**Passenger Search Service (PSS) Application requirement document**

1. ***Data base:***

Create database either in mysql or mongo db ‘pss’

Create tables for the below requirements

1. User should able to filter flight by airline name (EX: all flights of Indigo)
2. Scheduled flights contains id, flight number origin, destination, flight date, flight time, duration, price, seats available.
3. Make sure separate tables for inventory of seats and flight price. Maintain foreign keys of inventory and price in the scheduled flight table
4. Maintain separate tables for passenger, copassenger, booked flights and check-in flight information
5. Create One to one mappings for
   1. One Flight have one fare
   2. One Flight have one inventory
   3. One passenger have single booking id
6. Create one to many relations for
   1. One airline have many flights
   2. One passenger have many co passengers
7. Create Many to one relations for
   1. One Flight have mor than one airlines

***Number of database tables as follows***

* 1. Airline\_information : airline names like indigo , air india etc
  2. Flight\_info : contains mapping for flights information of a airline
  3. Flights\_information: one to many mappings for airline to flight info
  4. Flight : contains all scheduled flights
  5. Passenger : primary passengers who booked flight
  6. Co\_passenger : co passengers who are travelling along with primary passenger
  7. Copassengers: contains one to many mapping for passenger to copassengers
  8. Booking\_record: booked flight information and mapping to a primary passenger
  9. Check\_in : check in passenger information mapped to a booking id
  10. Inventory : for maintaining flight seat inventory
  11. Fare: contains fare of each flight

1. **API Server Rest Endpoints (Spring boot rest api)**

Create following rest end points for search, book and check in operations

* 1. Flight search
     1. User can search flights by origin, destination and flight date with either get or post method (post method JSON request body included here)

POST Request Url: http://localhost:8080/api/pss/

{

"origin":"Delhi",

"destination":"Chennai",

"flightDate":"2021-05-26",

"travellers":2

}

Response Body

[

{

"id": 1,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "AI-840",

"duration": "2 hrs 15 mins",

"flightDate": "2021-05-26",

"flightTime": "02:12:00",

"inventory": {

"invId": 8,

"count": 100

},

"fare": {

"fareId": 2,

"currency": "INR",

"fare": 4800.0

},

"flightInfo": {

"flightInfoid": 3,

"flightNumber": "AI-840",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 4,

"airlineLogo": "airindia.png",

"airlineName": "Air India"

}

}

},

{

"id": 57,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "SG-435",

"duration": "2 hrs 10 mins",

"flightDate": "2021-05-26",

"flightTime": "02:45:00",

"inventory": {

"invId": 59,

"count": 100

},

"fare": {

"fareId": 58,

"currency": "INR",

"fare": 4500.0

},

"flightInfo": {

"flightInfoid": 55,

"flightNumber": "SG-435",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 52,

"airlineLogo": "spicejet.png",

"airlineName": "Spicejet"

}

}

},

{

"id": 60,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "UK-830",

"duration": "2 hrs 05 mins",

"flightDate": "2021-05-26",

"flightTime": "10:15:00",

"inventory": {

"invId": 67,

"count": 100

},

"fare": {

"fareId": 61,

"currency": "INR",

"fare": 6200.0

},

"flightInfo": {

"flightInfoid": 62,

"flightNumber": "UK-830",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 63,

"airlineLogo": "vistara.png",

"airlineName": "Vistara"

}

}

},

{

"id": 68,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "UK-831",

"duration": "2 hrs 14 mins",

"flightDate": "2021-05-26",

"flightTime": "11:30:00",

"inventory": {

"invId": 70,

"count": 100

},

"fare": {

"fareId": 69,

"currency": "INR",

"fare": 5000.0

},

"flightInfo": {

"flightInfoid": 64,

"flightNumber": "UK-831",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 63,

"airlineLogo": "vistara.png",

"airlineName": "Vistara"

}

}

},

{

"id": 77,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "2T-518",

"duration": "2 hrs 10 mins",

"flightDate": "2021-05-26",

"flightTime": "10:15:00",

"inventory": {

"invId": 84,

"count": 100

},

"fare": {

"fareId": 78,

"currency": "INR",

"fare": 11000.0

},

"flightInfo": {

"flightInfoid": 79,

"flightNumber": "2T-518",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 80,

"airlineLogo": "truejet.png",

"airlineName": "Trujet"

}

}

},

{

"id": 85,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "2T-519",

"duration": "2 hrs 22 mins",

"flightDate": "2021-05-26",

"flightTime": "19:35:00",

"inventory": {

"invId": 87,

"count": 100

},

"fare": {

"fareId": 86,

"currency": "INR",

"fare": 15000.0

},

"flightInfo": {

"flightInfoid": 81,

"flightNumber": "2T-519",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 80,

"airlineLogo": "truejet.png",

"airlineName": "Trujet"

}

}

},

{

"id": 88,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "2T-520",

"duration": "1 hrs 45 mins",

"flightDate": "2021-05-26",

"flightTime": "06:15:00",

"inventory": {

"invId": 90,

"count": 100

},

"fare": {

"fareId": 89,

"currency": "INR",

"fare": 3000.0

},

"flightInfo": {

"flightInfoid": 82,

"flightNumber": "2T-520",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 80,

"airlineLogo": "truejet.png",

"airlineName": "Trujet"

}

}

},

{

"id": 91,

"origin": "DELHI",

"destination": "CHENNAI",

"flightNumber": "2T-521",

"duration": "1 hrs 55 mins",

"flightDate": "2021-05-26",

"flightTime": "22:45:00",

"inventory": {

"invId": 93,

"count": 100

},

"fare": {

"fareId": 92,

"currency": "INR",

"fare": 9000.0

},

"flightInfo": {

"flightInfoid": 83,

"flightNumber": "2T-521",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 80,

"airlineLogo": "truejet.png",

"airlineName": "Trujet"

}

}

}

]

* + 1. User can search for single flight by flight number, origin, destination, flight date with either get or post method (post method JSON request body included here)

POST Request URL: http://localhost:8080/api/pss/byFlightNumber/

{

"flightNumber":"6E-6684",

"flightDate":"2021-05-21",

"origin":"Chennai",

"destination":"PORTBLAIR"

}

Response body:

{

"id": 18,

"origin": "CHENNAI",

"destination": "PORTBLAIR",

"flightNumber": "6E-6684",

"duration": "3 hrs 00 mins",

"flightDate": "2021-05-21",

"flightTime": "03:00:00",

"inventory": {

"invId": 25,

"count": 100

},

"fare": {

"fareId": 19,

"currency": "INR",

"fare": 7500.0

},

"flightInfo": {

"flightInfoid": 20,

"flightNumber": "6E-6684",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 21,

"airlineLogo": "indigo.png",

"airlineName": "Indigo"

}

}

}

* + 1. User can search for single flight by flight number, origin, destination, flight date with either get or post method (post method JSON request body included here)

GET Request URL : <http://localhost:8080/api/pss/byFlightNumber/6E-6684/Chennai/PORTBLAIR/2021-05-21>

Response body:

{

"id": 18,

"origin": "CHENNAI",

"destination": "PORTBLAIR",

"flightNumber": "6E-6684",

"duration": "3 hrs 00 mins",

"flightDate": "2021-05-21",

"flightTime": "03:00:00",

"inventory": {

"invId": 25,

"count": 100

},

"fare": {

"fareId": 19,

"currency": "INR",

"fare": 7500.0

},

"flightInfo": {

"flightInfoid": 20,

"flightNumber": "6E-6684",

"flightType": "Airbus",

"seatCapacity": 150,

"airlineInfo": {

"airlineId": 21,

"airlineLogo": "indigo.png",

"airlineName": "Indigo"

}

}

}