

REPORT

Problem Statement:

The objective of this assignment is to instil in you the techniques for turning an object model into a machine for information gathering and data aggregation.

Your task to study ways to create a model for airplane booking System, where a customer can book a flight offered by an airlines though travel agency and can also have a option to book a cab as well as a hotel at the final destination or the layover.

Proposed Object Model:

The object model that we have proposed involves various independent units such as airline, hotel industry, cab industry, travel agency which work together to book a ticket for the customer. which is displayed on the next page.

All the components of the model are explained briefly-

Airlines-

Airlines create a specific route considering various details such as locations with travels who opt to flights for commuting, cost of operations, number of fleets, fleet capacity, etc. Airline then creates a directory with number of route options to choose from for the customer.

Hotel industry-

Hotel creates it's a directory for its properties. It include various details such as location, price, number of amenities, number of rooms, etc. A customer can choose to rent out the property for a couple of days by paying out the prices.

Cab Industry-

Cab Industry offers fleet of cabs that, customers can choose to rent. Cab Industry also creates a directory for its company, that includes number of availability, car type, car location, car price, car sitting capacity, etc.

Travel Agency-

Travel agency is like a middle man between the Company (Airline/cab/hotel) and the customer. A travel agency/agent can book a product on behalf for the customer and help the industry to connect to the potential customer and increase their revenues. Travel agents charges a small fee in return for that.

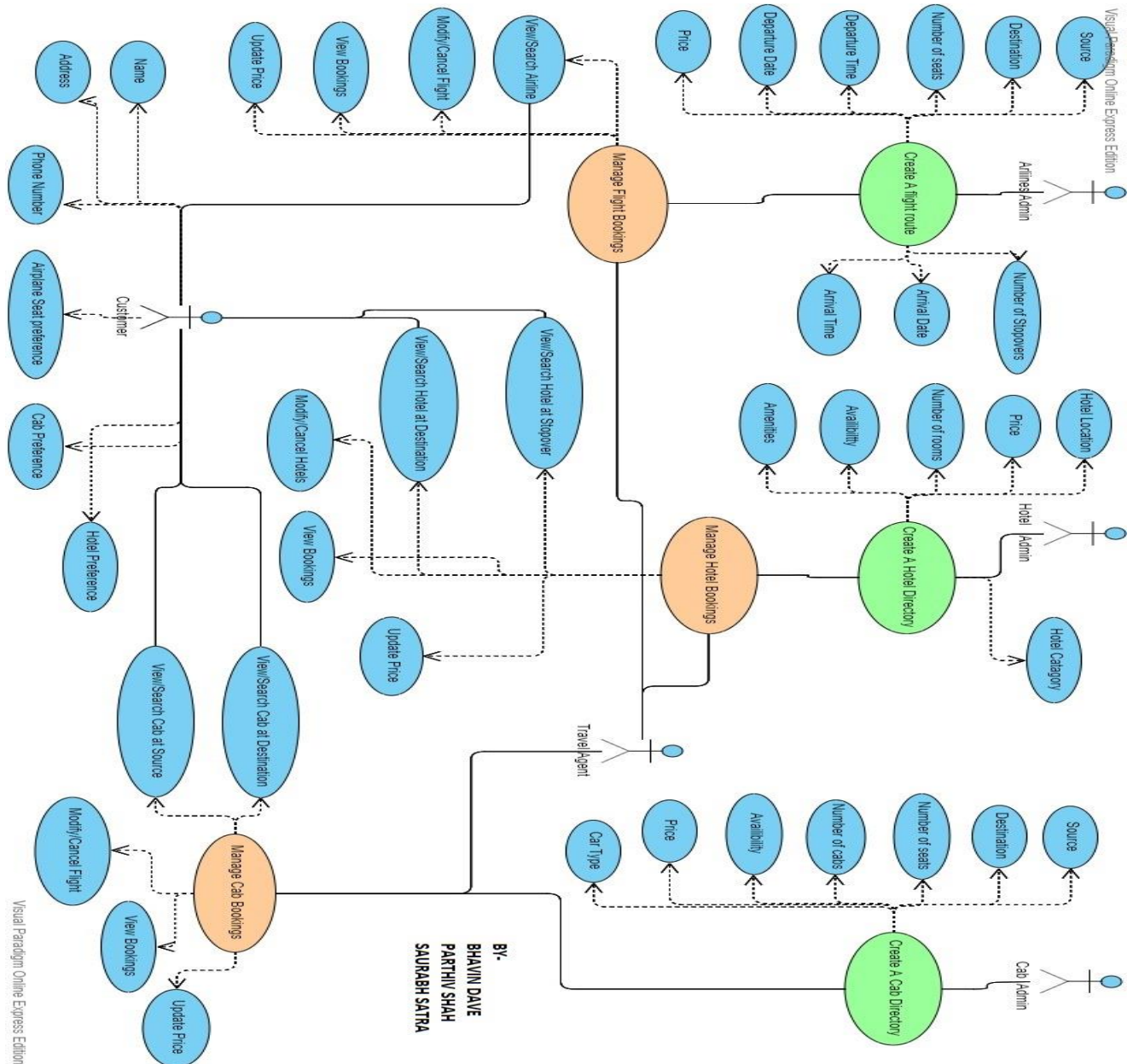
UML Diagram-The embedded PDF is also attached - [Object Model.pdf](#)

Figure 1: UML Diagram

Proposed Solution for Airplane booking system:

The above (Figure 1) is the proposed solution for the airplane booking system with a option to book hotel and cab as well. In that, we try to figure out sequence that will help us to book a flight, hotel as well as a cab.

Firstly, the industries such as Hotel, Airlines and the cab will list their offering respectively.

For example, the flight industry will offer the flight route offering such as source, destination, number of layover, location of layover, departure date, departure time, arrival date, arrival time, number of seats, etc. The hotel industry will offer its offering such as its properties which includes details such as location, price, number of rooms, availability, amenities, etc. Cab industry will offer the list of cabs that are available to the particular locations with details like umber of cabs available, number of seats, price etc. Travel agency is like a middle man between the Company (Airline/cab/hotel) and the customer. A travel agency/agent can book a product on behalf for the customer and help the industry to connect to the potential customer and increase their revenues. Travel agents charges a small fee in return for that.

A customer needs to fills out his details such as Name, Address, Phone Number, his destination, his preferred seating option, does he want to book a hotel and/or a cab or not, if yes where? At the layover or the final destination or both, to book a flight along with cab/hotel.

He can view the details of the flight from the flight directory, which was initially created by the airline industry. After filling out details and his preferences such as seat position he/she can choose to book the hotel or cab or both at the preferred location -- at layover (if the route has one) or at the destination. The details of hotel/cab can be fetched depending upon the customer's preference and the product listing. A travel agent can manage the customers booking and view, modify or even cancel the booking. As the flight gets booked, the details of the passenger get updated in its customer directory, so is the case for hotel and cab booking.