

PROJECT REPORT

Airline Reservation System

Name of Website: Book-A-Flight.com

Group Id: 2

Group Members:

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Project Description:

The website is designed for the purpose of displaying different flights available in different routes so that a user can book the flight as per his convenience. The different functionality that our website is offering for users are as follows :

- a) sign-up for new user ,
- b) login for existing user,
- c) search for the flights for various locations,
- d) sort the result on basis of price (lowest to highest and vice-versa),
- e) book flights,
- f) choose the number of baggage,
- g) Manage bookings after user logged in,
- h) Information about his flight,
- i) Booked ticket history and print the tickets.

All the input fields of the web pages contain validation to accept valid data and functional validations.

After sign-in into the system, the user is redirected to the home page. At the same page there are 4 options available for the user that is

- I. Book-A-Flight.com,
- II. Search for flight,
- III. Manage My Bookings,
- IV. Information,
- V. My Tickets.

Each of this perform different functionality by clicking it. By clicking Book-A-Flight.com button user is able to go to home page where he can search for flights and then proceed to book a flight which he/she wants. When user search for a flight he will be given option to choose his/her seats depending upon the different available seats and he/she can also enter details about the baggage. User can book a flight ticket for multiple passenger in one go.

By clicking on Manage My Bookings button, user can check-in and find his/her bookings by entering ticket id.

If customer wants to get information about his/her flight status, or airport information or he/she wants to order food and drink, he/she can do it by clicking drop down Information button.

By clicking on My Tickets, user can check his/her booked ticket history and generate the ticket.

The system also has an admin portal through which admin can add, delete and modify the details of the flights. In order to do so, the admin has to first login into the system and then access the data. In case of adding new resources (here flights details), admin can add flight details by entering airline name, from and to location, seats, departure date and time, arrival date and time and ticket price. By doing so, the flight detail will be added into database. In case of update changed attributes will be updated in the database. In case of delete, soft delete is performed by system.

Database Design:

We have used relational database : MySQL

Schema:

DDL:

```
CREATE DATABASE airline_management;  
USE airline_management;
```

Admin_profile :

```
CREATE TABLE admin_profile (  
    email_id VARCHAR(30),  
    user_password VARCHAR(50)  
);
```

User_profile :

```
CREATE TABLE user_profile (  
    profile_id INT(10) PRIMARY KEY AUTO_INCREMENT,  
    user_password VARCHAR(50),  
    firstname VARCHAR(15),  
    lastname VARCHAR(15),  
    mobile_number VARCHAR(13) NOT NULL UNIQUE,  
    email_id VARCHAR(30) NOT NULL UNIQUE  
);
```

Air_flight :

```
CREATE TABLE air_flight (  
    flight_id INT(10) PRIMARY KEY AUTO_INCREMENT,  
    airline_name VARCHAR(30),  
    from_location VARCHAR(20),  
    to_location VARCHAR(20),  
    total_seats INT(4),  
    deleted INT(1)  
);
```

Air_flight_details :

```
CREATE TABLE air_flight_details (  
    flight_id INT(10) REFERENCES air_flight (flight_id),  
    flight_departure_date DATE,  
    departure_time TIME,  
    flight_arrival_date DATE,  
    arrival_time TIME,  
    price FLOAT(5),  
    available_seats INT(4),  
    deleted INT(1)  
);
```

Air_ticket_info :

```
CREATE TABLE air_ticket_info (  
    
```

```
ticket_id INT(10) PRIMARY KEY AUTO_INCREMENT,  
profile_id INT(10) REFERENCES user_profile (profile_id),  
flight_id INT(10) REFERENCES air_flight (flight_id),  
flight_departure_date DATE,  
flight_status VARCHAR(10)  
);
```

Passenger_checkin :

```
CREATE TABLE passenger_checkin (  
    ticket_id INT(10) REFERENCES air_ticket_info (ticket_id),  
    checkedin BOOL  
);
```

Passenger_seat :

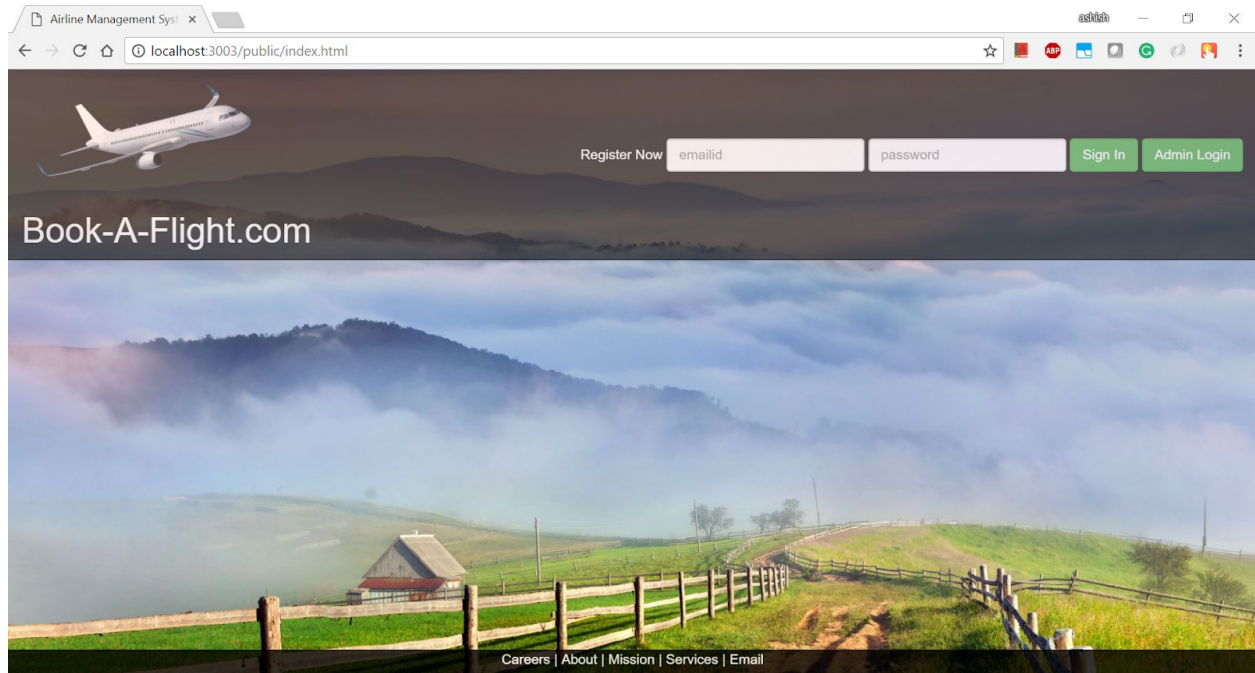
```
CREATE TABLE passenger_seat (  
    ticket_id INT(10) REFERENCES air_ticket_info (ticket_id),  
    fullname VARCHAR(60),  
    seat_number VARCHAR(4)  
);
```

Languages/ Frameworks:

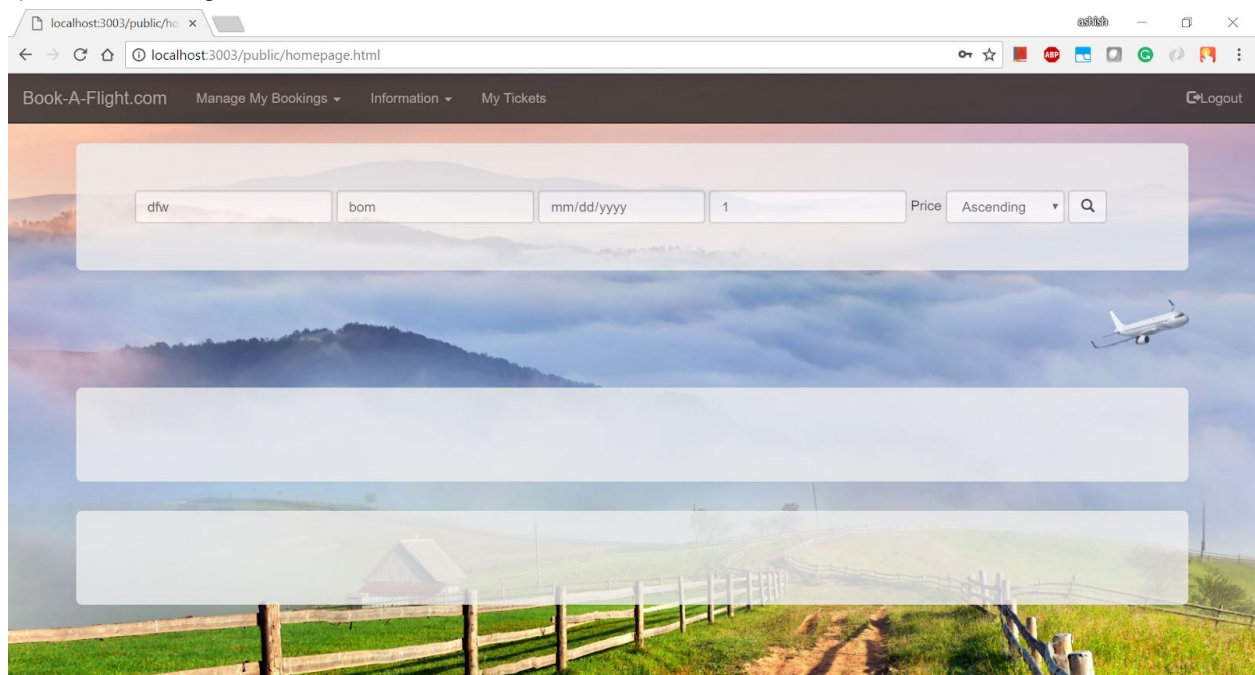
FrontEnd	: HTML, CSS, Bootstrap, JavaScript
BackEnd	: Node.js, MySQL

Screenshots of Main Functionalities:

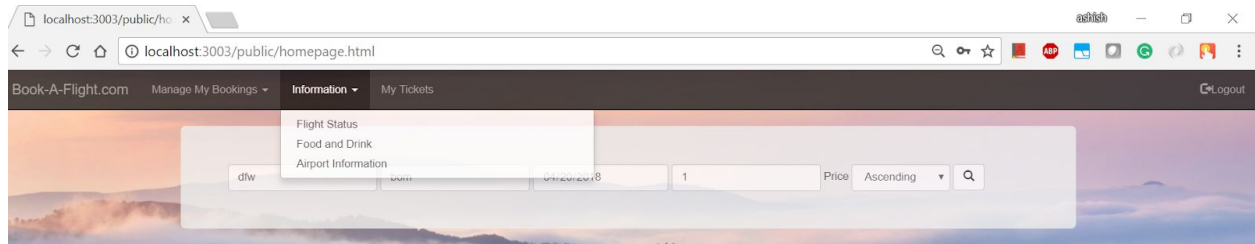
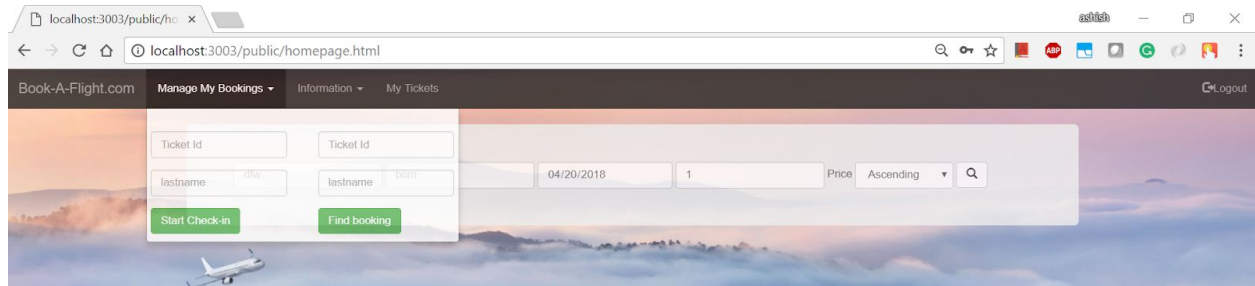
a) User Login Page :



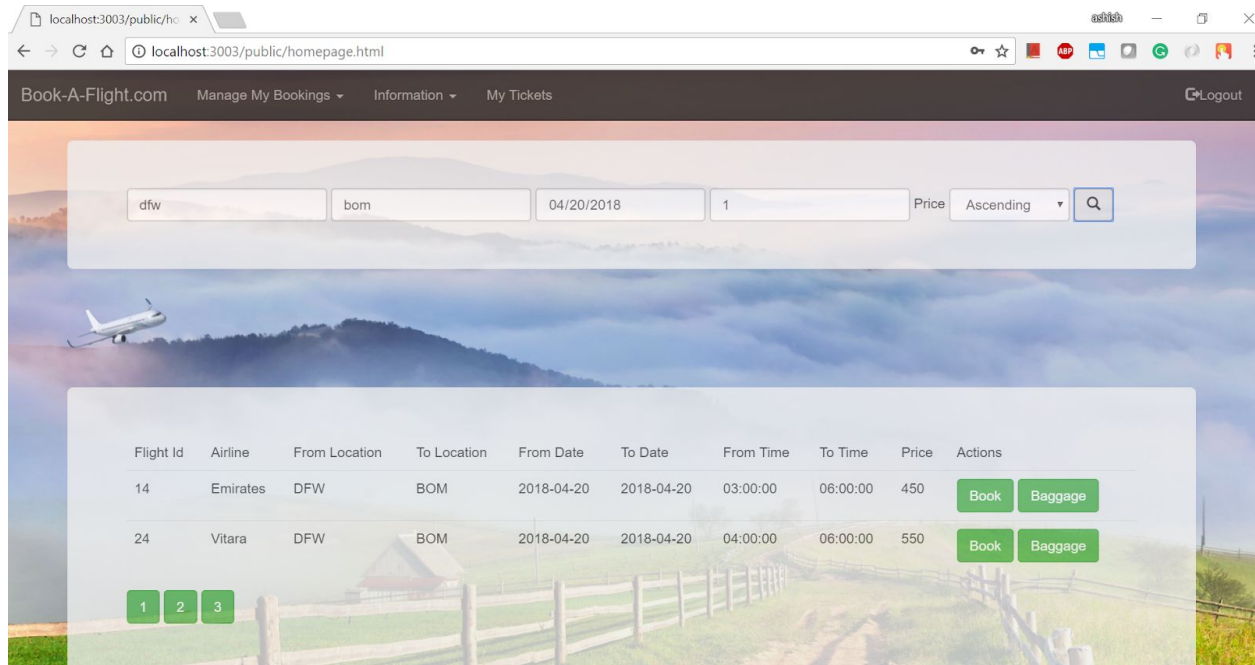
b) User HomePage, Search :



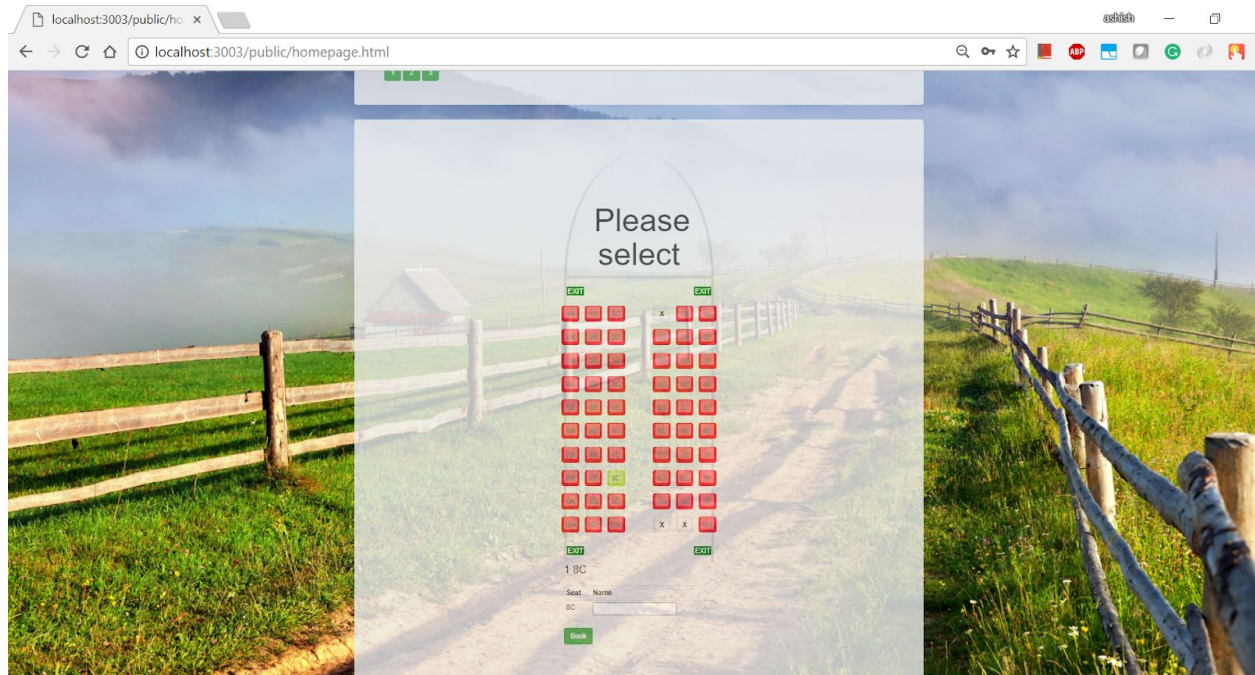
c) User Homepage Manage my bookings and Information :



d) Search Results (Pagination) :



e) Seat Select And Enter Passenger Details:



f) Ticket List :

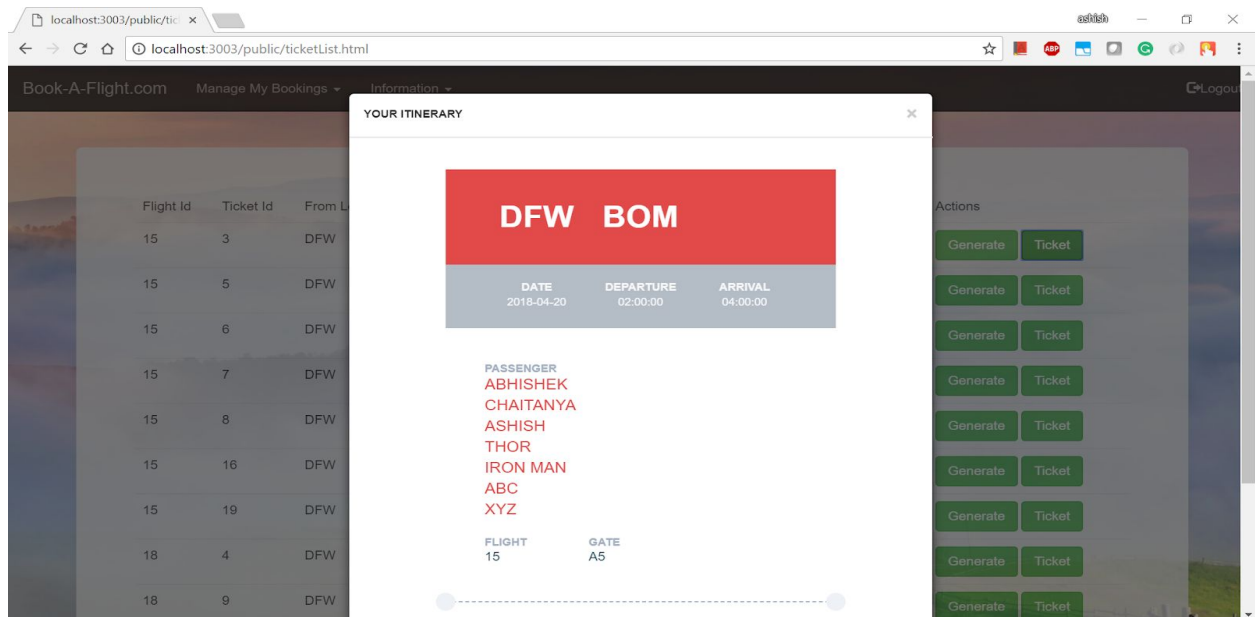
localhost:3003/public/tic x

localhost:3003/public/ticketList.html

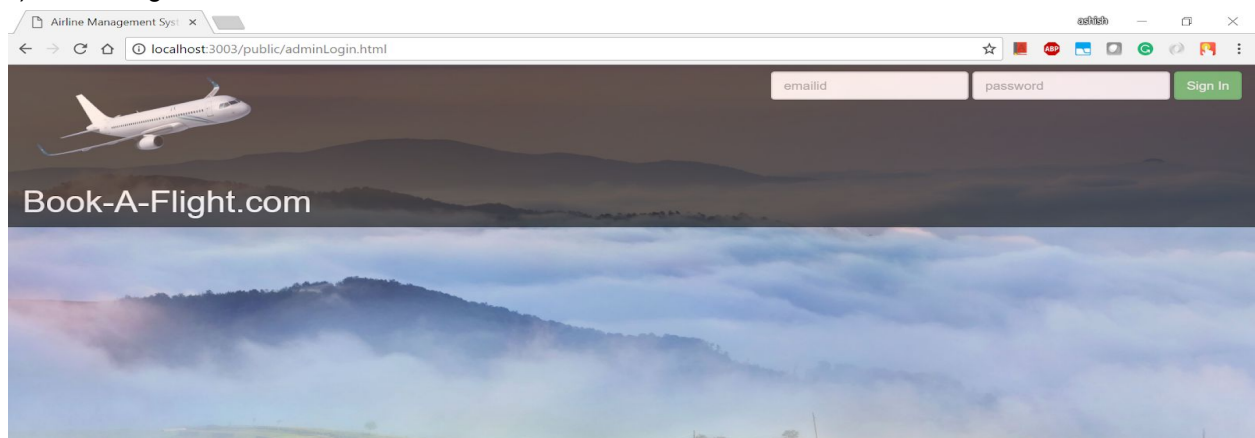
Book-A-Flight.com Manage My Bookings Information Logout

Flight Id	Ticket Id	From Location	To Location	From Date	From Time	To Date	To Time	Actions
15	3	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	5	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	6	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	7	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	8	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	16	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
15	19	DFW	BOM	2018-04-20	02:00:00	2018-04-20	04:00:00	Generate Ticket
18	4	DFW	BOM	2018-04-20	12:00:00	2018-04-20	14:00:00	Generate Ticket

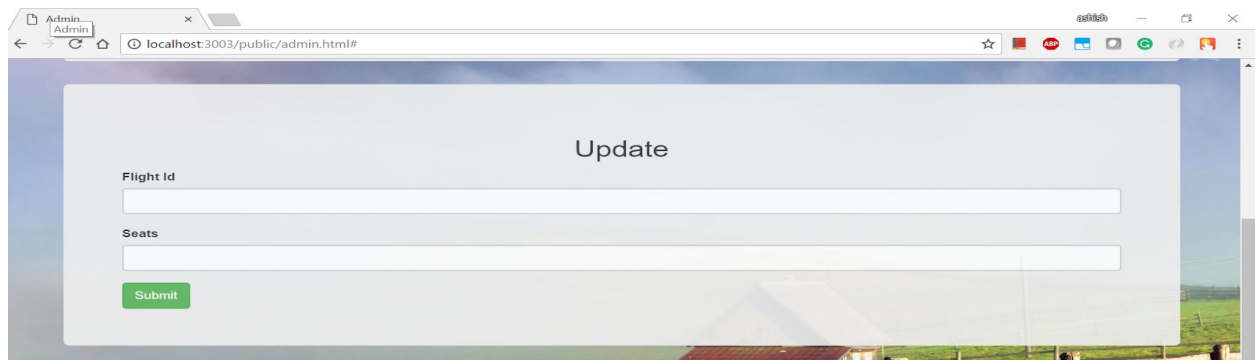
g) Ticket Generate :



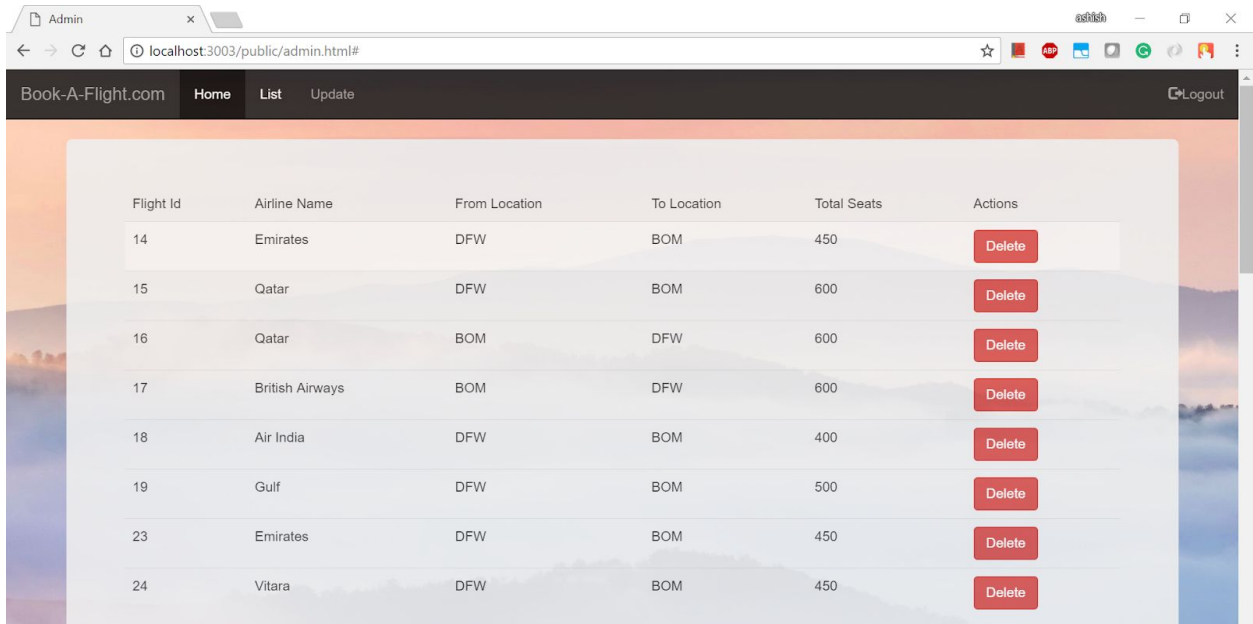
h) Admin Login :



i) Admin Update :



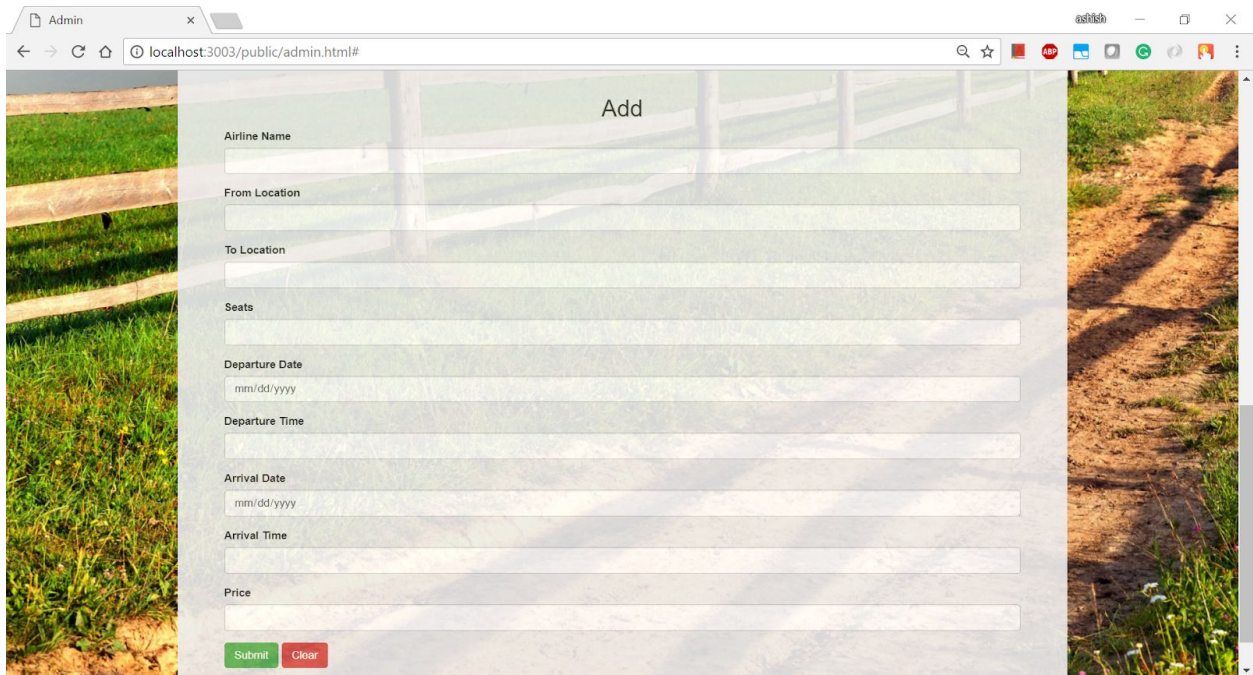
j) Admin home page :



The screenshot shows the Admin home page of a flight booking system. The browser address bar indicates the URL is localhost:3003/public/admin.html#. The page has a dark header with the site name 'Book-A-Flight.com' and navigation links 'Home', 'List', and 'Update'. A 'Logout' button is in the top right. The main content area features a table with flight details. The table has columns for Flight Id, Airline Name, From Location, To Location, Total Seats, and Actions. There are 8 rows of flight data, each with a red 'Delete' button in the Actions column.

Flight Id	Airline Name	From Location	To Location	Total Seats	Actions
14	Emirates	DFW	BOM	450	Delete
15	Qatar	DFW	BOM	600	Delete
16	Qatar	BOM	DFW	600	Delete
17	British Airways	BOM	DFW	600	Delete
18	Air India	DFW	BOM	400	Delete
19	Gulf	DFW	BOM	500	Delete
23	Emirates	DFW	BOM	450	Delete
24	Vitara	DFW	BOM	450	Delete

k) Admin Add New Flights :



The screenshot shows the Admin Add New Flights form. The browser address bar indicates the URL is localhost:3003/public/admin.html#. The page has a dark header with the site name 'Book-A-Flight.com' and navigation links 'Home', 'List', and 'Update'. A 'Logout' button is in the top right. The main content area features a form titled 'Add' with fields for Airline Name, From Location, To Location, Seats, Departure Date, Departure Time, Arrival Date, Arrival Time, and Price. There are 'Submit' and 'Clear' buttons at the bottom.

Add

Airline Name

From Location

To Location

Seats

Departure Date

mm/dd/yyyy

Departure Time

Arrival Date

mm/dd/yyyy

Arrival Time

Price

Submit Clear

Work Division:

This website application is the result of a team work and each member of the team has participated in the discussion and worked equally hard on each area of development starting from database design, user interface design, page styling, validations, client side scripting, server side scripting equally.

Abhishek Kulkarni :

Abhishek has worked upon database design, client side and server side scripting equally. He worked on homepage and displaying search results. He also worked on logic of travel itinerary like generating booked tickets by user.

Chaitanya Kulkarni :

Chaitanya also worked on database design, client side and server side scripting. He worked on displaying flight seats and booking flight ticket. He along with Ashish, is responsible implementation of pagination for displaying flight search results as queried by user.

Ashish Kumar :

Ashish also worked on database design, client side and server side scripting. He worked on user sign up and admin page functionality like update, delete and add flight details. He is also responsible for implementing pagination for search results along with Chaitanya.