Airlines Project Details

1)

The business process was about monitoring booking processes and measuring customer- satisfaction rate.

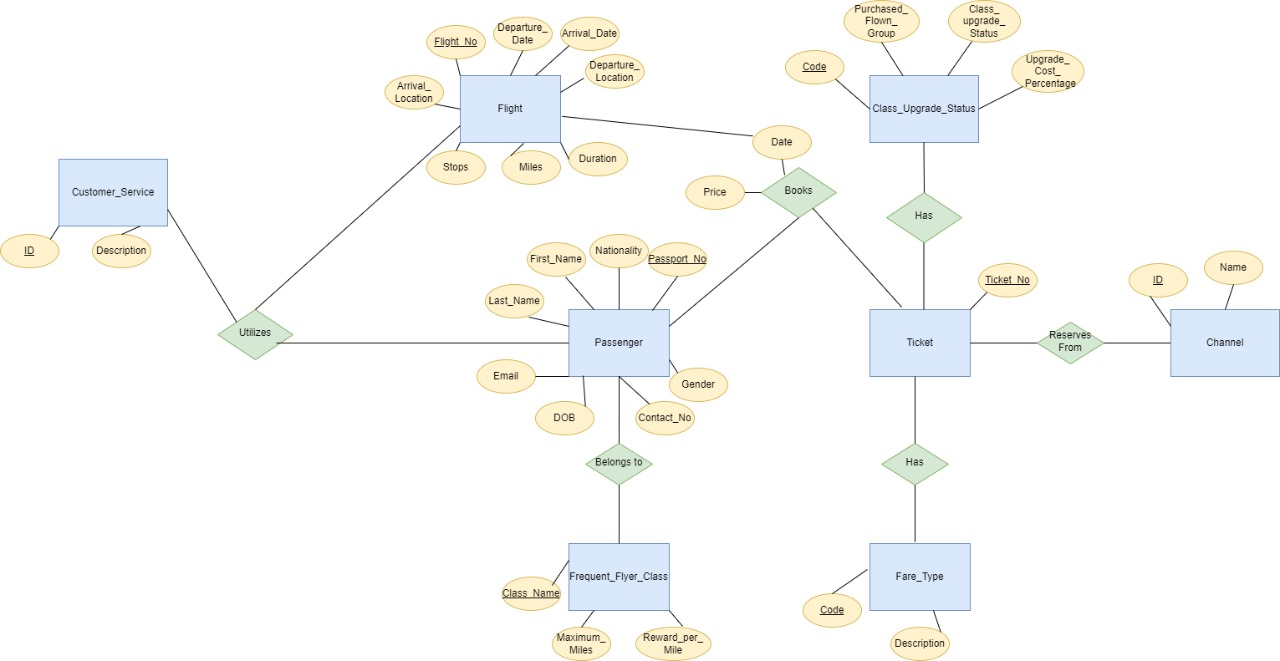
We followed the “Inmon” approach by making an ERD first in a Normalized form then we created the dimensional modeling for reporting.

In ERD we have 8 entities (Passenger, Flight, Ticket, Channel, Fare\_type, Frequent\_Flyer\_Class, Customer\_Service and Class\_Upgrade\_Status).

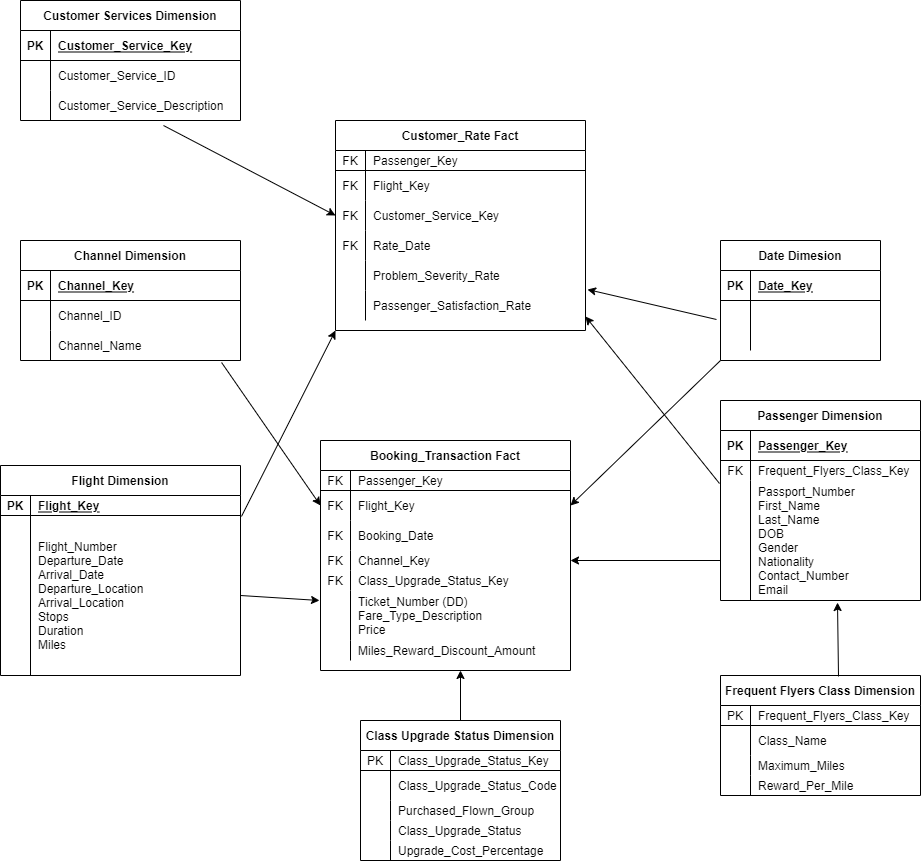
We created a Galaxy Schema in Dimensional modeling which has two facts tables (Customer\_Rate\_Fact and Booking\_Transaction\_Fact) and 7 Dimensions (Customer\_Services\_Dimension, Channel\_Dimension,\_ Date\_Dimension, Passenger\_Dimension, Flight\_Dimension, Class\_Upgrade\_Status\_Dimension and Frequent\_Flyers\_Class\_Dimension).

The booking transaction and customer rate facts granularity level are up-to-date on a daily basis.

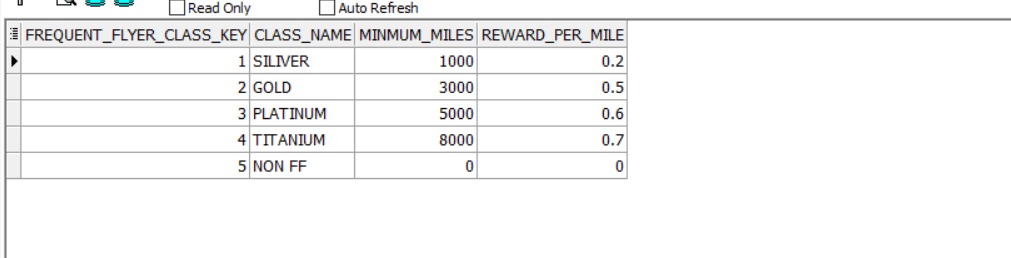
We followed Lnmon’s approach as it is much easier to create dimensional modeling from the data available in the data warehouse because the data is already cleaned and integrated.

2)

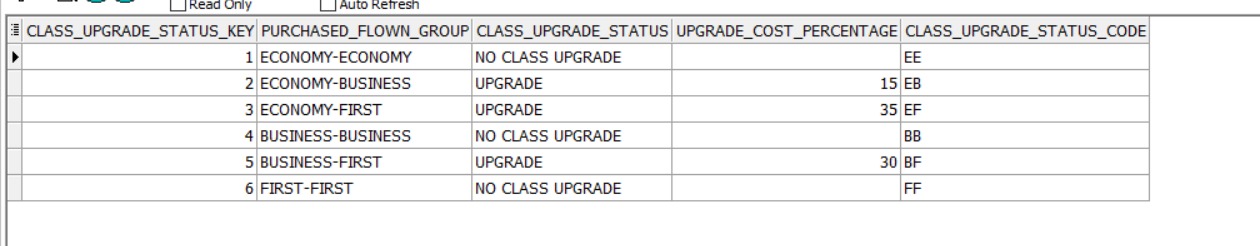
3)



* Passenger\_Dimension has all info about each passenger.
* Frequent\_Flyers\_Class\_Dimension has the following info.

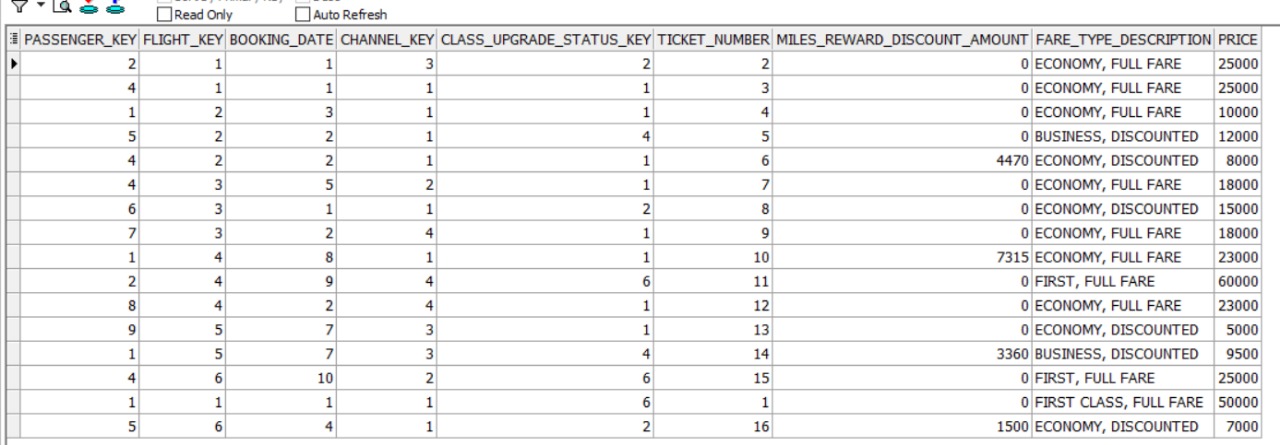


* Class\_Upgrade\_Status\_Dimension has the following info.

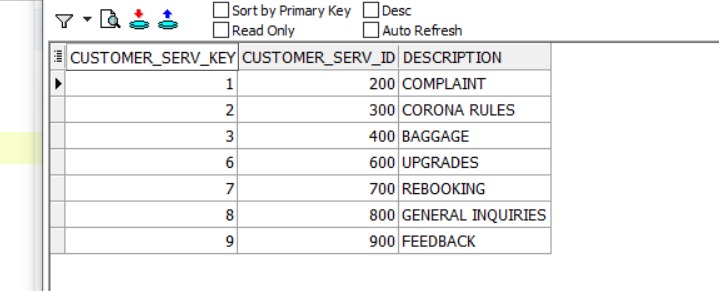


Booking\_Transaction\_Fact represents each ticket transaction that is booked by each passenger per each flight and what fare does he pay for. The Fare\_Type\_Description column represents the fare that is booked by each passenger throught its six values (Economy Full Fare, Economy Discounted, Business Full Fare, Business Discounted, First Full Fare, First Discounted). The Price column represent the cost of each fare type.

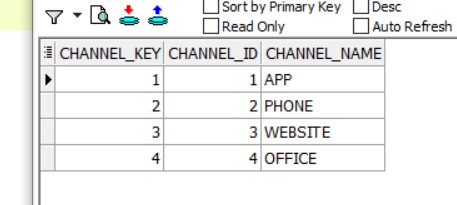
The Class\_Upgrade\_Status column shows us whether the passenger has upgrade his ticket or not. The Miles\_Reward\_Discount\_Amount column has the redeem miles amount according to the class of the frequent flyer and the number of miles he has. So to calculate the final price after redeeming miles, you can subtract the Price column from the Miles\_Reward\_Discount\_Amount column.



* Customer\_Services\_Dimension has the type of customer service activities that is monitored by the company to enhance their business process to satisfy their customers.



* Channel\_Dimension has the type of channel that is used by each passenger during booking.



* Flight\_Dimension has all info about each flight.
* Customer\_Rate\_Fact represents the customer service activities done by each passenger and his satisfaction rate.

