SQL Interview

Requirement

You will have 30 minutes to work on the following 5 questions: If you don't have time to write down the complete query, try to write down the steps of your thought process. 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.

Table Overview

There are three tables available:

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

Orders

booking_id	supplier_code	total_price	base_price	location_code	vehicle_category	offer_date_time
10001	AV	80.5	64.5	MCO	Compact	2024-01-02 12:01:01
100021	BU	70.9	60.4	LGA	Mid-Size	2024-01-02 13:02:10
30358	HZ	201.3	177.1	BOS	Full Size	2024-01-10 13:11:23
1009485	ZR	222.7	190	DEN	Standard SUV	2024-01-01 09:13:27
204531	ET	304.2	234.2	LGA001	Mid Size SUV	2024-01-11 10:11:00
20003	BU	594.9	510.3	MIA	Full Size Van	2024-01-23 04:50:11

- **Suppliers:** Dimensional table that maps the brand names by supplier_code
  - **supplier_code:** 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
AV	Avis	200
BU	Budget	202
AL	Alamo	307
AC	ACE	131
FO	Foco	40

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

Loctions

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

Question 1

Write a SQL query to calculate number of bookings by date

Question 2

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

Question 3

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

Question 4

Write a SQL query to count percentage of bookings where the margin% is less than 10% (margin = total price - base price)

Question 5 (optional)

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