

Data Visualization , Q2, DWH Project

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Airline Project

➤ **Business Process**

In the airline case study, we can develop 5 business processes that the business is mainly using.

1. *Flight activity*

Analyzing the data of each flight in the company and the profit .

2. *Reservation*

Analyzing the data of reservation process details and the channel that the passenger reserve from it.

3. *Overnight stay*

Analyzing the number of nights that passenger spend in the hotel.

4. *Frequent flyers*

Analyzes the data for frequent flyers (flyers who flies a lot).

5. *Customer care*

Analyzing the data related to the customer feedback.

➤ **Grain**

1. *Flight Activity*

Per each flight (Atomic)

2. *Reservation*

Per each ticket (Atomic)

3. *Overnight stay*

Per each ticket (Atomic)

4. *Frequent flyers*

Per passenger (Atomic)

5. *Customer care*

Per each Feedback (Atomic)

➤ **Dimensions**

1. Flight Activity

Flight, passenger, crew, aircraft, airport, date

2. Reservation

channel, passenger, date, flight, promotion, class.

3. Overnight stay

Hotel, Date, Channel, Passenger

4. Frequent flyers

Passenger, Date, Promotion, Class.

5. Customer care

Customer opinion, date, flight, passenger

➤ **Facts**

1. Flight Activity

Flight ID (FK), Passenger_ID (FK), Crew_id (FK), Airport_ID (FK),
Departure_Time (FK), Arrival_Time (FK), Duration, Number of miles, Total price,
Total cost, Total Profit, Aircraft_ID (FK)

2. Reservation

Channel_ID (FK), Passenger_ID (FK), Date_ID (FK), Ticket number (DD),
Class_ID (FK), Farebase_Type, Ticket price, Flight_ID (FK), Promotion_ID (FK),
Number of luggage, Ticket, price, Payment Method, seat Number.

3. Overnight stay

Departure_time (FK), Arrival_time (FK), Hotel_ID (FK), Channel_ID (FK),
Passenger_ID (FK), Ticket Number (DD), Number of nights

4. Frequent flyers

Passenger_ID (FK), Date_ID (FK), Count of flight miles, Promotion_ID (FK),
Response to promotions (Yes ,No) , Status, class_ID (FK), Overnight Hours

5. Customer care

Date_ID (FK), Flight_ID (FK), Passenger_ID (FK), Opinion_ID (FK), Interaction
type, Description, Problem Severity, Feedback_rate