

SQL Interview

1 Requirement

You will have 25 minutes to work on the following 8 questions: If you don’t have time to write down the complete query, try to write down the steps of your thought process. If you feel the time is tight, focus more on questions 1~6. We put the needed data table(s) before each question and removed certain variables for simplicity. The data in the table are not limited to the rows demonstrated as examples. Please feel free to use MySQL, Oracle SQL, PostgreSQL, MS SQL, Bigquery or any other SQL syntax you feel comfortable with.

2 Table Overview

There are three tables available:

- **Orders:** Transactional table which shows offer details of car rental bookings. Each row represents each order
 - **offer_id:** unique identifier of each booked rental car
 - **total_price:** the total rate charged on the customer with margin
 - **base_price:** the total rate given by the suppliers without margin
 - **length_of_keep:** number of days cars being rented
 - **location_code:** the location where cars to be picked up
 - **vehicle_code:** the car type that is booked
 - **offer_date_time:** date-time when offer is booked

Orders								
offer_id	supplier_code	total_price	base_price	length_of_keep	location_code	vehicle_code	offer_date_time	offer_status
10001	AV	80.5	64.5	1	MCO	CCAR	2024-01-02 12:01:01	0_ACCEPTED
100021	BU	70.9	60.4	1	LGA	FCAR	2024-01-02 13:02:10	0_ACCEPTED
30358	HZ	201.3	177.1	3	BOS	SPAR	2024-01-10 13:11:23	0_REJECTED
1009485	ZR	222.7	190	4	DEN	SFAR	2024-01-01 09:13:27	0_ACCEPTED
204531	ET	304.2	234.2	4	LGA001	FFAR	2024-01-11 10:11:00	0_CANCELLED
20003	BU	594.9	510.3	7	MIA	ICAR	2024-01-23 04:50:11	0_ACCEPTED

- **Suppliers:** Dimensional table that maps the brand names by supplier_code
 - **supplier_id:** supplier is the brand of the rental car company booked
 - **supplier_name:** brand name of the supplies

Suppliers			
supplier_code	supplier_name	num_active_locations	opaque_participant_flag
AV	Avis	200	Y

supplier_code	supplier_name	num_active_locations	opaque_participant_flag
BU	Budget	202	Y
AL	Alamo	307	Y
AC	ACE	131	Y
FO	Foco	40	N

- **Location:** Dimensional table that shows location details
 - **location_code:** the location where cars to be picked up
 - **airport_code:** corresponding airport of the pickup location
 - **city_name:** corresponding city of the pickup location

Locations

location_code	city_name	on_airport_flag
MCO001	Orlando	N
NYC002	New York	N
AUS	Austin	Y
DFW	Dallas	Y
LGA	New York	Y
ATL	Atlanta	Y

3 Question 1

Write a SQL query to calculate number of bookings by date

4 Question 2

Write a SQL query to get number of bookings for January by supplier names

5 Question 3

Write a SQL query to count how many distinct vehicle types booked in each location

6 Question 4

Write a SQL query to display average offer total price from highest to lowest by city names

7 Question 5

Write a SQL query to count percentage of bookings where the margin% is less than 10%

