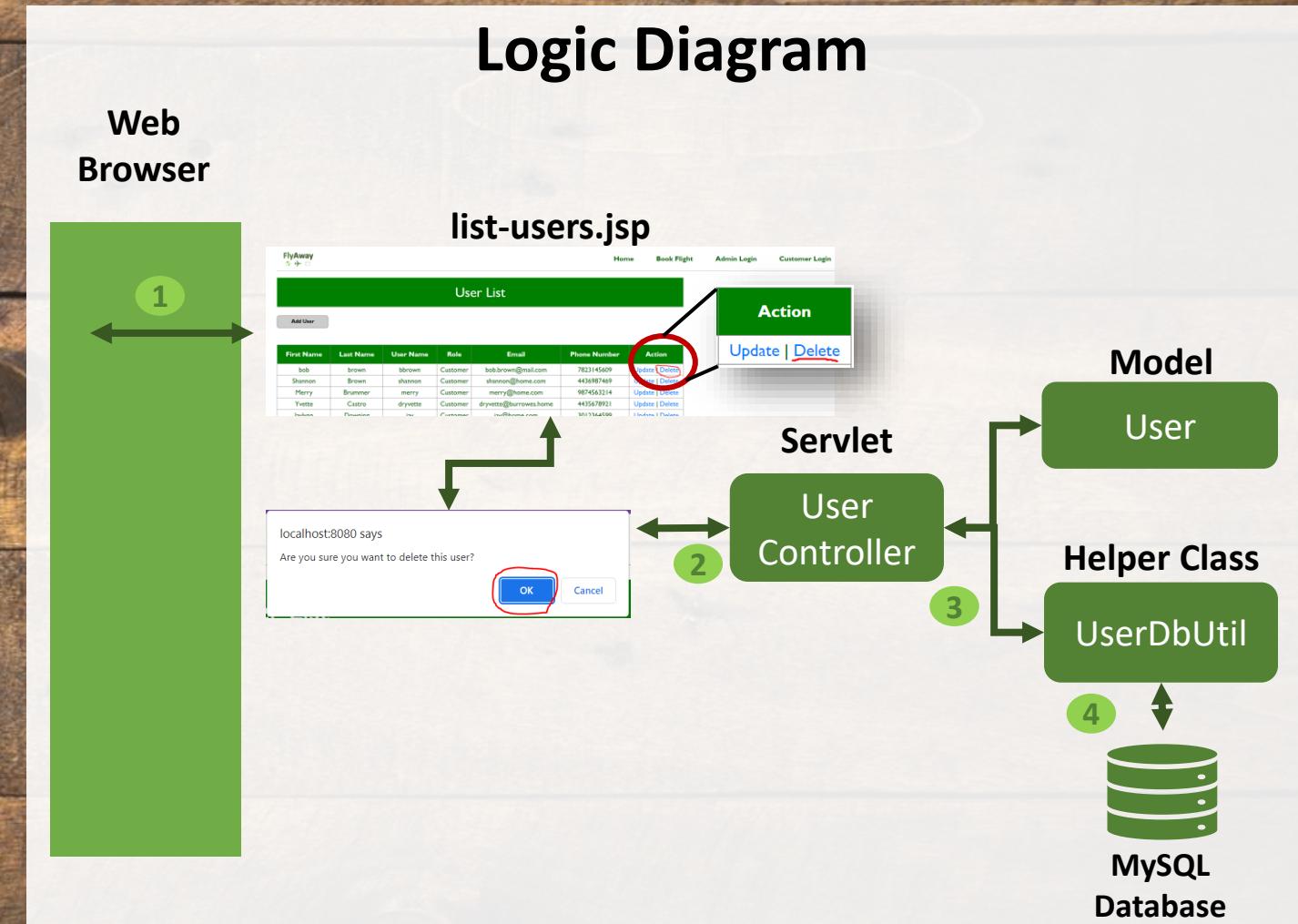
# Update Existing User: Sequence Diagram



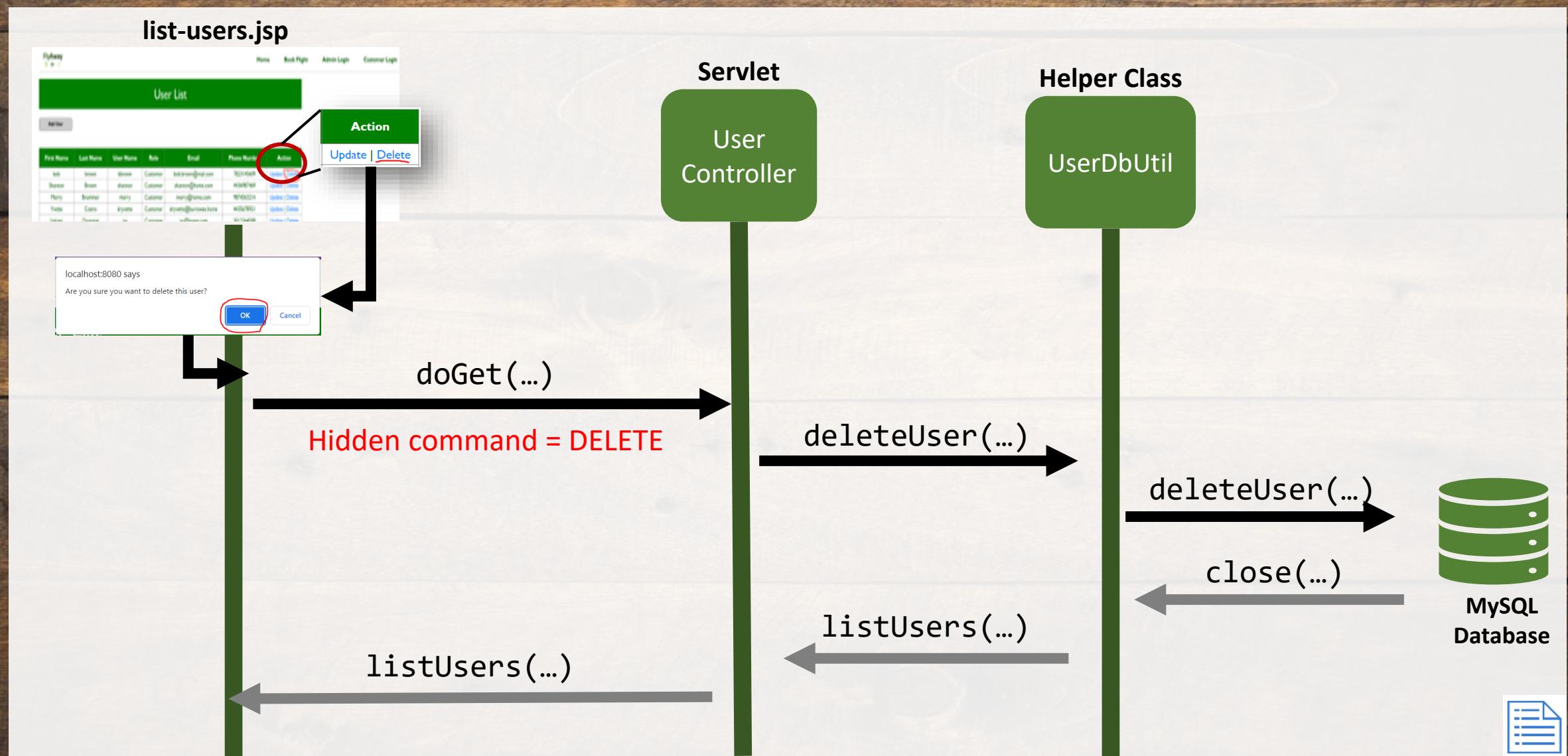
# Delete Existing User

## To Do List

1. Update **list-users.jsp** to add “Delete” link
  - Add logic to display a confirmation window
2. Update **UserControllerServlet.java** to handle the request to delete a User (using **DELETE** command)
3. Update **UserDbUtil.java** to add a JDBC deleteUser() method



# Delete Existing User: Sequence Diagram



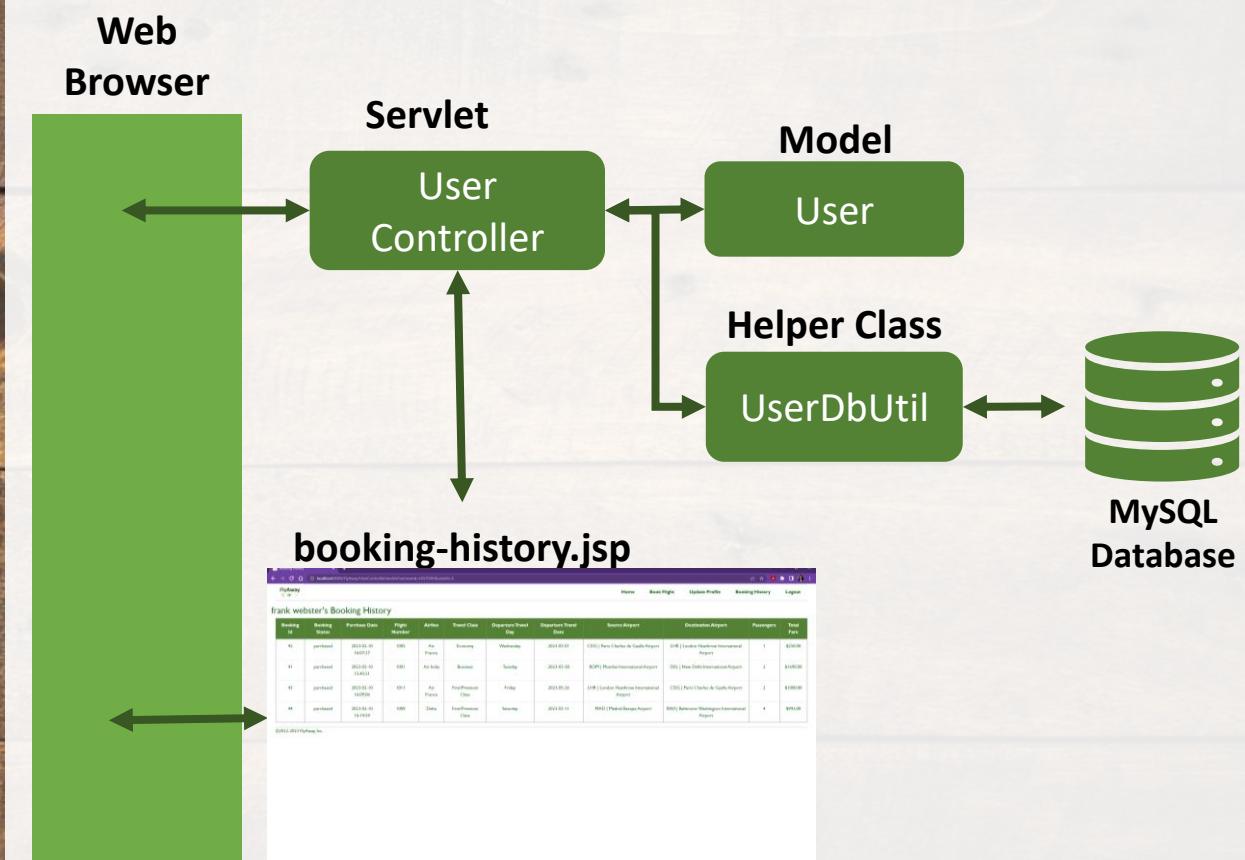
# Booking History

(Single Logged-In User)

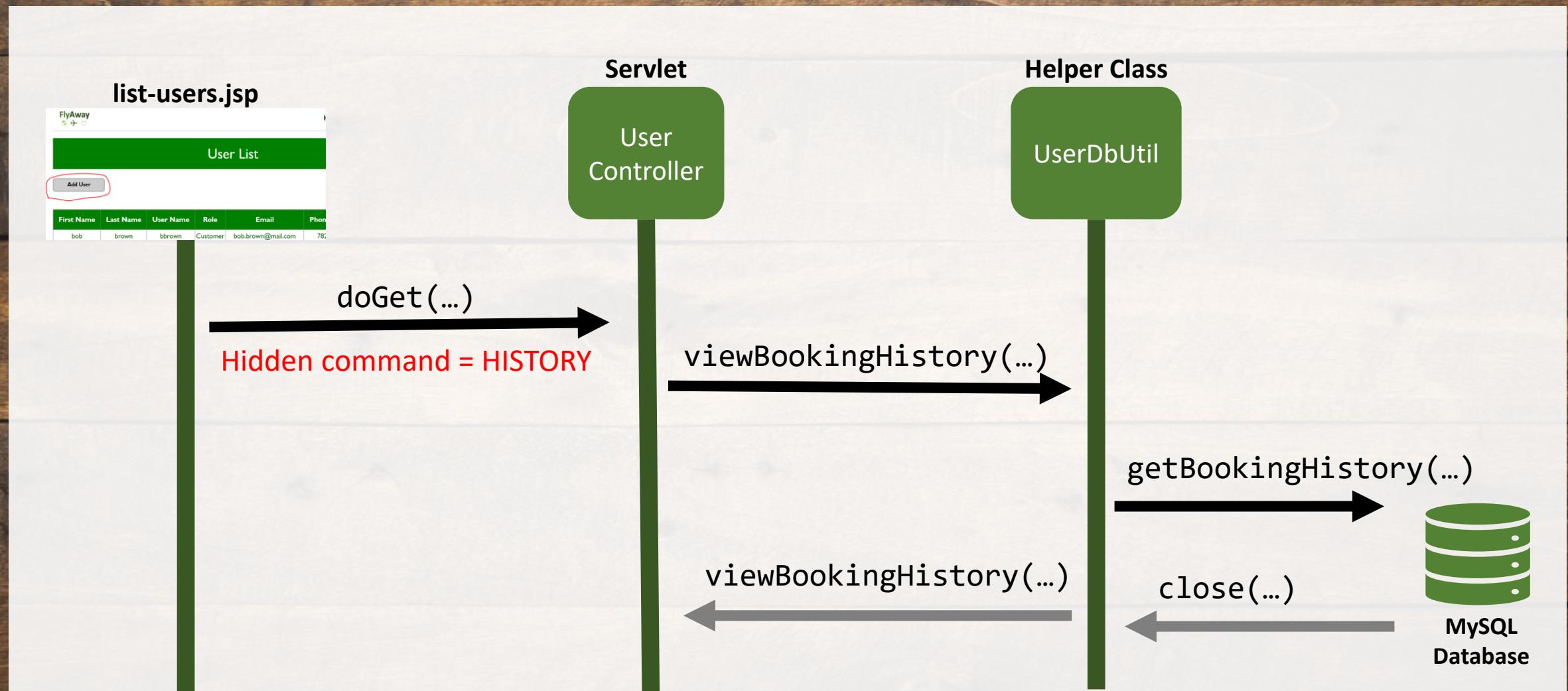
## To Do List

1. Update **UserControllerServlet.java** to handle the request to add a User (using **HISTORY** command)
2. Create a new object to hold the booking history results – **BookingHistory.java**
3. Create **UserDbUtil.java** to add a JDBC getBookingHistory() method
4. Create JSP page: **booking-history.jsp**

## Diagram



# Booking History: Sequence Diagram (Single Logged-In User)



## book-flight.jsp

## Journey Details

 Round Trip  One WayDeparture City **BOM | Mumbai International Airport**Arrival City **DEL | New Delhi International Airport**Depart Date: **03/20/2023**Return Date: **05/05/2023**Number of Travelers **2**

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Command: SEARCH  
Servlet: BookingController  
Method: searchFlights()

**Search Flights**

## search-results-page.jsp

## Search Results

## Departing Flights:

DEL to BOM  
DEL | New Delhi International Airport to BOM | Mumbai International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1000	Indigo	Monday	2023-03-20	BOM	DEL	<b>Book Tickets</b>
1001	Air India	Monday	2023-03-20	BOM	DEL	<b>Book Tickets</b>

## Returning Flights:

BOM to DEL  
BOM | Mumbai International Airport to DEL | New Delhi International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1003	Air India	Friday	2023-05-05	DEL	BOM	<b>Book Tickets</b>
1004	Indigo	Friday	2023-05-05	DEL	BOM	<b>Book Tickets</b>

[Back to Search Page](#)

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Command: LOAD  
Servlet: BookingController  
Method: loadFlight()

## Book Flight (1 of 2)

Home Book Flight Admin Login Customer Login

## fare-details.jsp

## Fare Details

Command: BOOK  
Servlet: BookingController  
Method: bookFare()

Flight Number	Airline	Travel Class	Fare	Action
1001	Air India	Economy	\$150.00	<b>Book Now</b>
1001	Air India	Business	\$300.00	<b>Book Now</b>
1001	Air India	First/Premium Class	\$1500.00	<b>Book Now</b>

[Back to Search Results](#)

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## fare-details.jsp

Home Book Flight Admin Login Customer Login

## Fare Details

Flight Number	Airline	Travel Class	Fare	Action
1001	Air India	Economy		<a href="#">Book Now</a>
1001	Air India	Business		<a href="#">Book Now</a>
1001	Air India	First/Premium Class		<a href="#">Book Now</a>

[Back to Search Results](#)

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Command: BOOK  
Servlet: BookingController  
Method: bookFare()

Book Now

## booking-details.jsp

Home Book Flight Update Profile Logout

## Booking Details

Flight Number	1004
Airline	Indigo
Travel Class	First/Premium Class
Source	DEL
Destination	BOM
Travel Day	Saturday
Travel Date	2023-04-29
No. of Passengers	2
Total Amount to be Paid	\$1372.0
Passenger Details	
Customer Id:	14
Customer Name:	Merry Brummer
Email Address:	merry@home.com
Phone Number:	9874563214

Command: PAY  
Servlet: PaymentServlet  
Method: collectPayment()

Go to Payment

## Book Flight (2 of 2)

## payment-form.jsp

## Payment Form

## CardHolder Name

Merry Brummer

## Card Number

Enter Card Number

## Total Amount to be Paid

\$2340.0

Confirm Payment

Command: PAYMENT\_SUCCESS  
Servlet: PaymentServlet  
Method: ()

## payment-confirmation.jsp

FlyAway

Payment Successful

## Payment Confirmation

Booking Id	20
Customer	Merry Brummer
Flight Number	1006
Source	JFK
Destination	HND
Travel Day	Tuesday
Travel Date	2023-06-27
No. of Passengers	1
Total Amount to be Paid	\$185.00





# Database Design



# Tomcat Datasource for Connection Pooling

- A single database connection **will not** scale for multiple web users



- **Best Practice** is to use database connection pools for scalability and handling multiple users quickly



# Tomcat Datasource for Connection Pooling

## Steps

1. Make sure that you have the JDBC Driver in your JAR files
2. Define the connection pool in **META-INF/context.xml**
3. Get connection pool reference in the Java code



# Database Design (12 Tables)

**Goal:** To design a highly normalized relational database in order to reduce data redundancy and improve data integrity.

## Tables with no foreign key association

userroles
<b>PK:</b> roleid
roletype

countrycodes
<b>PK:</b> countryid
countryName

airlines
<b>PK:</b> airlineid
companyName

flightdirections
<b>PK:</b> directionid
directionName

travelclass
<b>PK:</b> travelClassId
travelClassName

bookingstatus
<b>PK:</b>
bookingstatusid
bookingstatusname

**PRIMARY KEY (PK)**  
**FOREIGN KEY (FK)**

## Tables WITH foreign key associations

users
<b>PK:</b> userid
<b>FK:</b> roleid
firstname
lastname
username
email
password
phoneNumber
date_added

flightDetails
<b>PK:</b> flightnumber
<b>FK:</b> airlineid
src_airportCode
dest_airportCode
totalNumSeats
availFirstClassSeats
availBusinessClassSeats
availEconomySeats

ticketDetails
<b>PK:</b> bookingid
<b>FK:</b> userid
<b>FK:</b> bookingstatusid
<b>FK:</b> directionid
<b>FK:</b> flightnumber
<b>FK:</b> travelclassid
travelDate
totalPassengers
totalFare
purchaseDate

airportcodes
<b>PK:</b> airportCodeid
<b>FK:</b> countryid
airportCode
airportName

flighthdays
<b>PK:</b> flightdayid
<b>FK:</b> flightnumber
dayValue
dayName

fareDetails
<b>PK:</b> fareid
<b>FK:</b> travelclassid
<b>FK:</b> flightnumber
fare

# Database Design: Data Tables (1 of 7)

```
mysql> show tables;
+-----+
| Tables_in_flyawaydb |
+-----+
| airlines
| airportcodes
| bookingstatus
| countrycodes
| faredetails
| flightdays
| flightdetails
| flightdirections
| ticketdetails
| travelclass
| userroles
| users
+-----+
12 rows in set (0.00 sec)
```

```
mysql> select * from bookingstatus;
+-----+-----+
| bookingstatusid | bookingstatusname |
+-----+-----+
| 1 | pending
| 2 | confirmed
| 3 | purchased
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select * from travelclass;
+-----+-----+
| travelclassid | travelclassName |
+-----+-----+
| 1 | Economy
| 2 | Business
| 3 | First/Premium Class
+-----+-----+
3 rows in set (0.04 sec)
```

```
mysql> select * from userroles;
+-----+-----+
| roleid | roletype |
+-----+-----+
| 1 | admin
| 2 | customer
| 3 | guest
+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> select * from flightdirections;
+-----+-----+
| directionid | directionName |
+-----+-----+
| 1 | One-Way
| 2 | Round Trip
+-----+-----+
2 rows in set (0.01 sec)
```

*Tables with no  
foreign key  
association*

```
mysql> select * from countrycodes;
+-----+-----+
| countryid | countryName |
+-----+-----+
| 1 | United States of America
| 2 | France
| 3 | Spain
| 4 | Japan
| 5 | India
| 6 | England
+-----+-----+
6 rows in set (0.01 sec)
```

```
mysql> select * from airlines;
+-----+-----+
| airlineid | companyName |
+-----+-----+
| 1 | American
| 2 | Southwest
| 3 | Delta
| 4 | United
| 5 | Indigo
| 6 | Air India
| 7 | SpiceJet
| 8 | Go Air
| 9 | Iberia
| 10 | Air France
+-----+-----+
10 rows in set (0.00 sec)
```

# Database Design: Data Tables (2 of 7)

Tables WITH foreign key associations

userid	roleid	firstname	lastname	username	email	password	phoneNumber	date_added
1	3	guest	guest	NULL	NULL	NULL	NULL	2023-01-25 13:07:30
2	2	susan	smith	susan.smith	susan@mail.home	abc123	4102909283	2023-01-25 13:07:30
3	2	bob - TEST	brown	bbrown	TESTbob.brown@mail.com	abc123	7823148888	2023-01-25 13:07:30
4	2	hannah	hill	hannahhill	hannah@mail.com	abc123	2549871465	2023-01-25 13:07:30
5	2	frank	webster	frank	frankie@mail.com	abc123	6058762133	2023-01-25 13:07:30
6	1	nia	jester	nia	nia@mail.com	admin123	4328907623	2023-01-25 13:07:30
7	2	leslie	smith	leslie	leslie@home.com	abc123	1256324789	2023-01-25 13:07:30
8	2	michael	smith	msmith	michael@home.com	abc123	1256324789	2023-01-25 13:07:30
11	2	Kalonji	Kelley	kalonji	kkelley@home.com	abc1234	6523145698	2023-01-25 13:20:10
12	1	Ruth	Hall	ruth	ruthie@home.com	admin123	6321479852	2023-01-25 13:21:13
13	2	Daniel	Sterling	danny	danny@home.com	beautifulone	9725468326	2023-01-25 13:25:54
14	2	Merry	Brummer	merry	merry@home.com	abc123	9874563214	2023-01-25 13:27:34
15	2	Jaylynn	Downing	jay	jay@home.com	abc123	3012364599	2023-01-25 13:30:55
16	2	Shannon	Brown	shannon.brown	shannon@home.com	abc123	4436987469	2023-01-25 13:32:35
17	2	Samuel	Jones	sammie	sam@home.com	abc123	4048963215	2023-01-25 13:43:22
18	2	Terry	Mickens	tmick	terry.mickens@home.com	abc123	6931245879	2023-01-25 17:41:31
19	1	Tamara	Powell	tammy	tpowell@home.com	admin123	7894651296	2023-01-25 17:58:09
20	2	Tiffany	Jones	tiff	tiff@home.com	abc123	7894563121	2023-01-25 18:26:51
21	2	Myles	Robinson	myles	myles@home.com	abc123	6174892378	2023-01-25 18:28:20
22	2	Ian	Robinson	ian	ian@home.com	awesome	7845691245	2023-01-25 18:32:35
23	2	Cole	Robinson	cole	cole@home.com	abc123	7844771236	2023-01-25 18:33:43
24	1	Elijah	Kelley	buddy	buddy@home.com	admin123	4432223333	2023-01-25 18:35:27
28	2	Jasmine	Howard	jazzy	jazzy@home.com	abc123	1237894532	2023-01-30 22:47:27
29	2	Yvette	Castro	dryvette	dryvette@burrowes.home	abc123	4435678921	2023-01-30 23:01:15
30	1	Bradley	Knight	brad	brad@home.com	admin123	1234567890	2023-01-30 23:16:37
31	2	Jewel	Ray	jewel	jewel@home.com	abc123	1234567890	2023-01-31 14:50:53
32	2	Neema	Mbonika	neema	neema@home.net	NULL	1234567890	2023-02-02 17:30:08

27 rows in set (0.00 sec)



# Database Design: Data Tables (3 of 7)

Tables *WITH* foreign key associations

```
mysql> select * from airportcodes;
+-----+-----+-----+-----+
| airportCodeid | countryid | airportCode | airportName
+-----+-----+-----+-----+
|      1 |      1 |   BWI | Baltimore-Washington International Airport
|      2 |      1 |   REG | Ronald Regan International Airport
|      3 |      1 |   JFK | John F. Kennedy International Airport
|      4 |      5 |   BLR | Bangalore International Airport
|      5 |      5 |   BOM | Mumbai International Airport
|      6 |      5 |   DEL | New Delhi International Airport
|      7 |      5 |   MAA | Chennai International Airport
|      8 |      5 |   GMR | Hyderabad International Airport
|      9 |      5 |   LKO | Lucknow International Airport
|     10 |      5 |   HYD | Rajiv Gandhi International Airport
|     11 |      6 |   LHR | London Heathrow International Airport
|     12 |      2 |   CDG | Paris Charles de Gaulle Airport
|     13 |      3 |   MAD | Madrid-Barajas Airport
|     14 |      4 |   HND | Tokyo International Airport
|     15 |      3 |   BCN | Josep Tarradellas Barcelona-El Prat Airport
+-----+-----+-----+-----+
15 rows in set (0.01 sec)
```



# Database Design: Data Tables (4 of 7)

Tables WITH foreign key associations

flightdayid	flightnumber	dayValue	dayName	25	1003	6	Saturday
1	1000	7	Sunday	26	1004	7	Sunday
2	1000	1	Monday	27	1004	1	Monday
3	1000	2	Tuesday	28	1004	2	Tuesday
4	1000	3	Wednesday	29	1004	3	Wednesday
5	1000	4	Thursday	30	1004	4	Thursday
6	1000	5	Friday	31	1004	5	Friday
7	1000	6	Saturday	32	1004	6	Saturday
8	1001	7	Sunday	33	1005	1	Monday
9	1001	1	Monday	34	1005	3	Wednesday
10	1001	2	Tuesday	35	1005	5	Friday
11	1001	3	Wednesday	36	1006	2	Tuesday
12	1001	4	Thursday	37	1006	6	Saturday
13	1001	5	Friday	38	1006	7	Sunday
14	1001	6	Saturday	39	1007	1	Monday
15	1002	7	Sunday	40	1007	2	Tuesday
16	1002	2	Tuesday	41	1007	3	Wednesday
17	1002	4	Thursday	42	1007	4	Thursday
18	1002	6	Saturday	43	1007	5	Friday
19	1003	7	Sunday	44	1008	1	Monday
20	1003	1	Monday	45	1008	3	Wednesday
21	1003	2	Tuesday	46	1008	5	Friday
22	1003	3	Wednesday	47	1009	6	Saturday
23	1003	4	Thursday	48	1009	7	Sunday
24	1003	5	Friday	49	1010	2	Tuesday
				50	1010	4	Thursday
				51	1010	6	Saturday

51 rows in set (0.01 sec)



# Database Design: Data Tables (5 of 7)

*Tables WITH foreign key associations*

```
mysql> select * from faredetails;
+-----+-----+-----+-----+
| fareid | flightnumber | travelclassid | fare |
+-----+-----+-----+-----+
|      1 |     1000    |          1 | 450.00 |
|      2 |     1000    |          2 | 750.00 |
|      3 |     1000    |          3 | 925.00 |
|      4 |     1001    |          1 | 650.00 |
|      5 |     1001    |          2 | 845.00 |
|      6 |     1001    |          3 | 1352.00 |
|      7 |     1002    |          1 | 300.00 |
|      8 |     1002    |          2 | 405.00 |
|      9 |     1003    |          1 | 750.00 |
|     10 |     1003    |          2 | 900.00 |
|     11 |     1003    |          3 | 1170.00 |
|     12 |     1004    |          1 | 350.00 |
|     13 |     1004    |          2 | 490.00 |
|     14 |     1004    |          3 | 686.00 |
|     15 |     1005    |          1 | 250.00 |
|     16 |     1006    |          1 | 190.00 |
|     17 |     1006    |          3 | 285.00 |
|     18 |     1007    |          1 | 670.00 |
|     19 |     1008    |          1 | 870.00 |
|     20 |     1008    |          2 | 1392.00 |
|     21 |     1008    |          3 | 1809.60 |
|     22 |     1009    |          1 | 100.00  |
|     23 |     1009    |          2 | 160.00  |
|     24 |     1009    |          3 | 248.00  |
|     25 |     1010    |          1 | 220.00  |
|     26 |     1010    |          3 | 396.00  |
+-----+-----+-----+-----+
26 rows in set (1.20 sec)
```



# Database Design: Data Tables (6 of 7)

Tables *WITH* foreign key associations

```
mysql> select * from flightDetails;
+-----+-----+-----+-----+-----+-----+-----+-----+
| flightnumber | airlineid | src_airportCode | dest_airportCode | totalNumSeats | availFirstClassSeats | availBusinessClassSeats | availEconomySeats |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1000 | 5 | BOM | DEL | 65 | 4 | 7 | 54 |
| 1001 | 6 | BOM | DEL | 75 | 4 | 8 | 63 |
| 1002 | 7 | BOM | DEL | 80 | 4 | 8 | 68 |
| 1003 | 6 | DEL | BOM | 180 | 9 | 18 | 153 |
| 1004 | 5 | DEL | BOM | 150 | 8 | 15 | 127 |
| 1005 | 10 | CDG | LHR | 125 | 7 | 13 | 105 |
| 1006 | 1 | JFK | HND | 100 | 5 | 10 | 85 |
| 1007 | 3 | MAD | BCN | 115 | 6 | 12 | 97 |
| 1008 | 1 | REG | CDG | 50 | 3 | 5 | 42 |
| 1009 | 3 | MAD | BWI | 90 | 5 | 9 | 76 |
| 1010 | 4 | HND | BLR | 150 | 8 | 15 | 127 |
+-----+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.01 sec)
```



# Database Design: Data Tables (7 of 7)

Tables *WITH* foreign key associations

```
mysql> select * from ticketdetails;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| bookingid | userid | bookingstatusid | directionid | flightnumber | travelclassid | travelDate | totalPassengers | totalfare | purchaseDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 27 | 14 | 3 | 2 | 1001 | 2 | 2023-02-24 | 4 | 3380.00 | 2023-02-10 11:51:44 |
| 28 | 14 | 3 | 1 | 1006 | 3 | 2023-06-27 | 1 | 285.00 | 2023-02-10 11:51:44 |
| 29 | 14 | 3 | 2 | 1001 | 2 | 2023-02-22 | 3 | 2535.00 | 2023-02-10 11:51:44 |
| 30 | 14 | 3 | 2 | 1004 | 3 | 2023-05-12 | 3 | 2058.00 | 2023-02-10 11:51:44 |
| 31 | 14 | 3 | 2 | 1001 | 2 | 2023-03-02 | 3 | 2535.00 | 2023-02-10 11:51:44 |
| 32 | 14 | 3 | 2 | 1001 | 3 | 2023-04-13 | 4 | 5408.00 | 2023-02-10 11:51:44 |
| 33 | 14 | 3 | 2 | 1001 | 3 | 2023-04-13 | 4 | 5408.00 | 2023-02-10 11:51:44 |
| 34 | 14 | 3 | 2 | 1001 | 3 | 2023-04-13 | 4 | 5408.00 | 2023-02-10 11:51:44 |
| 35 | 14 | 3 | 2 | 1001 | 3 | 2023-04-13 | 4 | 5408.00 | 2023-02-10 11:51:44 |
| 36 | 14 | 3 | 2 | 1004 | 3 | 2023-02-14 | 4 | 2744.00 | 2023-02-10 11:51:44 |
| 37 | 14 | 2 | 2 | 1002 | 1 | 2023-04-06 | 3 | 900.00 | 2023-02-10 11:51:44 |
| 38 | 14 | 3 | 2 | 1002 | 1 | 2023-04-06 | 3 | 900.00 | 2023-02-10 11:51:44 |
| 39 | 14 | 3 | 2 | 1004 | 3 | 2023-03-01 | 4 | 2744.00 | 2023-02-10 11:51:44 |
| 40 | 33 | 3 | 2 | 1001 | 3 | 2023-03-06 | 2 | 2704.00 | 2023-02-10 12:01:32 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
14 rows in set (0.00 sec)
```



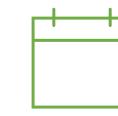
# Source Code

All code for this project can be found at the following link:  
<https://github.com/niakelleyjester/simplilearn-projects>





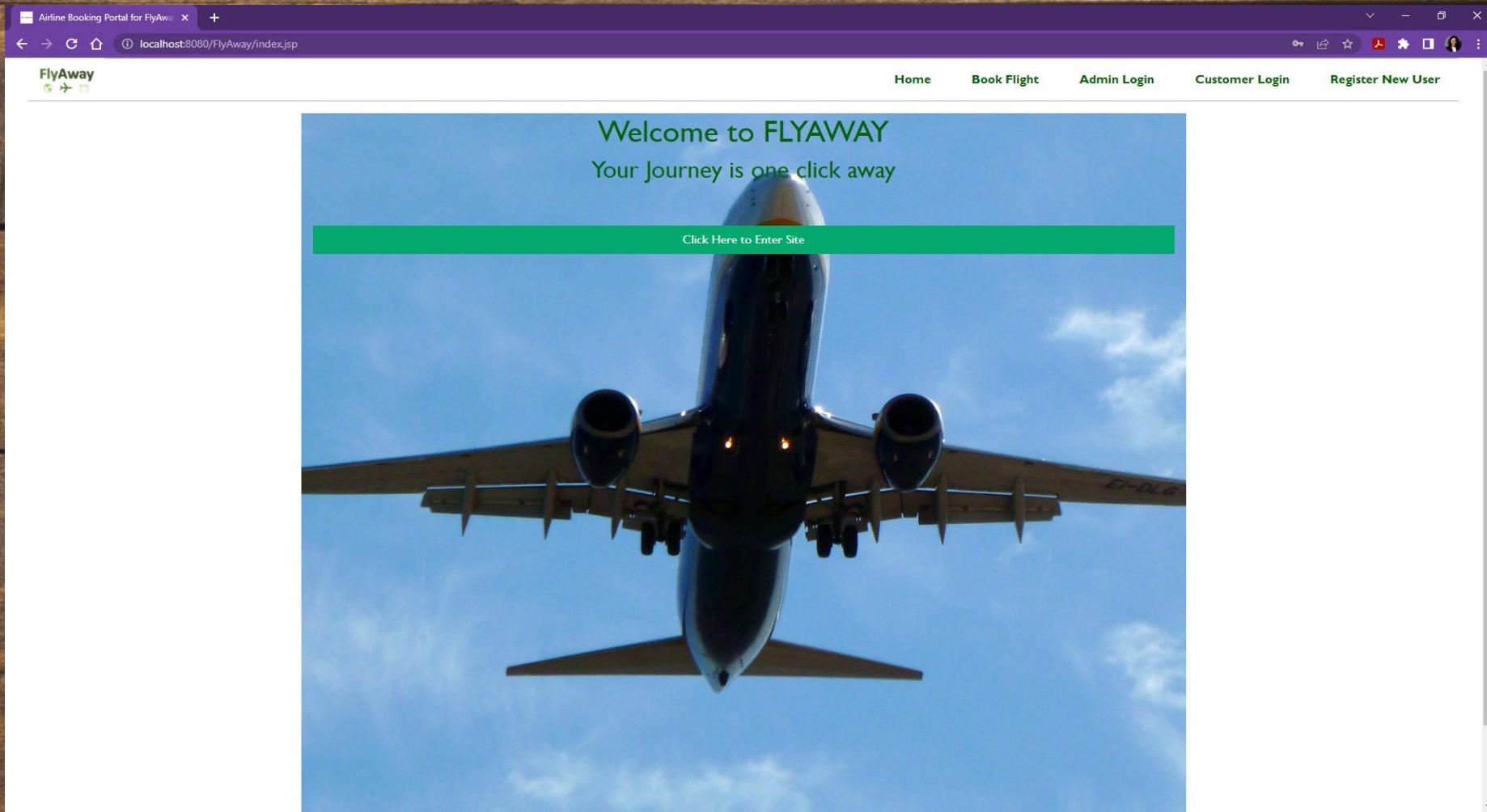
# FlyAway Application Screenshots



Phase 2 Project  
Nia Kelley Jester  
February 2023  
Instructor: Sonam Soni

# Home Page

User Not Logged-In



# Login Page

## Customer User

MySQL Database

```
mysql> select * from users where roleid=2;
```

userid	roleid	firstname	lastname	username	email	password	phoneNumber	date_added
2	2	susan	smith	susan.smith	susan@mail.home	abc123	4102909283	2023-01-25 13:07:30
3	2	bob - TEST	brown	bbrown	TESTbob.brown@mail.com	abc123	7823148888	2023-01-25 13:07:30
4	2	hannah	hill	hannahhill	hannah@mail.com	abc123	2549871465	2023-01-25 13:07:30
5	2	frank	webster	frank	frankie@mail.com	abc123	6058762133	2023-01-25 13:07:30
7	2	leslie	smith	leslie	leslie@home.com	abc123	1256324789	2023-01-25 13:07:30
8	2	michael	smith	msmith	michael@home.com	abc123	1256324789	2023-01-25 13:07:30
11	2	Kalonji	Kelley	kalonji	kkelley@home.com	abc1234	6523145698	2023-01-25 13:20:10
13	2	Daniel	Sterling	danny	danny@home.com	beautifulOne	9725468326	2023-01-25 13:25:54
14	2	Merry	Brummer	merry	merry@home.com	abc123	9874563214	2023-01-25 13:27:34
15	2	Jaylynn	Downing	jay	jay@home.com	abc123	3012364599	2023-01-25 13:30:55
16	2	Shannon	Brown	shannon.brown	shannon@home.com	abc123	4436987469	2023-01-25 13:32:35
17	2	Samuel	Jones	sammie	sam@home.com	abc123	4048963215	2023-01-25 13:43:22
18	2	Terry	Mickens	tmick	terry.mickens@home.com	abc123	6931245879	2023-01-25 17:41:31
20	2	Tiffany	Jones	tiff	tiff@home.com	abc123	7894563121	2023-01-25 18:26:51
21	2	Myles	Robinson	myles	myles@home.com	abc123	6174892378	2023-01-25 18:28:20
22	2	Ian	Robinson	ian	ian@home.com	awesome	7845691245	2023-01-25 18:32:35
23	2	Cole	Robinson	cole	cole@home.com	abc123	7844771236	2023-01-25 18:33:43
28	2	Jasmine	Howard	jazzy	jazzy@home.com	abc123	1237894532	2023-01-30 22:47:27
29	2	Yvette	Castro	dryvette	dryvette@burrowes.home	abc123	4435678921	2023-01-30 23:01:15
31	2	Jewel	Ray	jewel	jewel@home.com	abc123	1234567890	2023-01-31 14:50:53
32	2	Neema	Mbonika	neema	neema@home.net	NULL	1234567890	2023-02-02 17:30:08
33	2	Jasen	Jester	jasen.jester	jasen@home.com	abc123	1234567890	2023-02-10 11:21:18

22 rows in set (0.00 sec)

Customer Login Form

FlyAway

Customer Login

User Name

Password

Email

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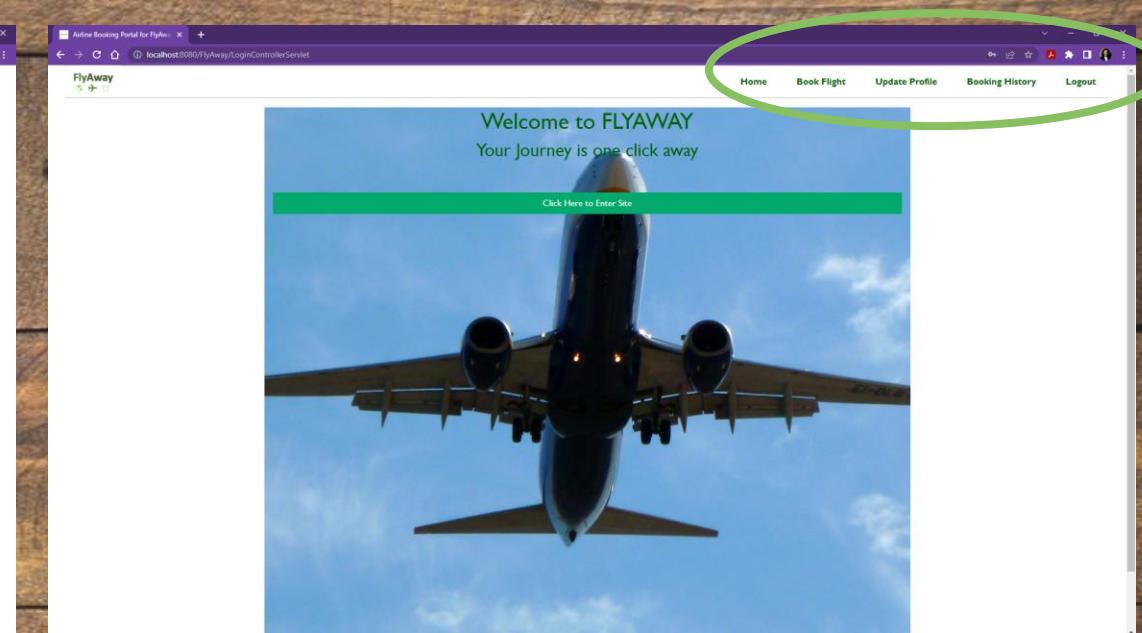
Home Book Flight Admin Login Customer Login Register New User



# Logged-In User

## Customer User

A screenshot of a web browser window titled "Customer Login Form" from the URL "localhost:8080/FlyAway/customer-login-form.jsp". The page displays a "Customer Login" form with three input fields: "User Name" containing "merry", "Password" containing ".....", and "Email" containing "merry@home.com". Below the form is a green "Login" button. At the top of the page, there is a navigation bar with links: Home, Book Flight, Admin Login, Customer Login, and Register New User.



Navigation Bar (no User logged in)

[Home](#)   [Book Flight](#)   [Admin Login](#)   [Customer Login](#)

Navigation Bar for Customer User

[Home](#)   [Book Flight](#)   [Update Profile](#)   [Booking History](#)   [Logout](#)



# Book Flight

## Customer User

**FlyAway**

**Journey Details**

Round Trip  One Way

Departure City **BOM | Mumbai International Airport** Arrival City **DEL | New Delhi International Airport**

Depart Date: **04/17/2023** Return Date: **07/22/2023**

Number of Travelers **3**

**Search Flights**

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**FlyAway**

**Journey Details**

Round Trip  One Way

Departure City **BOM | Mumbai International Airport** Arrival City **DEL | New Delhi International Airport**

Depart Date: **04/17/2023** Return Date: **07/22/2023**

Number of Travelers **3**

**Search Flights**

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FlyAway

Journey Details

Round Trip  One Way

Departure City: BOM | Mumbai International Airport Arrival City: DEL | New Delhi International Airport

Depart Date: 04/17/2023

Return Date: 07/22/2023

Number of Travelers: 1

Search Flights

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# Search Flights Button – Search Results Page

## Customer User

Search Results

Departing Flights:

BOM to DEL  
BOM | Mumbai International Airport to DEL | New Delhi International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1000	Indigo	Monday	2023-04-17	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<button>Book Tickets</button>
1001	Air India	Monday	2023-04-17	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<button>Book Tickets</button>

Returning Flights:

DEL to BOM  
DEL | New Delhi International Airport to BOM | Mumbai International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1003	Air India	Saturday	2023-07-22	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<button>Book Tickets</button>
1004	Indigo	Saturday	2023-07-22	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<button>Book Tickets</button>

[Back to Search Page](#)

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# Book Tickets Button – Fare Details Page

## Customer User

BOM to DEL  
BOM | Mumbai International Airport to DEL | New Delhi International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1000	Indigo	Monday	2023-04-17	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<a href="#">Book Tickets</a>

Fare Details

localhost:8080/FlyAway/BookFlightControllerServlet?command=LOAD&flightNumber=1000&airline=Indigo&day=Monday&date=2023-04-17&src=BOM&srcFullName=Mumbai+International+Airport&dest=DEL&destFullName>New+Delhi+I...

**FlyAway**

Home Book Flight Update Profile Booking History Logout

### Fare Details

Flight Number	Airline	Travel Class	Fare	Action
1000	Indigo	Economy	\$450.00	<a href="#">Book Now</a>
1000	Indigo	Business	\$750.00	<a href="#">Book Now</a>
1000	Indigo	First/Premium Class	\$925.00	<a href="#">Book Now</a>

[Back to Search Results](#)

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# Book Now Button – Booking Details Page

## Customer User

1000	Indigo	First/Premium Class	\$925.00	<a href="#">Book Now</a>
------	--------	---------------------	----------	--------------------------

Fare Booking Details    [+/-](#)

localhost:8080/FlyAway/BookFlightControllerServlet?command=BOOK\_FARE&flightNumber=1000&airline=Indigo&day=Monday&date=2023-04-17&src=BOM&srcFullName=Mumbai+International+Airport&dest=DEL&destFullName>New+Delhi+International+Airport

[Home](#) [Book Flight](#) [Update Profile](#) [Booking History](#) [Logout](#)

### Booking Details

Flight Number	1000
Airline	Indigo
Travel Class	First/Premium Class
Source	BOM   Mumbai International Airport
Destination	DEL   New Delhi International Airport
Travel Day	Monday
Travel Date	2023-04-17
No. of Passengers	3
Total Amount to be Paid	\$2775.0
Passenger Details	
Customer Id:	14
Customer Name:	Merry Brummer
Email Address:	merry@home.com
Phone Number:	9874563214

[Go to Payment](#)

[Back to Fare Details](#)

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# Go To Payment Button – Payment Form Page

## Customer User

Fare Booking Details

FlyAway

Booking Details

Flight Number	1000
Airline	Indigo
Travel Class	First/Premium Class
Source	BOM   Mumbai International Airport
Destination	DEL   New Delhi International Airport
Travel Day	Monday
Travel Date	2023-04-17
No. of Passengers	3
Total Amount to be Paid	\$2775.0
Passenger Details	
Customer Id:	14
Customer Name:	Merry Brummer
Email Address:	merry@home.com
Phone Number:	9874563214

[Go to Payment](#)

FlyAway

Payment

Home Book Flight Update Profile Booking History Logout

Payment Form

CardHolder Name: Merry Brummer

Card Number:

Total Amount to be Paid: \$2775.00

[Confirm Payment](#)



# Confirm Payment Button – Payment Confirmation Page

## Customer User

### Payment Form

CardHolder Name

Merry Brummer

Card Number

12323

Total Amount to be Paid

\$2775.00

Confirm Payment

[Back to Booking Details](#)

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Payment Confirmation

Booking Id	45
Customer	Merry Brummer
Flight Number	1000
Source	BOM   Mumbai International Airport
Destination	DEL   New Delhi International Airport
Travel Day	Monday
Travel Date	2023-04-17
No. of Passengers	3
Total Amount to be Paid	\$2775.00

[Back to Payment Form](#)  
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# Database Update

Ticket is Successfully Booked

```
mysql> select * from ticketdetails;
```

bookingid	userid	bookingstatusid	directionid	flightnumber	travelclassid	travelDate	totalPassengers	totalfare	purchaseDate
27	14	3	2	1001	2	2023-02-24	4	3380.00	2023-02-10 11:51:44
28	14	3	1	1006	3	2023-06-27	1	285.00	2023-02-10 11:51:44
29	14	3	2	1001	2	2023-02-22	3	2535.00	2023-02-10 11:51:44
30	14	3	2	1004	3	2023-05-12	3	2058.00	2023-02-10 11:51:44
31	14	3	2	1001	2	2023-03-02	3	2535.00	2023-02-10 11:51:44
32	14	3	2	1001	3	2023-04-13	4	5408.00	2023-02-10 11:51:44
33	14	3	2	1001	3	2023-04-13	4	5408.00	2023-02-10 11:51:44
34	14	3	2	1001	3	2023-04-13	4	5408.00	2023-02-10 11:51:44
35	14	3	2	1001	3	2023-04-13	4	5408.00	2023-02-10 11:51:44
36	14	3	2	1004	3	2023-02-14	4	2744.00	2023-02-10 11:51:44
37	14	2	2	1002	1	2023-04-06	3	900.00	2023-02-10 11:51:44
38	14	3	2	1002	1	2023-04-06	3	900.00	2023-02-10 11:51:44
39	14	3	2	1004	3	2023-03-01	4	2744.00	2023-02-10 11:51:44
40	33	3	2	1001	3	2023-03-06	2	2704.00	2023-02-10 12:01:32
41	5	3	2	1001	2	2023-03-28	2	1690.00	2023-02-10 15:45:51
42	5	3	1	1005	1	2023-03-01	1	250.00	2023-02-10 16:07:27
43	5	3	1	1011	3	2023-05-26	2	1000.00	2023-02-10 16:09:06
44	5	3	2	1009	3	2023-03-11	4	992.00	2023-02-10 16:14:59
45	14	3	2	1000	3	2023-04-17	3	2775.00	2023-02-10 18:10:14

19 rows in set (0.00 sec)

Booking Id	45
Customer	Merry Brummer
Flight Number	1000
Source	BOM   Mumbai International Airport
Destination	DEL   New Delhi International Airport
Travel Day	Monday
Travel Date	2023-04-17
No. of Passengers	3
Total Amount to be Paid	\$2775.00



# Booking History

# Customer User

Merry Brummer's Booking History											
Booking Id	Booking Status	Purchase Date	Flight Number	Airline	Travel Class	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Passengers	Total Fare
37	confirmed	2023-02-10 11:51:44	I002	SpiceJet	Economy	Thursday	2023-04-06	BOM   Mumbai International Airport	DEL   New Delhi International Airport	3	\$900.00
45	purchased	2023-02-10 18:10:14	I000	Indigo	First/Premium Class	Monday	2023-04-17	BOM   Mumbai International Airport	DEL   New Delhi International Airport	3	\$2775.00
39	purchased	2023-02-10 11:51:44	I004	Indigo	First/Premium Class	Wednesday	2023-03-01	DEL   New Delhi International Airport	BOM   Mumbai International Airport	4	\$2744.00
36	purchased	2023-02-10 11:51:44	I004	Indigo	First/Premium Class	Tuesday	2023-02-14	DEL   New Delhi International Airport	BOM   Mumbai International Airport	4	\$2744.00
35	purchased	2023-02-10 11:51:44	I001	Air India	First/Premium Class	Thursday	2023-04-13	BOM   Mumbai International Airport	DEL   New Delhi International Airport	4	\$5408.00
34	purchased	2023-02-10 11:51:44	I001	Air India	First/Premium Class	Thursday	2023-04-13	BOM   Mumbai International Airport	DEL   New Delhi International Airport	4	\$5408.00
33	purchased	2023-02-10 11:51:44	I001	Air India	First/Premium Class	Thursday	2023-04-13	BOM   Mumbai International Airport	DEL   New Delhi International Airport	4	\$5408.00
32	purchased	2023-02-10 11:51:44	I001	Air India	First/Premium Class	Thursday	2023-04-13	BOM   Mumbai International Airport	DEL   New Delhi International Airport	4	\$5408.00
30	purchased	2023-02-10 11:51:44	I004	Indigo	First/Premium Class	Friday	2023-05-12	DEL   New Delhi International Airport	BOM   Mumbai International Airport	3	\$2058.00
28	purchased	2023-02-10 11:51:44	I006	American	First/Premium Class	Tuesday	2023-06-27	JFK   John F. Kennedy International Airport	HND   Tokyo International Airport	1	\$285.00
31	purchased	2023-02-10 11:51:44	I001	Air India	Business	Thursday	2023-03-02	BOM   Mumbai International Airport	DEL   New Delhi International Airport	3	\$2535.00
29	purchased	2023-02-10 11:51:44	I001	Air India	Business	Wednesday	2023-02-22	BOM   Mumbai International Airport	DEL   New Delhi International Airport	3	\$2535.00
27	purchased	2023-02-10 11:51:44	I001	Air India	Business	Friday	2023-02-24	BOM   Mumbai International Airport	DEL   New Delhi International Airport	4	\$3380.00
38	purchased	2023-02-10 11:51:44	I002	SpiceJet	Economy	Thursday	2023-04-06	BOM   Mumbai International Airport	DEL   New Delhi International Airport	3	\$900.00

# Update Profile

## Customer User

Update User Form    +    localhost:8080/FlyAway/UserControllerServlet?command=LOAD&userId=14    Home    Book Flight    **Update Profile** (circled in red)    Booking History    Logout

### Update User

First Name:	Merry
Last Name:	Brummer
Username:	merry
Email:	merry@home.com
Password:	.....
Phone Number:	9874563214

Data was pre-loaded from the database (users table)

Save

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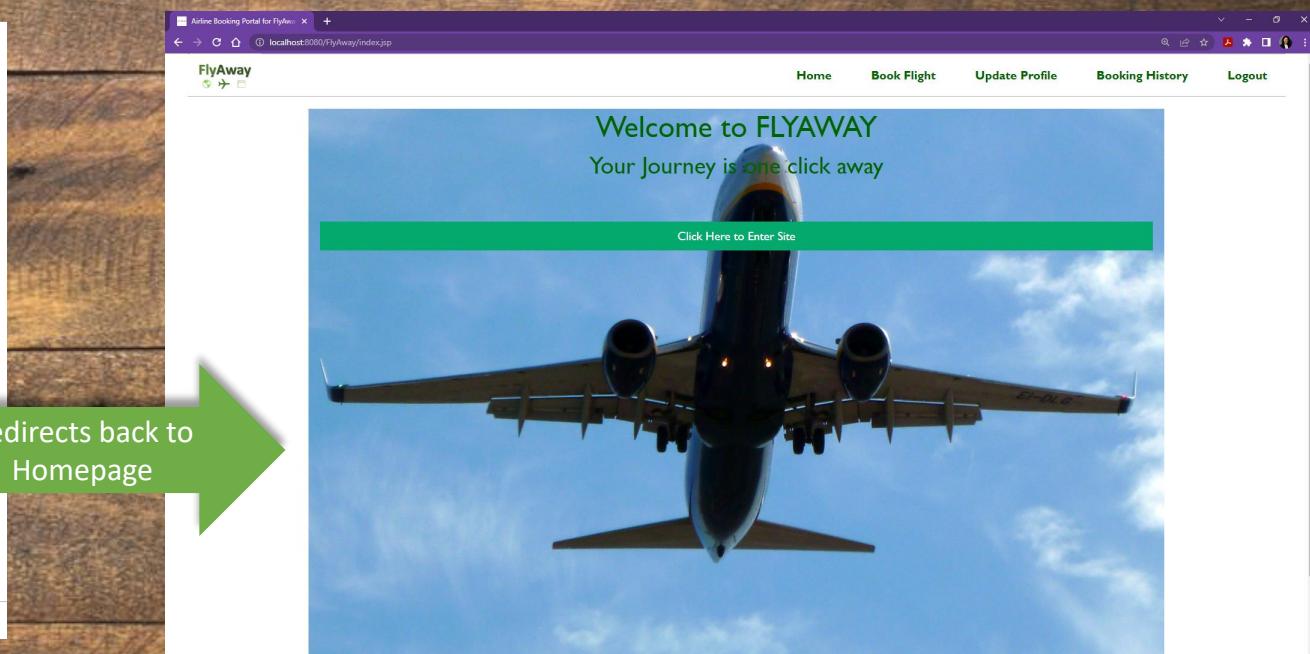
# Database Update

# Customer User

MySQL Database - BEFORE UPDATE

## Update User

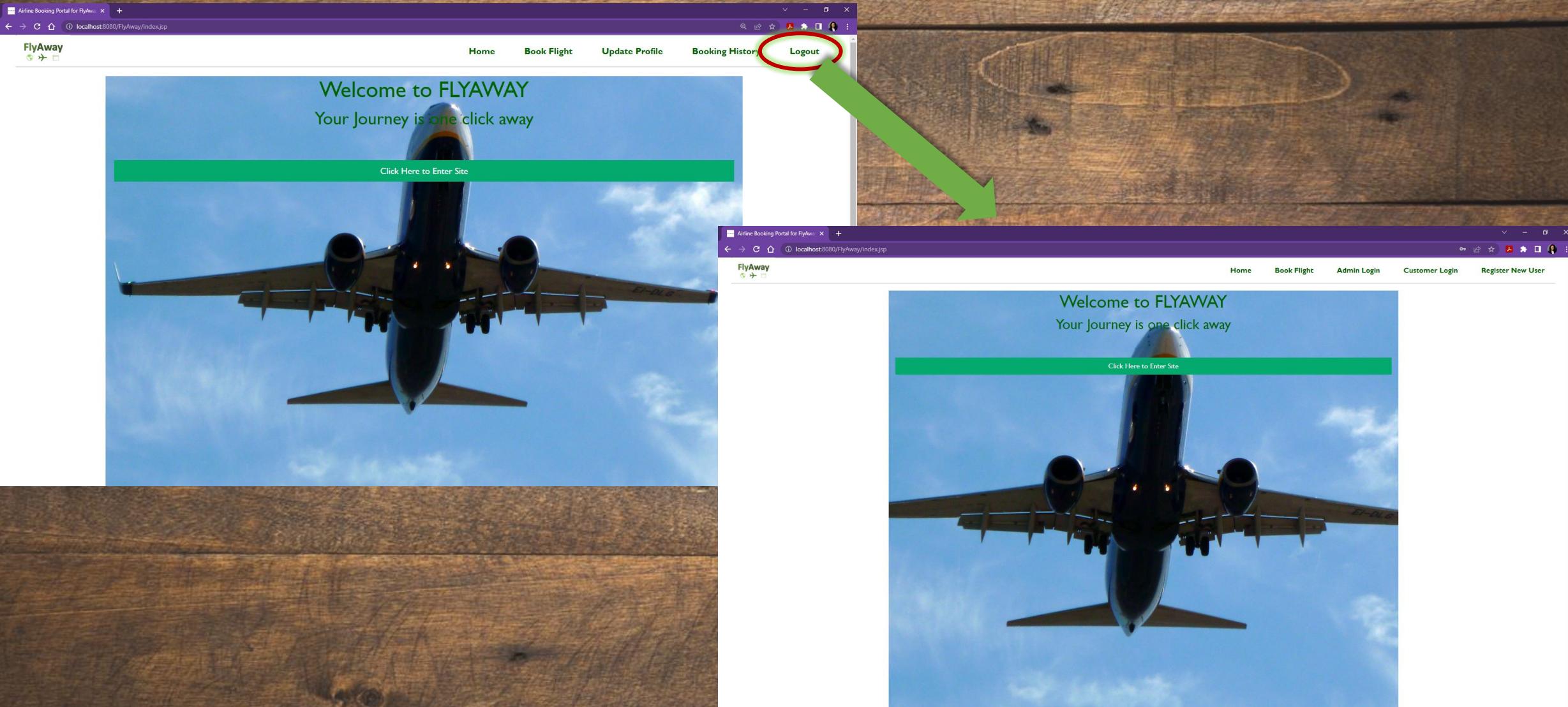
First Name:	Merry
Last Name:	Brummer
Username:	merry.brummer
Email:	merry@home.com
Password:	*****
Phone Number:	9874560000
<input type="button" value="Save"/>	Re



MySQL Database - AFTER UPDATE

# Logout

## Customer User



# Book Fare

## No Logged-In User

Search Results

Departing Flights:

DEL to BOM  
DEL | New Delhi International Airport to BOM | Mumbai International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1003	Air India	Thursday	2023-03-02	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<a href="#">Book Tickets</a>
1004	Indigo	Thursday	2023-03-02	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<a href="#">Book Tickets</a>

Returning Flights:

BOM to DEL  
BOM | Mumbai International Airport to DEL | New Delhi International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1000	Indigo	Friday	2023-04-14	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<a href="#">Book Tickets</a>
1001	Air India	Friday	2023-04-14	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<a href="#">Book Tickets</a>

[Back to Search Page](#)

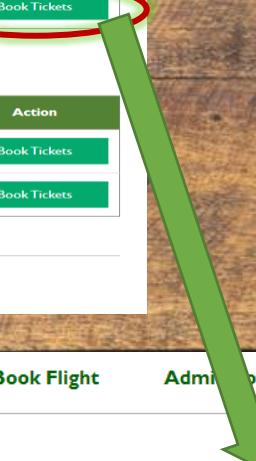
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Fare Details

Flight Number	Airline	Travel Class	Fare	Action
1004	Indigo	Economy	\$350.00	<a href="#">Please Login to Book Ticket</a>
1004	Indigo	Business	\$490.00	<a href="#">Please Login to Book Ticket</a>
1004	Indigo	First/Premium Class	\$686.00	<a href="#">Please Login to Book Ticket</a>

[Back to Search Results](#)

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Admin Login Form

localhost:8080/FlyAway/admin-login-form.jsp

FlyAway

Home Book Flight Admin Login Customer Login Register New User

User Name  
nia

Password  
\*\*\*\*\*

Email  
nia@home.com

Login

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# Login Page

## Admin User

MySQL Database

```
mysql> select * from users where roleid=1;
```

userid	roleid	firstname	lastname	username	email	password	phoneNumber	date_added
6	1	nia	jester	nia	nia@mail.com	admin123	4328907623	2023-01-25 13:07:30
12	1	Ruth	Hall	ruth	ruthie@home.com	admin123	6321479852	2023-01-25 13:21:13
19	1	Tamara	Powell	tammy	tpowell@home.com	admin123	7894651296	2023-01-25 17:58:09
24	1	Elijah	Kelley	buddy	buddy@home.com	admin123	4432223333	2023-01-25 18:35:27
30	1	Bradley	Knight	brad	brad@home.com	admin123	1234567890	2023-01-30 23:16:37

5 rows in set (0.00 sec)



# Logged-In User

## Admin User

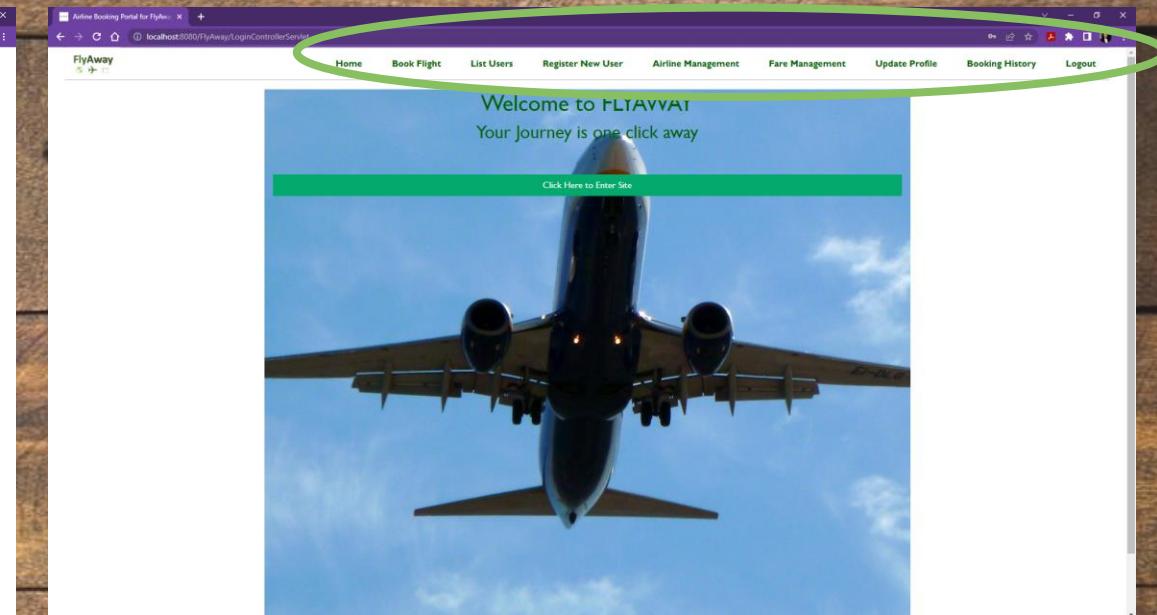
Admin Login

User Name  
nia

Password  
.....

Email  
nia@home.com

Login



Navigation Bar (no User logged in)

Home Book Flight Admin Login Customer Login Register New User

Navigation Bar for Admin User

Home Book Flight List Users Register New User Airline Management Fare Management Update Profile Booking History Logout



# Conclusion

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FlyAway Application



# Lessons Learned

## Proudest Moment

- Realized that I was getting more comfortable with JDBC steps
- Designing a highly normalized database (there are some limitations to my current design, which I took note of for next release)

## Most Challenging Moment

- I've learned so much content throughout this course. There is always room for improvement. There will be trade-offs on any project. I am recognizing when to re-write code, re-design solution, or release the code in a functional state and strategize later.
- Finding time to write my formal Junit test cases. I always seem to run out of time for this step!

## Would I Do This Again?

- Resounding yes!



# Learning Never Stops...

## Items to focus on the Next Release

### 1. There is an enhancement needed in the Booking Ticket logic.

- The current payment process will only allow one ticket purchase, essence all of bookings are one-way. There is no way to associate a partial ticket to the roundtrip airfare.

#### Search Results

##### Departing Flights:

DEL to BOM

DEL | New Delhi International Airport to BOM | Mumbai International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1003	Air India	Thursday	2023-03-02	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<button>Book Tickets</button>
1004	Indigo	Thursday	2023-03-02	DEL   New Delhi International Airport	BOM   Mumbai International Airport	<button>Book Tickets</button>

##### Returning Flights:

BOM to DEL

BOM | Mumbai International Airport to DEL | New Delhi International Airport

Flight Number	Airline	Departure Travel Day	Departure Travel Date	Source Airport	Destination Airport	Action
1000	Indigo	Friday	2023-04-14	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<button>Book Tickets</button>
1001	Air India	Friday	2023-04-14	BOM   Mumbai International Airport	DEL   New Delhi International Airport	<button>Book Tickets</button>

[Back to Search Page](#)



# Learning Never Stops...

## Items to focus on the Next Release

### 2. Enhance table design for a booking

- Originally, I wanted to have a booking object that contains multiple tickets. A roundtrip booking would have 2 tickets; a one-way fare would have one ticket. I ran out of time to implement this design.

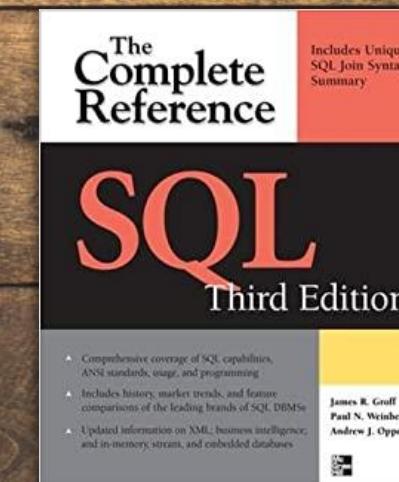
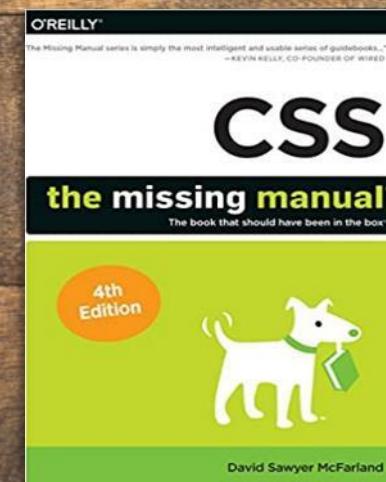
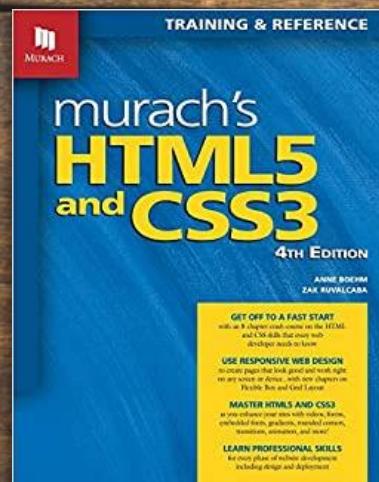
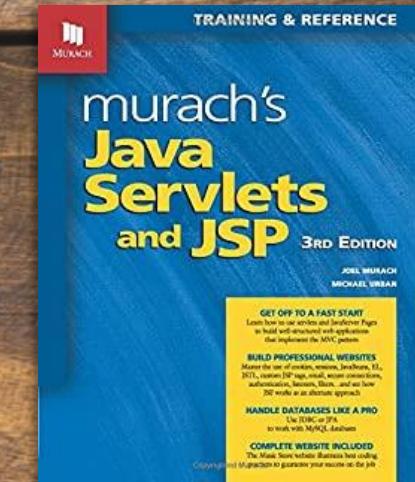
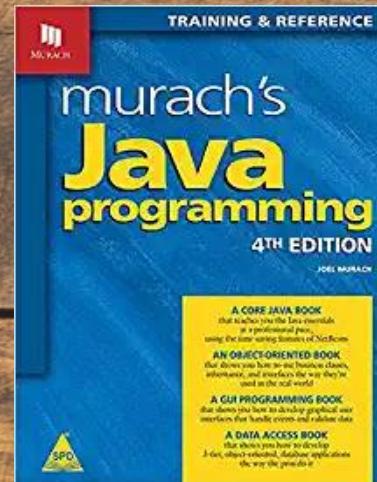
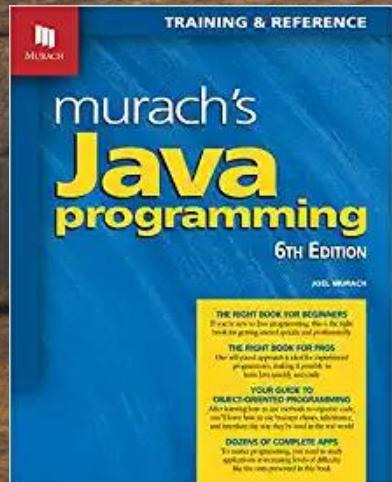
### 3. Implement a robust Junit test suite



# REFERENCES



# Technical Books



# Appendix A

Requirements Specification Document provided by our instructor

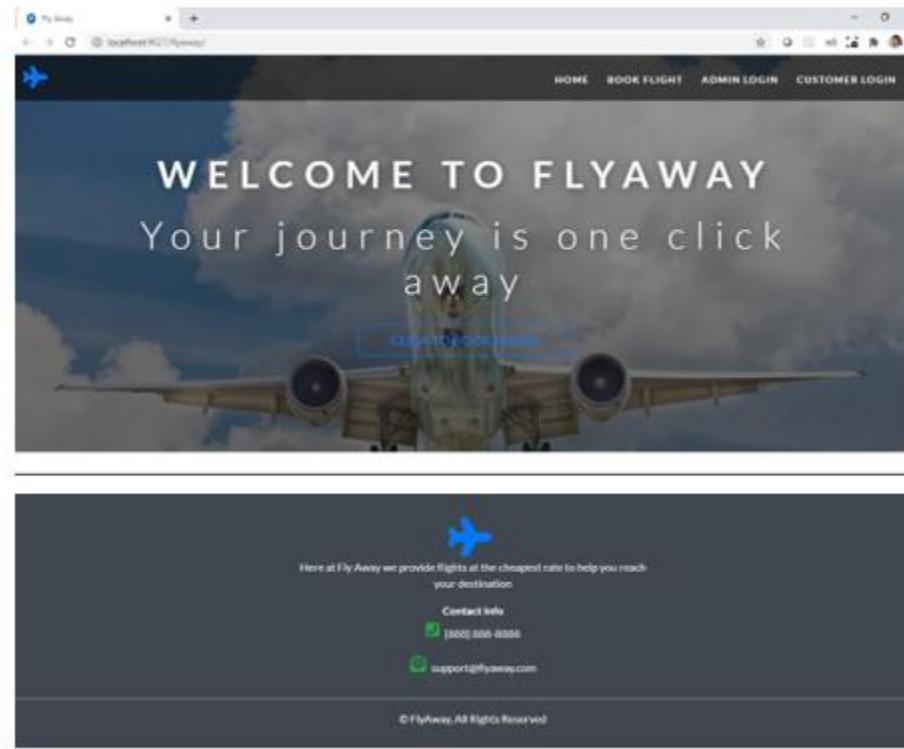


# Requirements Specification:

## Customer Related Scenarios

### 1. Customer Related Scenarios:

**1.1. Home Page of FlyAway Website: Include options for Booking Flight, Admin Login, Customer Login.**



# Requirements Specification: Customer Related Scenarios

1.2. When a new customer wants to Book a Flight (Navbar does not change). He is provided with a form to enter journey details.

A screenshot of a web browser showing a 'Journey Details' form. The form has fields for 'From' (dropdown), 'To' (dropdown), 'Travel Date' (date input set to 18-04-2021), 'No-Of Travellers' (text input placeholder 'Enter No of Travellers'), and a large green 'Search Flights' button.

1.3. Customer enter journey details here From: Mumbai, To: Delhi, Travel Date: 18-04-2021  
No of passengers: 3.

A screenshot of a web browser showing the same 'Journey Details' form but with populated fields. The 'From' field is set to 'MUMBAI(BOM) IN', the 'To' field is set to 'NEW DELHI(DEL) IN', the 'Travel Date' is '18-04-2021', and the 'No-Of Travellers' is '3'. A green 'Search Flights' button is visible at the bottom.



# Requirements Specification: Customer Related Scenarios

1.4. If flights are available from the provided source to Destination, User will be directed to Flight details page where they will see all the flights available for the given date/day.

Fly Away

HOME ADMIN LOGIN CUSTOMER LOGIN

Flight Number	Airline	Travel Date	Source	Destination	
1000	Indigo	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>
1001	Air India	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>
1002	SpiceJet	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>

Here at Fly Away we provide flights at the cheapest rate to help you reach your destination

We can see for Sunday 3 flights are present from Mumbai(BOM) to Delhi(DEL).

flight_number	airline	weekdays	src_airport_code	dest_airport_code
1000	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1001	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1002	SpiceJet	Sun_Tue_Thu_Sat	BOM	DEL
1003	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1004	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1005	SpiceJet	Sun_Tue_Thu_Sat	DEL	BOM
1007	Indigo	Sun_Tue_Thu_Sat	BLR	MAA
1008	Go Air	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MAA	BLR
1009	Indigo	Sun_Tue_Thu_Sat	MAA	BLR
NULL	NULL	NULL	NULL	NULL



# Requirements Specification: Customer Related Scenarios

1.5. Suppose User entered date as 21-04-2021 which is Wednesday then he will be shown only flights which are available for Wednesday.

The screenshot shows a web browser window for 'Fly Away' with the URL 'localhost:5127/flyaway/bookflight.jsp'. The page title is 'Journey Details'. It contains fields for 'From' (Mumbai [BOM] IN), 'To' (New Delhi [DEL] IN), 'Travel Date' (21-04-2021), and 'No Of Travellers' (3). A green 'Search Flights' button is at the bottom.

We can see here only two flights are present for Wednesday.

The screenshot shows a table of flight results for a search from Mumbai to New Delhi on April 21, 2021. The table has columns: Flight Number, Airline, Travel Date, Source, Destination, and Book Tickets. Two flights are listed:

Flight Number	Airline	Travel Date	Source	Destination	Book Tickets
1000	Indigo	2021-04-21 (Wednesday)	MUMBAI [ BOM ] IN	NEW DELHI [ DEL ] IN	<button>Book Tickets</button>
1001	Air India	2021-04-21 (Wednesday)	MUMBAI [ BOM ] IN	NEW DELHI [ DEL ] IN	<button>Book Tickets</button>

We can also confirm the same in the database.

The screenshot shows a 'Result Grid' interface displaying flight data. The columns are: flight\_number, airline, weekdays, src\_airport\_code, and dest\_airport\_code. The data includes several flights for Wednesday, with rows 1000 and 1001 highlighted in yellow. Other rows show flights for various days of the week.

flight_number	airline	weekdays	src_airport_code	dest_airport_code
1000	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1001	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1002	SpiceJet	Sun_Tue_Thu_Sat	BOM	DEL
1003	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1004	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1005	SpiceJet	Sun_Tue_Thu_Sat	DEL	BOM
1007	Indigo	Sun_Tue_Thu_Sat	BLR	MAA
1008	Go Air	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MAA	BLR
1009	Indigo	Sun_Tue_Thu_Sat	MAA	BLR
1011	HUL	HUL	HUL	HUL



# Requirements Specification: Customer Related Scenarios

1.6. If User enters details in the form for which flight is not available in the database

Journey Details

From: HYDERABAD/HYD) IN To: LUCKNOW/LKO) IN

Travel Date: 18-04-2021

No. Of Travellers: 3

Search Flights

User gets a message as There are no Flights for those details.

Journey Details

From: Select To: Select

Travel Date: 18-04-2021

No. Of Travellers: Enter No. of Travellers

Search Flights



# Requirements Specification: Customer Related Scenarios

**1.7. If the user enters correct details in the Journey details form, All the flights available for that day is shown.**

The screenshot shows a web browser window titled 'Fly Away'. The URL is 'localhost:5627/flyaway/bookFlight'. The page has a header with 'HOME', 'ADMIN LOGIN', and 'CUSTOMER LOGIN'. Below the header is a 'Journey Details' form. The 'From' field contains 'MUMBAI (BOM) IN'. The 'To' field contains 'NEW DELHI (DEL) IN'. The 'Travel Date' field contains '18-04-2021'. The 'No Of Travellers' field contains '3'. A green 'Search Flights' button is at the bottom of the form.

**1.8. User will be shown all the Flights available from Mumbai to Delhi on Sunday. User can select any airline from the list and compare their fares by clicking on (Book Tickets).**

The screenshot shows a web browser window titled 'Fly Away' with the URL 'localhost:5627/flyaway/bookFlight'. The page has a header with 'HOME', 'ADMIN LOGIN', and 'CUSTOMER LOGIN'. Below the header is a table displaying flight information. The table has columns: Flight Number, Airline, Travel Date, Source, Destination, and a 'Book Tickets' button. There are three rows of data:

Flight Number	Airline	Travel Date	Source	Destination	
1008	Indigo	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>
1001	Air India	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>
1002	SpiceJet	2021-04-18 (Sunday)	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	<a href="#">Book Tickets</a>

At the bottom of the page, there is a dark banner with the text 'Here at Fly Away we provide flights at the cheapest rate to help you reach your destination' and a blue airplane icon.



# Requirements Specification: Customer Related Scenarios

1.9. If user selects an airline from the list (here 1000). User will be directed to fare details page where all the different classes are shown with fares. (User can book tickets on any class of their choice).

The screenshot shows a table with flight information:

Flight Number	Airline	Travel Class	Fare	Action
1000	Indigo	Business	15000.0	<a href="#">Book Now</a>
1000	Indigo	Economy	3000.0	<a href="#">Book Now</a>
1000	Indigo	Premium	10000.0	<a href="#">Book Now</a>

At the bottom, there is a dark banner with a blue airplane icon and the text: "Here at Fly Away we provide flights at the cheapest rate to help you reach your destination".

1.10. If the user is a new customer, then after selecting a fare they will be redirected to Register page where they should enter their valid details. If the user is already existing customer then they can use Login in existing account option to directly login to their account.

The screenshot shows a registration form titled "Registration Form" with fields for First Name, Last Name, Email Address, Password, and Phone Number. There are two green buttons at the bottom: "Register" and "Login Into Existing Account".



# Requirements Specification: Customer Related Scenarios

**1.11.** After entering user details if the details are valid then they are redirected to Booking details page where they will see all their booking related details after confirming details, they can click on confirm Booking. (Notice navbar changed after login or register).

The screenshot shows a web browser window titled "fly Away". The URL is "localhost:9627/flyaway/register". The page has a header with "CUSTOMER DETAILS", "CHANGE PASSWORD", and "LOGOUT". Below the header is a section titled "BOOKING DETAILS" containing the following flight information:

Flight Number:	1000
Airline:	Indigo
Travel Class:	Economy
Source:	MUMBAI (BOM) INDIA
Destination:	NEW DELHI (DEL) INDIA
Travel Date:	2021-04-10   Sunday
No of Passengers:	3
Total Amount to be paid:	3000.0 × 3 = 9000.0
Passenger Details:	Customer Id: 3008 Customer Name: [REDACTED] Email Address: [REDACTED] Phone Number: [REDACTED]

At the bottom of the page is a large blue "Confirm Booking" button.

**1.12.** After Confirming booking details, user will be forwarded to payment form where they need to enter payment details like Card Name and Card Number. They can also recheck the amount to be paid, And confirm payment.

The screenshot shows a web browser window titled "fly Away" with the URL "localhost:9627/flyaway/confirmbooking". The page has a header with "CUSTOMER DETAILS", "CHANGE PASSWORD", and "LOGOUT". A central modal dialog box is open with the title "Payment Form". It contains three input fields: "Card Holder Name" (empty), "Card Number" (empty), and "Total Amount to be Paid" (set to "9000.0"). At the bottom of the modal is a blue "Confirm Payment" button.



# Requirements Specification: Customer Related Scenarios

- 1.13. After confirming payment user will be forwarded to Ticket details page where they can see all the details of their journey and payment. At this step the journey details are stored in the database. User can also print their tickets with print ticket button.

The screenshot shows the 'TICKET DETAILS' page of the Fly Away website. It displays the following flight information:

Booking ID	Flight Number	Airline	Travel Class	Source	Destination	Travel Date	No. of Passengers	Total Amount paid
1	I000	Indigo	Economy	MUMBAI (BOM) - INDIA	NEW DELHI (DEL) - INDIA	2021-04-18 (Sunday)	3	9000.0

Passenger Details section:

Customer ID	Customer Name	Email Address	Phone Number
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Payment Details section:

Card Number	Card Holder Name	Payment Date
[REDACTED]	[REDACTED]	[REDACTED]

A blue 'Print Ticket' button is located at the bottom of the form.

At the bottom of the page, there is a dark footer bar with a small airplane icon and the text: "Here at Fly Away we provide flights at the cheapest rate to help you reach your destination". Below that, it says "Contact Info" and provides a phone number: "(888) 888-8888".

We can also confirm in the database the booking details are stored here.

booking_id	flight_number	class	travel_date	no_of_passengers	total_fare	customer_id
1	I000	Economy	2021-04-18	3	9000.0	3008

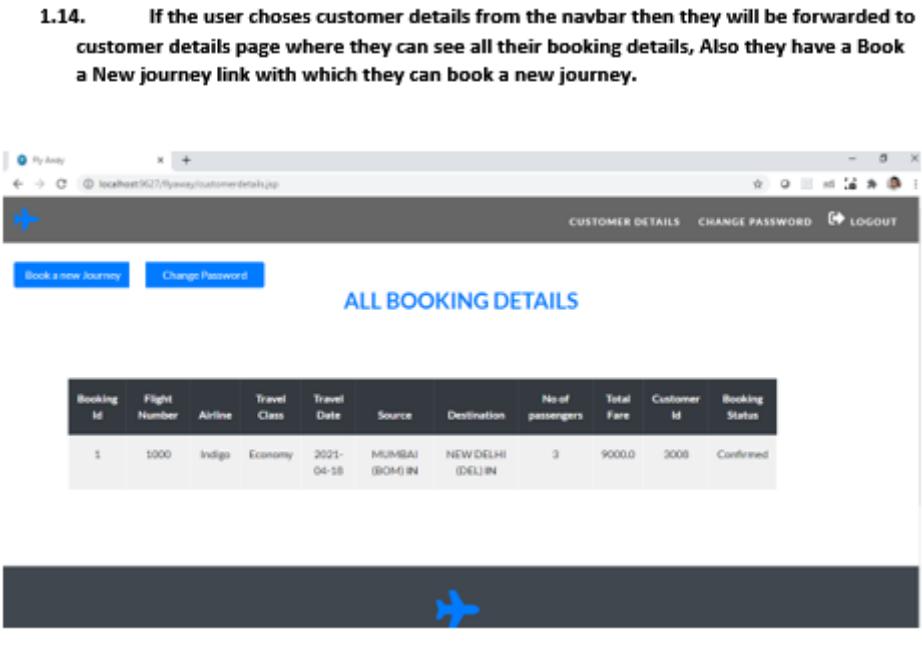
Booking details are stored for customer id.

customer_id	first_name	last_name	email	password	phone
3008	MAIL	MAIL	MAIL	MAIL	MAIL



# Requirements Specification: Customer Related Scenarios

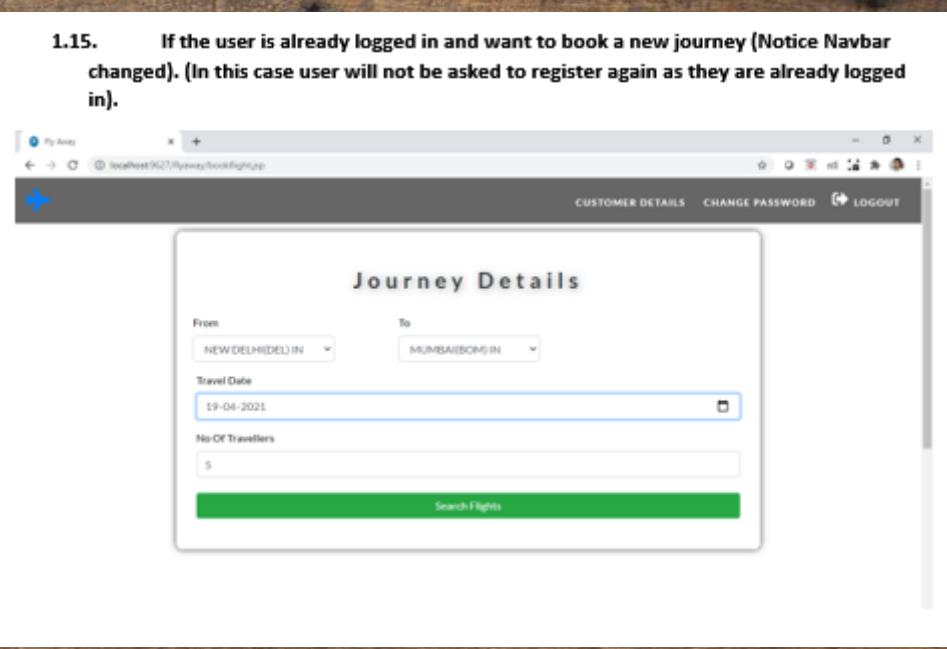
- 1.14. If the user chooses customer details from the navbar then they will be forwarded to customer details page where they can see all their booking details, Also they have a Book a New journey link with which they can book a new journey.



The screenshot shows a web browser window titled 'My Andy'. The URL is 'localhost:5627/MyAndy/customerdetails.jsp'. The page has a dark header with 'CUSTOMER DETAILS', 'CHANGE PASSWORD', and 'LOGOUT' links. Below the header is a button bar with 'Book a new Journey' and 'Change Password'. The main content area is titled 'ALL BOOKING DETAILS' and contains a table with the following data:

Booking Id	Flight Number	Airline	Travel Class	Travel Date	Source	Destination	No of passengers	Total Fare	Customer Id	Booking Status
1	1000	Indigo	Economy	2021-04-18	MUMBAI(BOM) IN	NEW DELHI(DEL) IN	3	9000.0	3008	Confirmed

- 1.15. If the user is already logged in and want to book a new journey (Notice Navbar changed). (In this case user will not be asked to register again as they are already logged in).



The screenshot shows a web browser window titled 'My Andy'. The URL is 'localhost:5627/MyAndy/bookFlight.jsp'. The page has a dark header with 'CUSTOMER DETAILS', 'CHANGE PASSWORD', and 'LOGOUT' links. Below the header is a 'Journey Details' form with the following fields:

- From: NEW DELHI(DEL) IN
- To: MUMBAI(BOM) IN
- Travel Date: 19-04-2021
- No Of Travellers: 5
- Search Flights button



# Requirements Specification: Customer Related Scenarios

**1.16.** If valid details are entered. User will be shown all the Flights available from Mumbai to Delhi on Sunday. User can select any airline from the list and compare their fares by clicking on (Book Tickets).

The screenshot shows a web application interface titled "My App". At the top, there are links for "CUSTOMER DETAILS", "CHANGE PASSWORD", and "LOGOUT". Below this is a table with columns: Flight Number, Airline, Travel Date, Source, Destination, and a "Book Tickets" button. Two flights are listed:

Flight Number	Airline	Travel Date	Source	Destination	
1003	Air India	2023-04-19 (Monday)	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	<button>Book Tickets</button>
1004	Indigo	2023-04-19 (Monday)	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	<button>Book Tickets</button>

At the bottom of the page, there is a dark banner with a blue airplane icon and the text: "Here at Fly Away we provide flights at the cheapest rate to help you reach your destination".

We confirm from the database only 2 flights are available for Monday from Delhi to Mumbai.

The screenshot shows a "Result Grid" window with a table of flight records. The columns are: flight\_number, airline, weekdays, src\_airport\_code, and dest\_airport\_code. The data includes several flights from Delhi (DEL) to Mumbai (BOM), with flight numbers 1003 and 1004 highlighted in yellow.

flight_number	airline	weekdays	src_airport_code	dest_airport_code
1000	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1001	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1002	SpiceJet	Sun_Tue_Thu_Sat	BOM	DEL
1003	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1004	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1005	SpiceJet	Sun_Tue_Thu_Sat	DEL	BOM
1007	Indigo	Sun_Tue_Thu_Sat	BLR	MAA
1008	Go Air	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MAA	BLR
1009	Indigo	Sun_Tue_Thu_Sat	MAA	BLR
*	NULL	NULL	NULL	NULL

**1.17.** If user selects an airline from the list (here 1004). User will be directed to fare details page where all the different classes are shown with fares. (User can book tickets on any class of their choice).

The screenshot shows a "Result Grid" window with a table of fare details for flight 1004. The columns are: flight\_number, airline, travel\_class, and fare. The data shows three fare classes for Indigo:

flight_number	airline	travel_class	fare
1004	Indigo	Business	15500.0
1004	Indigo	Economy	4500.0
1004	Indigo	Premium	11050.0

We can confirm from the database the list of fares for flight 1004.

The screenshot shows a "Result Grid" window with a table of fare records for flight 1004. The columns are: flight\_number, class, and fare. The data shows multiple entries for flight 1004 across different classes and airlines:

flight_number	class	fare
1003	Economy	4500.00
1003	Premium	11050.00
1004	Business	15500.00
1004	Economy	4500.00
1004	Premium	11050.00
1007	Economy	4500.00
1007	Premium	11050.00
1008	Premium	14400.00



# Requirements Specification:

## Customer Related Scenarios

1.18. If the user is already logged in then they are forwarded directly to Booking details page where they will see all their booking related details after confirming details, they can click on confirm Booking.

The screenshot shows a web browser window with the title 'Pyண' and the URL 'localhost:8077/Py�/Py�.html'. The main content area is titled 'BOOKING DETAILS' and displays the following flight information:

Flight Number:	1004
Airline:	Indigo
Travel Class:	Premium
Source:	NEW DELHI (DEL) INDIA
Destination:	MUMBAI (BOM) INDIA
Travel Date:	2021-04-19 (Monday)
No of Passengers:	3
Total Amount to be paid:	10000.0 x 3 = 30000.0

Below the flight details, there is a section for 'Passenger Details' with fields for Customer ID, Customer Name, Email Address, and Phone Number, each represented by a redacted input field.

At the bottom of the page is a large blue button labeled 'Confirm Booking'.



# Requirements Specification:

## Customer Related Scenarios

**1.19.** After Confirming booking details, user will be forwarded to payment form where they need to enter payment details like Card Name and Card Number. They can also recheck the amount to be paid, And confirm payment.

The screenshot shows a web application window titled "My Away" with a URL of "localhost:9227/myaway/confirmbooking". The main header includes "CUSTOMER DETAILS", "CHANGE PASSWORD", and "LOGOUT". Below this, a modal window titled "Payment Form" is displayed. It contains three input fields: "Card Holder Name" (empty), "Card Number" (empty), and "Total Amount to be Paid" (containing "9000.0"). At the bottom of the modal is a blue "Confirm Payment" button.

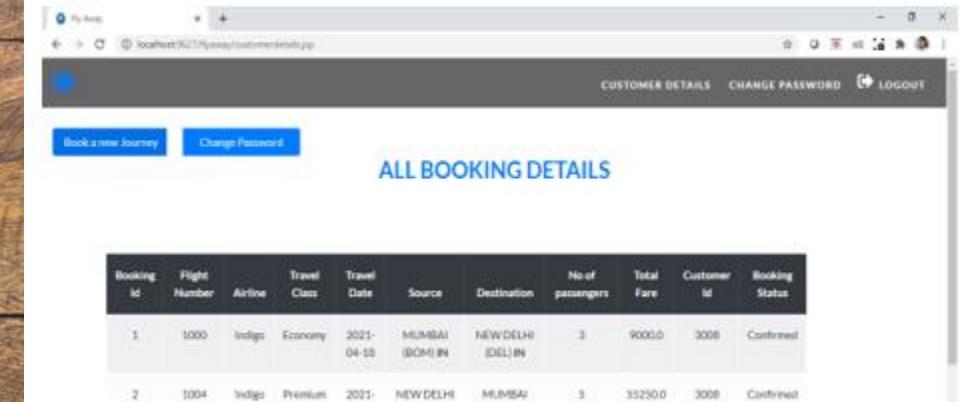


# Requirements Specification: Customer Related Scenarios

1.20. After confirming payment user will be forwarded to Ticket details page where they can print their ticket.

We can also confirm from the database new booking details are present for the same user Id.

1.21. If the user chooses customer details from the navbar then they will be forwarded to customer details page where they can see all their booking details. Also they have a Book a New journey link with which they can book a new journey.



The screenshot shows a web browser window with the URL `localhost:6277/Project/customer/join.jsp`. The page has a dark header with 'CUSTOMER DETAILS', 'CHANGE PASSWORD', and 'LOGOUT' buttons. Below the header, there are two blue buttons: 'Book a new Journey' and 'Change Password'. The main content area is titled 'ALL BOOKING DETAILS' and contains a table with the following data:

Booking Id	Flight Number	Airline	Travel Class	Travel Date	Source	Destination	No of passengers	Total Fare	Customer Id	Booking Status
1	1000	Indigo	Economy	2021-04-18	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	3	9000.0	3006	Confirmed
2	1004	Indigo	Premium	2021-04-19	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	3	35250.0	3008	Confirmed



# Requirements Specification: Customer Related Scenarios

1.22. User also has the option to change password if they wishes to.

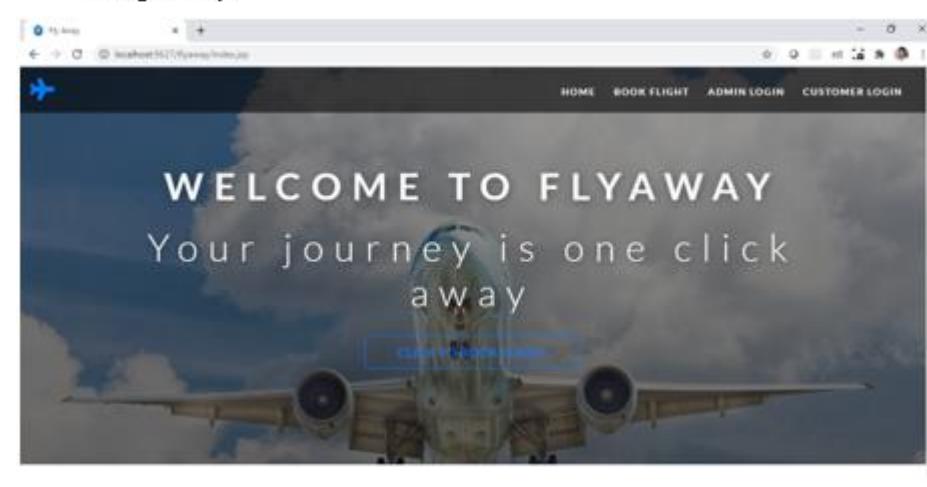
We can see in the database the old password.

A screenshot of a web browser window titled "Fly Away". The URL is "localhost:9021/flyaway/updatepassword". The page displays a green success message: "Password Successfully Updated" with a checkmark icon. Below this, there are two buttons: "Book a New Journey" and "Change Password". A large blue button labeled "ALL BOOKING DETAILS" is centered. Below the button is a table showing booking information:

Booking Id	Flight Number	Airline	Travel Class	Travel Date	Source	Destination	No of passengers	Total Fare	Customer Id	Booking Status
1	1000	Indigo	Economy	2021-04-18	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	3	9000.0	3008	Confirmed
2	1004	Indigo	Premium	2021-04-19	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	5	55250.0	3008	Confirmed

After password changed successfully the same is reflected in the database.

1.23. If the user selects Logout option they are redirected to Home page. (Notice navbar changed now).



# Requirements Specification: Customer Related Scenarios

**1.24.** If the user selects Customer Login from the navbar then they will be forwarded to Login form where the customer will enter their email address and password.

The screenshot shows a web browser window titled "Fly Away" with the URL "localhost:9627/Flyaway/login". The page has a header with links for "HOME", "ADMIN LOGIN", and "CUSTOMER LOGIN". Below the header is a "Login Form" containing two input fields: "Email Address" and "Password", each with a placeholder text "Enter Email Address" and "Enter Password" respectively. A blue "Login" button is at the bottom of the form.

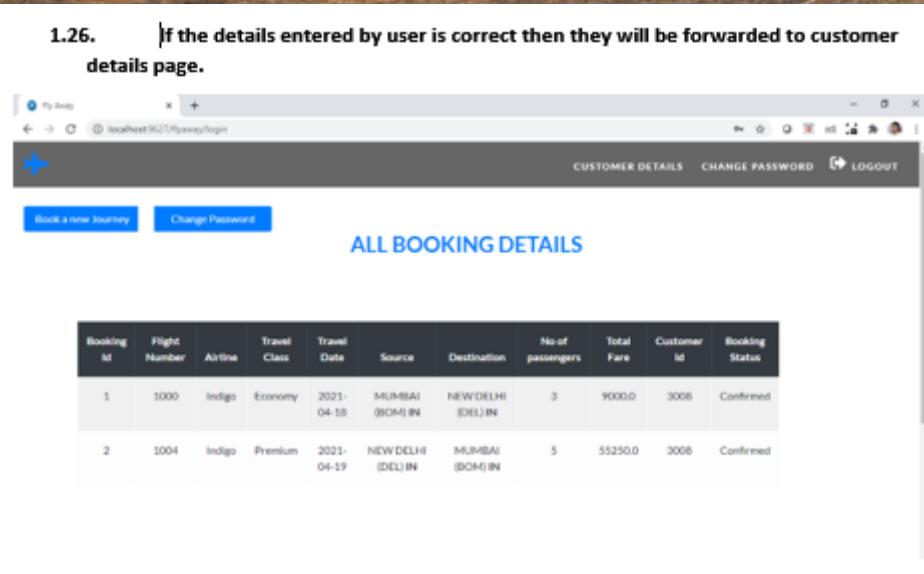
**1.25.** If the entered details are incorrect. Incorrect Username or Password error is displayed.

The screenshot shows a web browser window titled "Fly Away" with the URL "localhost:9627/Flyaway/login". The page has a header with links for "HOME", "ADMIN LOGIN", and "CUSTOMER LOGIN". Below the header is a "Login Form" containing two input fields: "Email Address" and "Password", each with a placeholder text "Enter Email Address" and "Enter Password" respectively. A red error message "Incorrect email or Password" is displayed below the password field. A blue "Login" button is at the bottom of the form.



# Requirements Specification: Customer Related Scenarios

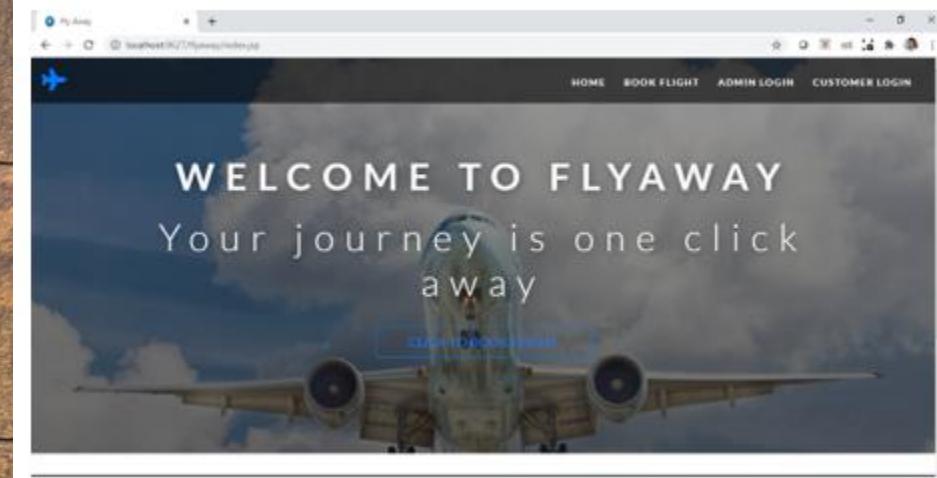
1.26. If the details entered by user is correct then they will be forwarded to customer details page.



The screenshot shows a web browser window for 'Fly Away' with the URL 'localhost:9277/flyawaylogin'. The page title is 'All Booking Details'. It features a navigation bar with 'CUSTOMER DETAILS', 'CHANGE PASSWORD', and 'LOGOUT'. Below the navigation bar is a button for 'Book a new Journey' and another for 'Change Password'. The main content area is titled 'ALL BOOKING DETAILS' and contains a table with the following data:

Booking Id	Flight Number	Airline	Travel Class	Travel Date	Source	Destination	No of passengers	Total Fare	Customer Id	Booking Status
1	1000	Indigo	Economy	2021-04-18	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	3	9000.0	3008	Confirmed
2	1004	Indigo	Premium	2021-04-19	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	5	55250.0	3008	Confirmed

If the user selects Logout option they are redirected to [Home](#) page. (Notice navbar changed now).



The screenshot shows a web browser window for 'Fly Away' with the URL 'localhost:9277/flyaway/index.jsp'. The page title is 'HOME'. The navigation bar at the top includes 'HOME', 'BOOK FLIGHT', 'ADMIN LOGIN', and 'CUSTOMER LOGIN'. The main content area has a dark background with a large airplane in flight. The text 'WELCOME TO FLYAWAY' is prominently displayed, followed by 'Your journey is one click away'. A blue button labeled 'Get Started' is visible. The overall theme is travel and flight booking.



# Requirements Specification:

## Admin Related Scenarios

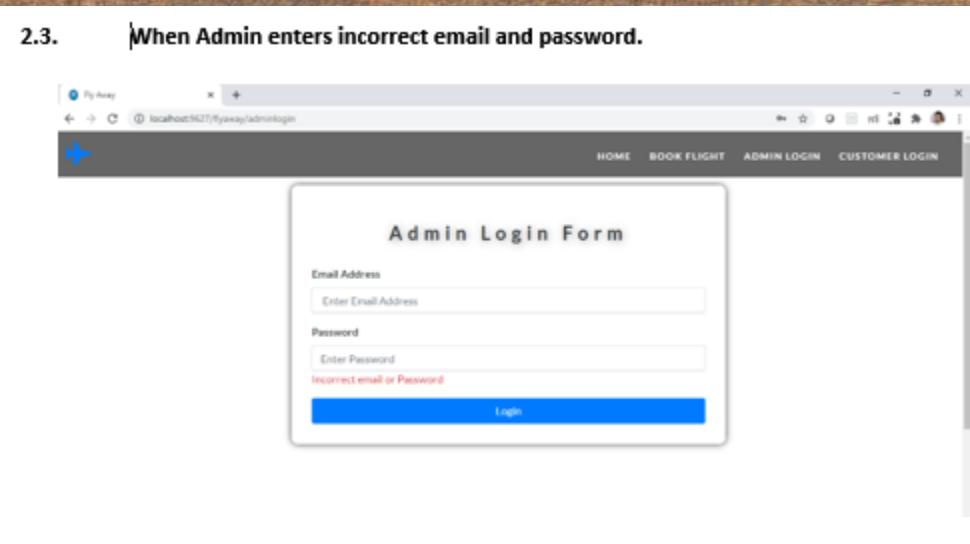
2.1. Home Page Admin can go in Admin Details by choosing Admin Login in navbar.



2.2. Admin can login by providing email and password

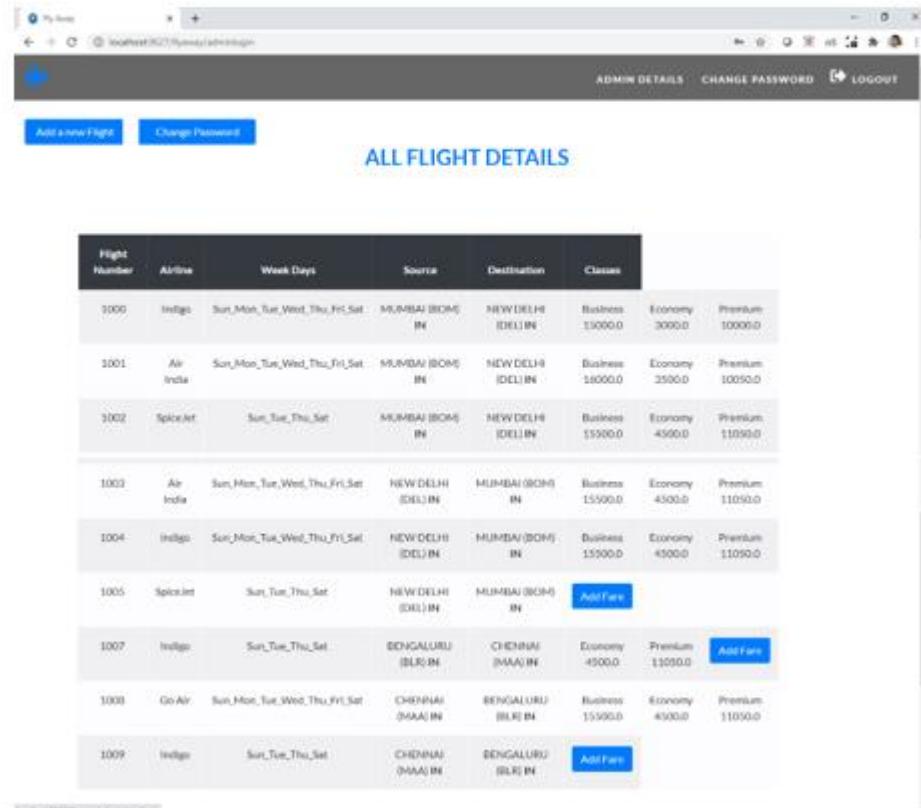
A screenshot of a web browser displaying the Admin login form. The title bar shows 'Fly Away' and the URL 'localhost:1021/Flyaway/login'. The main content is a 'Login Form' with two input fields: 'Email Address' and 'Password', both containing placeholder text 'Enter Email Address' and 'Enter Password' respectively. Below the fields is a blue 'Login' button.

# Requirements Specification: Admin Related Scenarios



# Requirements Specification: Admin Related Scenarios

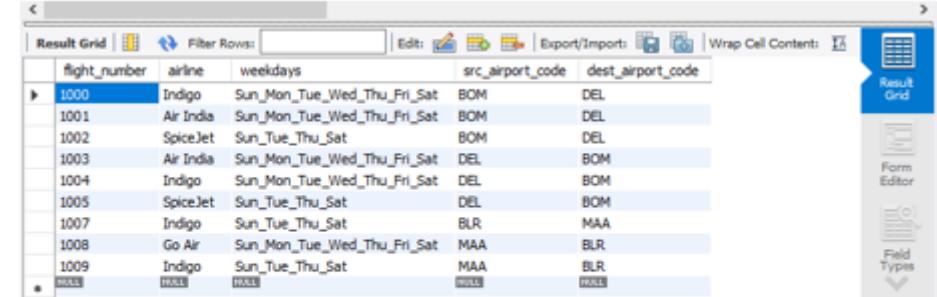
2.4. When Admin enters correct details then they are forwarded to Admin details page where they can see All the flight details and options to add flight and change password.



The screenshot shows a web browser window titled "My Home". The URL is "localhost:8021/flynow/admin/login". The page has a header with "ADMIN DETAILS", "CHANGE PASSWORD", and "LOGOUT" buttons. Below the header, there are two buttons: "Add New Flight" and "Change Password". The main content area is titled "ALL FLIGHT DETAILS" and contains a table with the following data:

Flight Number	Airline	Week Days	Source	Destination	Classes	Fare
1000	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business	30000.0 Premium
1001	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business	35000.0 Premium
1002	SpiceJet	Sun_Tue_Thu_Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business	45000.0 Premium
1003	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	Business	45000.0 Premium
1004	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	Business	45000.0 Premium
1005	SpiceJet	Sun_Tue_Thu_Sat	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	Add Fare	
1007	Indigo	Sun_Tue_Thu_Sat	BENGALURU (BLR) IN	CHENNAI (MAA) IN	Economy	45000.0 Premium
1008	Go Air	Sun_Mon_Tue_Wed_Thu_Fri_Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	Business	45000.0 Premium
1009	Indigo	Sun_Tue_Thu_Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	Add Fare	

We can check all the Flights in the database



The screenshot shows a "Result Grid" interface with the following data:

flight_number	airline	weekdays	src_airport_code	dest_airport_code
1000	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1001	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	BOM	DEL
1002	SpiceJet	Sun_Tue_Thu_Sat	BOM	DEL
1003	Air India	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1004	Indigo	Sun_Mon_Tue_Wed_Thu_Fri_Sat	DEL	BOM
1005	SpiceJet	Sun_Tue_Thu_Sat	DEL	BOM
1007	Indigo	Sun_Tue_Thu_Sat	BLR	MAA
1008	Go Air	Sun_Mon_Tue_Wed_Thu_Fri_Sat	MAA	BLR
1009	Indigo	Sun_Tue_Thu_Sat	MAA	BLR
*	NULL	NULL	NULL	NULL

A check has been placed for Flight classes. As for now each flight can have maximum of 3 classes. If the flight already have 3 classes then (Add Fare) option is disabled in that case. If the Flight as less than 3 classes then there is an option where Admin can add Fare details for different classes.



# Requirements Specification: Admin Related Scenarios

2.5. Admin can add a new flight with Add New Flight option.

The screenshot shows a web application window titled "Fly Away". The URL in the address bar is "localhost:9627/flyaway/adminaddflight.jsp". The page has a header with "ADMIN DETAILS", "CHANGE PASSWORD", and "LOGOUT" links. A large central modal dialog is open, titled "Add New Flight". Inside the dialog, there are several input fields and dropdown menus. The "Airline" field contains "SpiceJet". The "Select Weekdays" section contains checkboxes for Sunday, Tuesday, Thursday, and Saturday, with Sunday and Tuesday checked. The "Source Airport" dropdown shows "HYDERABAD(HYD) IN". The "Destination Airport" dropdown shows "LUCKNOW(LKO) IN". At the bottom of the dialog is a prominent green "Add Flight" button.



# Requirements Specification:

## Admin Related Scenarios

2.6. If all the details entered by user is valid then flight successfully Added message is displayed.

The screenshot shows a web browser window titled "My Avail". The URL is "localhost:9021/flyaway/addflight/admin". The page has a header with "ADMIN DETAILS", "CHANGE PASSWORD", and "LOGOUT". Below the header, a green success message box displays "Flight successfully added." with a checkmark icon. At the bottom left are buttons for "Add a new flight" and "Change Password". The main content area is titled "ALL FLIGHT DETAILS" and contains a table with two rows of flight information. The first row is for flight 5000 from Mumbai (BOM) to New Delhi (DEL) on Sun, Tue, Thu, Sat, with classes Business, Economy, and Premium. The second row is for flight 5001 from Mumbai (BOM) to New Delhi (DEL) on Sun, Mon, Tue, Wed, Thu, Fri, Sat, also with classes Business, Economy, and Premium.

Flight Number	Airline	Week Days	Source	Destination	Classes
5000	Indigo	Sun,Mon,Tue,Wed,Thu,Fri,Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business 15000.0, Economy 3000.0, Premium 10000.0
5001	Air India	Sun,Mon,Tue,Wed,Thu,Fri,Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business 56000.0, Economy 3500.0, Premium 10050.0

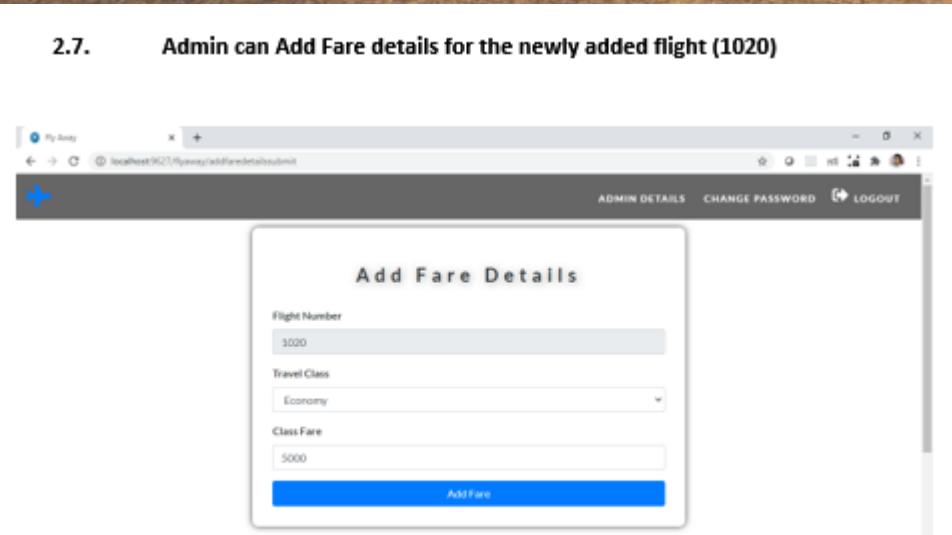
The screenshot shows a list of flights on a web page titled "My Avail" with the URL "localhost:9021/flyaway/addflight/admin". The page includes "ADMIN DETAILS", "CHANGE PASSWORD", and "LOGOUT" buttons. The flight list table has columns: Flight Number, Airline, Week Days, Source, Destination, and Classes. The last column contains a "Add Fare" button. One specific flight is highlighted with yellow boxes: Flight 5000 from Mumbai (BOM) to New Delhi (DEL) on Sun, Tue, Thu, Sat, with classes Business, Economy, and Premium. The other flights listed are 5007 (Indigo), 5008 (Go Air), 5009 (Indigo), and 5010 (SpiceJet).

Flight Number	Airline	Week Days	Source	Destination	Classes	Action
5005	Spiral Jet	Sun,Tue,Thu,Sat	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	Business 15500.0, Economy 4500.0, Premium 11050.0	Add Fare
5007	Indigo	Sun,Tue,Thu,Sat	BENGALURU (BLR) IN	CHENNAI (MAA) IN	Economy 4000.0, Premium 11050.0	Add Fare
5008	Go Air	Sun,Mon,Tue,Wed,Thu,Fri,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	Business 15500.0, Economy 4500.0, Premium 11050.0	
5009	Indigo	Sun,Tue,Thu,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	Economy 4000.0, Premium 11050.0	Add Fare
5010	Spiral Jet	Sun,Tue,Thu,Sat	HYDERABAD (HYD) IN	LUCKNOW (LKO) IN	Business 15500.0, Economy 4500.0, Premium 11050.0	Add Fare



# Requirements Specification: Admin Related Scenarios

2.7. Admin can Add Fare details for the newly added flight (1020)



The screenshot shows a web application window titled "My Airy". The main header includes "ADMIN DETAILS", "CHANGE PASSWORD", and "LOGOUT". Below this, a modal dialog box is open with the title "Add Fare Details". It contains three input fields: "Flight Number" with the value "1020", "Travel Class" set to "Economy", and "Class Fare" with the value "5000". At the bottom of the dialog is a blue "Add Fare" button.



# Requirements Specification: Admin Related Scenarios

2.8. If the fare details are valid then fare Details are successfully added

The screenshot shows a table titled "ALL FLIGHT DETAILS" with columns: Flight Number, Airlines, Week Days, Source, Destination, and Classes. The last row, flight number 1000, has a "Add Fare" button which is highlighted in blue. A green success message at the top of the page says "Fare Added Successfully".

Flight Number	Airlines	Week Days	Source	Destination	Classes
1000	Indigo	Sun,Mon,Tue,Wed,Thu,Fri,Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business 15000.0 Economy 30000.0 Premium 50000.0
1001	GoAir	Sun,Mon,Tue,Wed,Thu,Fri,Sat	BENGALURU (BLR) IN	CHENNAI (MAA) IN	Business 15000.0 Economy 30000.0 Premium 50000.0
1002	Indigo	Sun,Tue,Thu,Sat	BENGALURU (BLR) IN	CHENNAI (MAA) IN	Economy 4500.0 Premium 11050.0 <a href="#">Add Fare</a>
1003	GoAir	Sun,Mon,Tue,Wed,Thu,Fri,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	Business 15500.0 Economy 4500.0 Premium 11050.0
1004	Indigo	Sun,Tue,Thu,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	<a href="#">Add Fare</a>
1005	SpiceJet	Sun,Tue,Thu,Sat	NEW DELHI (DEL) IN	MUMBAI (BOM) IN	<a href="#">Add Fare</a>

When all 3 classes fare details are added to the newly added flight then Add Fare Option is disabled.

The screenshot shows a table with the same structure as the first one. The last row, flight number 1005, has a "Add Fare" button which is now grayed out. The other rows show the "Add Fare" button available for flights with incomplete fare details.

Flight Number	Airlines	Week Days	Source	Destination	Business	Economy	Premium	Add Fare
1006	Indigo	Sun,Tue,Thu,Sat	BENGALURU (BLR) IN	CHENNAI (MAA) IN	4500.0	11050.0	<a href="#">Add Fare</a>	
1007	GoAir	Sun,Mon,Tue,Wed,Thu,Fri,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	15500.0	4500.0	11050.0	<a href="#">Add Fare</a>
1008	Indigo	Sun,Tue,Thu,Sat	CHENNAI (MAA) IN	BENGALURU (BLR) IN	<a href="#">Add Fare</a>			
1009	SpiceJet	Sun,Tue,Thu,Sat	HYDERABAD (HYD) IN	LUCKNOW (LKO) IN	15000.0	5000.0	10000.0	<a href="#">Add Fare</a>



# Requirements Specification: Admin Related Scenarios

- 2.9. Admin can change their password if they wishes to.

Before case Password:

Update password form:

Password Updated successfully:

The screenshot shows the Admin Dashboard with a success message: "Password Successfully Updated". Below it is a table titled "ALL FLIGHT DETAILS" showing two flight records:

Flight Number	Airline	Week Days	Source	Destination	Classes
3000	Indigo	Sun,Mon,Tue,Wed,Thu,Fri,Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business 15000.0, Economy 3000.0, Premium 10000.0
3001	Air India	Sun,Mon,Tue,Wed,Thu,Fri,Sat	MUMBAI (BOM) IN	NEW DELHI (DEL) IN	Business 16000.0, Economy 3500.0, Premium 10050.0

Checking for password updation in the database.

- 2.10. Admin can logout from the Application from where they will be forwarded to Home page.

