**MyFlight - Flight Booking Application**

BST technologies developing a microservices based application – MyFlight- a flight booking application. This application needs to be developed in .NET Core and can be deployed in various cloud hosting services. Organization needs to deploy the application using the Kubernetes services. They want to containerize the applications using Docker.

**Modules:**

1. **Front-end UI (SPA application)**

The front-end application can be developed in Angular 5 or React JS. The UI will allow users to search for flights based the source and destination locations. Users can book flights and do the payments through the app. Once the booking is done they will get a confirmation message.

1. **Search flights**

The Search API provides the details about all flights. It maintains the details of the flights along with duration, source and destination locations and facilities. Users can search the flights by location, date and fleet type. No authentication is required to list and view the details of the flight.

1. **Flight booking**

Once the user selects a particular flight they can provide the travellers details, insurance details, facilities and travel dates in a Redis database. Once the user completes the booking and payment the details will be moved to the user profile and travel history database which is maintained by the User Service API.

1. **Payment services**

When user completes flight selection and traveller details he can move into payments section. The payments section accepts the payments information of the booking such as Payment type, date, amount, Tax and service charge details. This module also contains the methods for handling refund in case of cancellation.

1. **User Service API**

The user service API provides the functionalities for maintaining the traveller details, booking history details etc.

1. **Identity Service**

Identity service provides the functionalities for authentication and authorization. Frontend applications need to be registered as Client and other services need to be registered as API resources. The Identity Services issues the access token to the client after successful login which can be used to authenticate the APIs.