Airline Co System

Model:

Kimball Two-layer approach was utilized, for the following reasons:

- Data marts was priorly known,
- Fast construction with no normalization, to serve fast-growing business
- Focusing on individual business areas and processes rather than the whole enterprise

Business Process: Airline Tracking Process

Granularity:

- 1. Flight Fact: per transaction
- 2. Customer Care Fact: per flight
- 3. Finance Fact: per reservation

Dimensions:

- Aircraft

Describes aircraft by specifying its ID, model, name and serial no

- Airport

Describes the airports which are available for landing (ID, Name, Country)

- Passenger

Describes the customers of the airline system (ID, Name, Gender, Phone, Address, Nationality)

- Date

Has an ID, Year, Quarter, Month and Day

- Frequent Flyer

Describes the programmes designed for frequent flyers (ID, Duration, Price, Status, Name, Min_Req_Miles, Min_Req_Seg, Desc)

- Fare Basis

Describes the fare base code for each class (First, Business and Economy)

- Time

Timestamp (Hour:Minute)

- Promotion

Describes the promotions available in the system (ID, Name, Desc)

- Booking Channel

Describe the booking channel (Online, Travel agency or On premise) as well as the payment method (Cash, Credit or Master)

- Service

Describe the rate of the services provided (ID, Occurrence (Pre-Flight, On-board or Post-Flight), Rate)

- Complaint

Describe the customers complaints (ID, Severity, Desc, Occurrence (Pre-Flight, On-board or Post-Flight))

Facts:

- Flight Fact

Linked to:

(Aircraft, Airport, Passengers, Frequent Flyer, Fare Basis, Date, Time, Promotion, Booking Channel) + Flight ID (DD) Measures:

- Miles
- Duration
- Customer Care Fact

Linked to:

(Date, Passenger, Complaint, Service)

- Finance Fact

Linked to:

(Passengers, Frequent Flyer, Date, Promotion, Booking Channel) Measures:

- Cost
- Revenue
- Gross Profit

SQL Queries

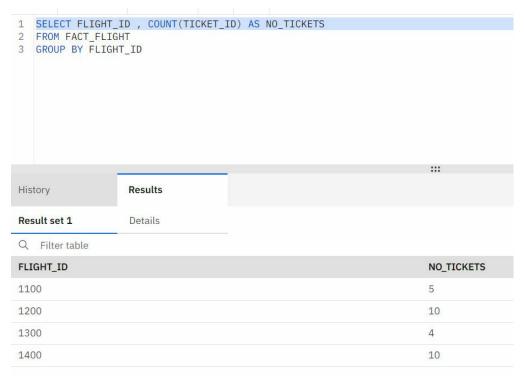
1. No. of flights between 6 pm to 6 am

SELECT COUNT (DISTINCT FLIGHT_ID) AS NO_FLIGTS_6PM_6AM FROM FACT_FLIGHT F JOIN DIM_TIME T ON F.ACTUAL_TIME_ID = T.TIME_ID WHERE T.HOURS BETWEEN 6 AND 18;					
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History	Results				
Result set 1	Details				
Q Filter table					
NO_FLIGTS_6PM_6AM					
2					

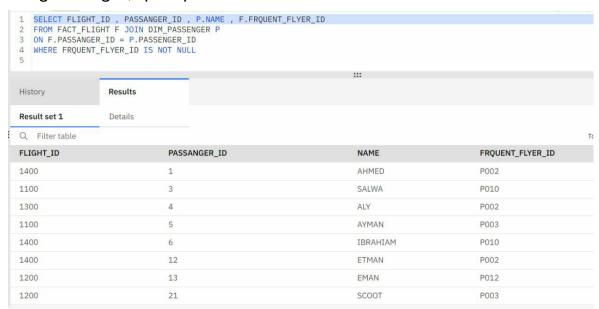
2. For the top flight in reservations, which complaint was the most issued



3. Number of tickets in each flight



4. In a given flight, specify aircraft ID and model



5. Which passengers are frequent flyers

