

FLIGHT BOOKING

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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

logout

Book Flight Manage Bookings Booking History

Ticket Booking History

25/09/2019	Logo	Rs 2,504	3 Seats	View Details
15/09/2019	Logo	Rs 10,241	1 Seat	View Details

<< more search results>>

Use scrollbar, if required

Admin Menu

Admin logout

Manage Schedules Manage Discounts Manage Airlines Reports

Add Airline

logout

Manage Schedules Manage Discounts Manage Airlines Reports

Airline Name:

Upload Logo

Contact Number

Contact Address

Add New Airline

Book Flight - Apply Discount

logout

Book Flight Manage Bookings Booking History

Discount Code

Select Seat (Onward Journey)

Select Seat (Return Journey)

Check out

User - Book Flight

logout

Book Flight Manage Bookings Booking History

☐ One Way ☐ Round Trip

From To

Onward Journey Return Journey

Airline Logo	Price	Rs 2,504	Airline Logo	Price	Rs 3,703
Airline Logo	Price	Rs 2,804	Airline Logo	Price	Rs 5,304
Airline Logo	Price	Rs 1,984	Airline Logo	Price	Rs 4,504

Meal Preference Meal Preference

Total Price: Rs 3,142

Clickable, select when Clicked

User - Manage Bookings

logout

Book Flight Manage Bookings Booking History

Airline Logo	Rs 3,210	5th Nov 2019	<input type="button" value="View"/>	<input type="button" value="Download"/>	<input type="button" value="Cancel"/>
Airline Logo	Rs 5,218	2nd Nov 2019	<input type="button" value="View"/>	<input type="button" value="Download"/>	<input type="button" value="Cancel"/>
Airline Logo	Rs 4,642	29th Oct 2019	<input type="button" value="View"/>	<input type="button" value="Download"/>	
Airline Logo	Rs 2,229	21st Oct 2019	<input type="button" value="View"/>	<input type="button" value="Download"/>	
Airline Logo	Rs 8,216	19th Oct 2019	<input type="button" value="View"/>	<input type="button" value="Download"/>	

Total Price: Rs 3,142

Show Tickets in reverse Chronological order. Cancel button available only for Tickets whose Travel is pending

Manage Airlines

logout

Manage Schedules Manage Discounts Manage Airlines Reports

List of Airlines

Logo	Indigo	<Contact Number>	<Brief Writeup>	<input type="button" value="View Details"/>
Logo	GoAir	<Contact Number>	<Brief Writeup>	<input type="button" value="View Details"/>

<< other Airlines>>

Use scrollbar, if required

Schedule Search Results

logout

Manage Schedules Manage Discounts Manage Airlines Reports

Search Results

Logo	Bangalore	Hyderabad	A320	<input type="button" value="Schedule Details"/>
Logo	Chennai	New Delhi	A320 Neo	<input type="button" value="Schedule Details"/>

<< more search results>>

Use scrollbar, if required

Search Schedule

logout

Manage Schedules Manage Discounts Manage Airlines Reports

Select Airline

Flight Number

Instrument Used

<<more fields can be added to Search Criteria>>

Select an Airline

Enter Flight Number

3 BUSINESS REQUIREMENTS:

As an application developer, develop microservices with below guidelines:

User Story #	User Story Name	User Story
US_01	User Mode	<ol style="list-style-type: none">1. User can search for a Flight based on date/time, from place/to place, one way or round trip2. 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<ul style="list-style-type: none">• 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 only5. With email id user should be able to<ul style="list-style-type: none">• 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	<ol style="list-style-type: none">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:<ul style="list-style-type: none">• 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

		<ul style="list-style-type: none"> • Total number of non-business class Seats • Ticket cost (consider taxes and other charges), • number of rows, • meal(none, veg, non veg)
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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:

- Ensure layer project Structure with proper naming conventions and model classes.
- Use application.json file to maintain all configuration like connection string
- Implemented the layered structure - Controller, Interface, Service, DAO, Testing, Validation, Security etc
- 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