FLIGHT BOOKING

CONTENTS

1 PROBLEM STATEMENT

Build a software system which lets user search for a Flight Ticket and book it & includes Admin related activities. User can also cancel or update the Ticket.

Below are the different roles, which need to be supported by above Software System.

1. User
2. Admin

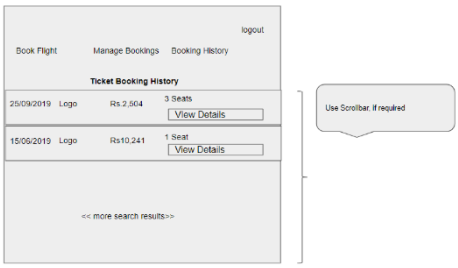
The scope includes developing the application using dot net core as the backend and for end use react.

For mobile application use flutter

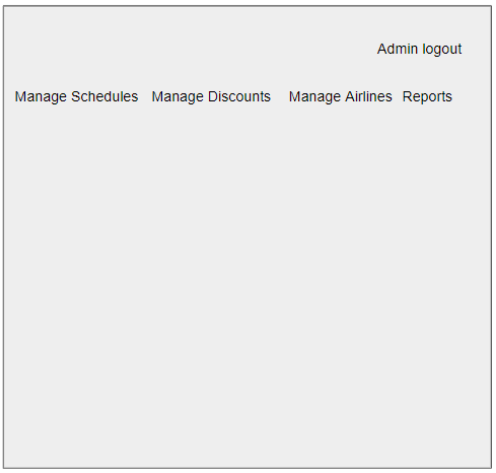
2 WIREFRAMES

UI needs improvisation and modification as per given use case.

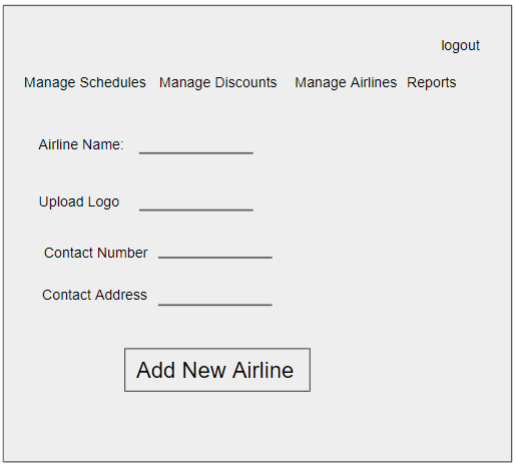
User - Booking History



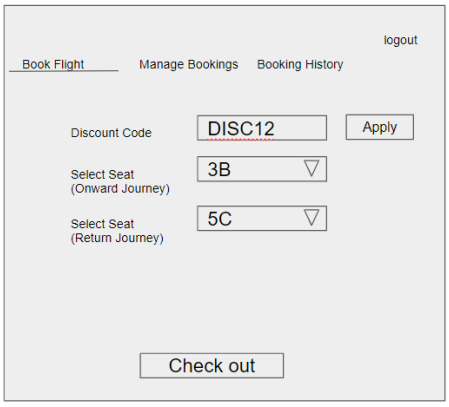
Admin Menu



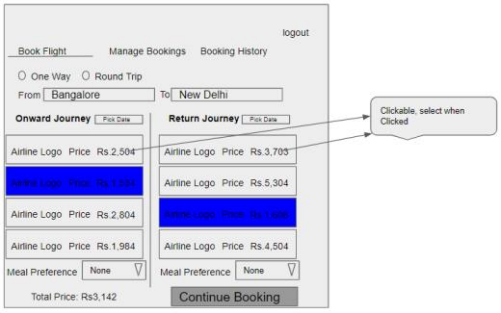
Add Airline



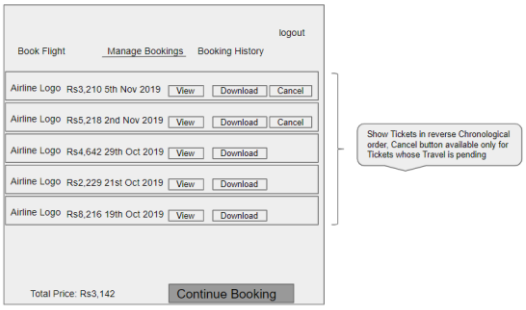
Book Flight - Apply Discount



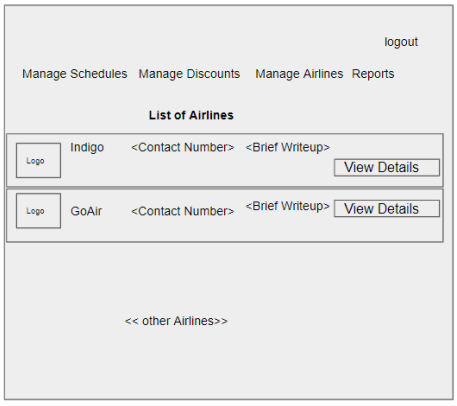
User - Book Flight



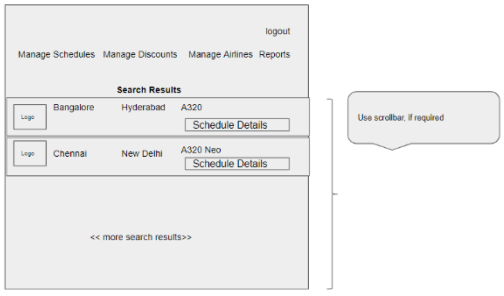
User - Manage Bookings



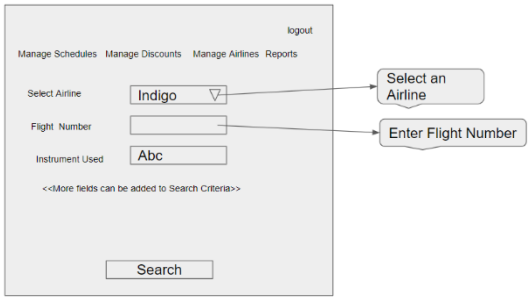
Manage Airlines



Schedule Search Results



Search Schedule



3 BUSINESS REQUIREMENTS:

As an application developer, develop microservices with below guidelines:

User Story #	User Story Name	User Story
US_01	User Mode	1. User can search for a Flight based on date/time, from place/to place, one way or round trip 2. Each Search result need to display Flight Date/time, Airline Name/Logo, Price(to & round trip – TBD) 3. From Search results, User should be able to select a specific Flight and go ahead and complete Ticket Booking by providing below details • Name and Email ID • Number of seats to book. • Details of each passenger (NAME:GENDER:AGE) • Opt for Meal(Veg/Non veg) • Select Seat Number(s) 4. On successful Ticket Booking, PNR number need to be generated, it should be possible to download TicketBooking can be done a Logged in User only 5. With email id user should be able to • view History of Ticket Bookings, • Cancel a Ticket only prior to a day(24 hrs) before journey date. 6. With PNR number view the booked ticket details
US_02	Admin Mode	1. Admin shall be able to login/logout. 2. There can be pre-defined username/password for Admin. 3. Admin shall be able to add/block an Airline. When Airline is Blocked, Flights belonging to that Airline will not be shown in Ticket Search results. 4. Admin shall be able to add Inventory/Schedule of an existing Airline by specifying below details: • flight number • Airline • From Place • To Place • Start date time, • End date time, • Scheduled Days(Daily, Week Days, Week Ends, For specific days specify the list of Days like Mon, Wed) • Instrument used(A320, A320 neo, etc…) • Total number of business class Seats

		• Total number of non-business class Seats • Ticket cost (consider taxes and other charges), • number of rows, • meal(none, veg, non veg)

4 PROPOSED REST ENDPOINTS TO BE EXPOSED

4.1 REST APIS:

POST	**/api/v1.0/flight/airline/register**	**New airline booking**
POST	**/api/v1.0/flight/admin/login**	**Admin login**
POST	**/api/v1.0/flight/airline/inventory/add**	**Add Inventory/Schedule of an existing Airline**
POST	**/api/v1.0/flight/search**	**Searches for flight**
POST	**/api/v1.0/flight/booking/{flightid}**	**Book ticket**
GET	**/api/v1.0/flight/ticket/{pnr}**	**Get Booked ticket details based on PNR**
GET	**/api/v1.0/flight/booking/history/{emailId}**	**Get Booked tickets history based on Email ID**
DELETE	**/api/v1.0/flight/booking/cancel/{pnr}**	**Cancel a booked ticket**

5 KEY RUBRICS/EXPECTED DELIVERABLES

As an application developer:

a. Ensure layer project Structure with proper naming conventions and model classes.
b. Use application.json file to maintain all configuration like connection string
c. Implemented the layered structure - Controller, Interface, Service, DAO, Testing, Validation, Security etc
d. Secure all Rest End Points by configuring SSL Certificate for Cloud

6 PLATFORM

Use above Business Requirements to implement the below.

1. Use Azure to deploy application on cloud.
2. Use Azure SQL Server as a database for the Application.
3. Use Azure Functions and DB to build a backend process for handling requests for Flight booking App.
4. Use Azure Service to send email after booking.

Note: Minimum 2APIs (UI+Backend) to be hosted in cloud