DBMS Project (Flight Booking)

**Aim:** The aim of this case study is to design and develop a database management system for flight booking. Book My Flight (BMF) is a flight reservation service where customers can book domestic flights within India, according to their needs.

**Description:**  Book My Flight is a flight reservation service that keeps records of various users, flights of different airlines, destinations, timings, bookings and cancellations of users. Using BMF, tickets for domestic flights can be booked.

In this system a user(customer) first of all, has to create an account (sign up) in order to use the facilities provided by the flight booking service. This user has to provide his full name, gender, date of birth, user id and password for his account. When the user has successfully created an account then he/she can book tickets using this facility. On further use of the service, the user just has to log in in his already created account using his user id and password to use facilities.

When the user wishes to book tickets then he is provided with a list of flights scheduled for future(as the service even has records of past flights). He can choose a flight and the type of seat(if available) whether economy, business or first class he wishes.

While booking the user needs to provide information about the passenger he is booking a ticket in the name of. A passenger is the person who will actually fly through the flight. His booking needs his name, date of birth, food preference, gender and number of infants(person with age <2) traveling with him. Passengers are the people who want to travel from one place to another. A particular passenger cannot take more than two infants along with him. Infants are the children below the age of 2. There are no traveling charges for the infants traveling along with the passenger.

The information about various destinations is contained the database. This consists of the destination name and its destination code which is unique for every destination. For e.g. BOM for Bombay/Mumbai.

The database has a collection of flights that tells about the date and time of departure of flight, arrival of flight and its source and destination. Every flight is identified by its flightId which is always unique. Each airplane has three types of seats namely: business, economic and first class. The cost may vary depending upon the .

Database stores name and airline ID of different airlines. It also stores airplane ID of airplanes associated with that airline, which uniquely identifies them.

There is a base price for each and every ticket of the flight. It prices varies periodically as per the following algorithm: if user books tickets which is 2 months ahead of current date then he will get ticket on base price, between 2 months and 1 month the price is 1.1 times the base price, between 1month and 15 days the price is 1.25 times the base price, between 15 days and 7 days the price is 1.5 times the base price, between 7 days and 1 day price is 1.75 times the base price and for the booking on the current day the ticket cost 2 times than its actual cost. When the user continues his booking then a unique ticket id is generated and is assigned to every passenger.

This flight booking also provides a facility to cancel the booked tickets. The user has to provide the ticket id which he/she wants to cancel. Upon entering the ticket id, a difference of cancellation date and departure date decides how much refund a user will get. If he cancels ticket that will depart 15 days or more then he will get full booking money back for his ticket, if the difference is between 15 days and 7 days then he’ll get 0.75 times the booking money, if the difference is between 7days and 3days then he’ll get 0.50 times the booking money, if the difference is between 3days and 1day then he’ll get 0.25 times the booking money. Cancellation on same day will get no refund.