SQL Challenge 1

Challenge 1 - Steve's Car Showroom

Introduction

Steve runs a top-end car showroom but his data analyst has just quit and left him without his crucial insights. Can you analyse the following data to provide him with all the answers he requires?

Tables

Here are the tables you will be using

sales

sale_id	car_id	salesman_id	purchase_date
1	1	1	2021-01-01
2	3	3	2021-02-03
3	2	2	2021-02-10
4	5	4	2021-03-01
5	8	1	2021-04-02
6	2	1	2021-05-05
7	4	2	2021-06-07
8	5	3	2021-07-09
9	2	4	2022-01-01
10	1	3	2022-02-03
11	8	2	2022-02-1-
12	7	2	2022-03-01
13	5	3	2022-04-02
14	3	1	2022-05-05
15	5	4	2022-06-07
16	1	2	2022-07-09
17	2	3	2023-01-01
18	6	3	2023-02-03
19	7	1	2023-02-10
20	4	4	2023-03-01

cars

car_id	make	type	style	cost_$
1	Honda	Civic	Sedan	30000
2	Toyota	Corolla	Hatchback	25000
3	Ford	Explorer	SUV	40000
4	Chevrolet	Camaro	Coupe	36000
5	BMW	X5	SUV	55000
6	Audi	A4	Sedan	48000
7	Mercedes	C-Class	Coupe	60000
8	Nissan	Altima	Sedan	26000

salespersons

salesman_id	name	age	city
1	John Smith	28	New York
2	Emily Wong	35	San Fran
3	Tom Lee	42	Seattle
4	Lucy Chen	31	LA

1. What are the details of all cars purchased in the year 2022?

```
70    -- 1. What are the details of all cars purchased in the year 2022?
71    select cars.* from sales join cars using (car_id) where year(purchase_date)='2022'
72
73
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

car_id	make	type	style	cost_$
2	Toyota	Corolla	Hatchback	25000
1	Honda	Civic	Sedan	30000
8	Nissan	Altima	Sedan	26000
7	Mercedes	C-Class	Coupe	60000
5	BMW	X5	SUV	55000

2. What is the total number of cars sold by each salesperson?

```
76      -- 2. What is the total number of cars sold by each salesperson?
77      select name, count(sale_id) as cars_sold
78      from sales  join salespersons using(salesman_id)
79      group by name
80
```

name	cars_sold
John Smith	5
Emily Wong	5
Tom Lee	6
Lucy Chen	4

3. What is the total revenue generated by each salesperson?

```
81      -- 3. What is the total revenue generated by each salesperson?
82      select name  , sum(cost_$) as total_revenue
83      from sales
84      join salespersons using(salesman_id)
85      join cars c using(car_id)
86      group by salesman_id
```

name	total_revenue
John Smith	181000
Emily Wong	177000
Tom Lee	253000
Lucy Chen	171000

4.What are the details of the cars sold by each salesperson?

```
87      -- 4.What are the details of the cars sold by each salesperson?
88      select salesman_id,name,cars.*
89      from sales
90      join salespersons using(salesman_id)
91      join cars using(car_id)
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: TA

salesman_id	name	car_id	make	type	style	cost_$
1	John Smith	8	Nissan	Altima	Sedan	26000
1	John Smith	2	Toyota	Corolla	Hatchback	25000
1	John Smith	3	Ford	Explorer	SUV	40000
1	John Smith	7	Mercedes	C-Class	Coupe	60000
2	Emily Wong	2	Toyota	Corolla	Hatchback	25000
2	Emily Wong	4	Chevrolet	Camaro	Coupe	36000
2	Emily Wong	8	Nissan	Altima	Sedan	26000
2	Emily Wong	7	Mercedes	C-Class	Coupe	60000
2	Emily Wong	1	Honda	Civic	Sedan	30000
3	Tom Lee	3	Ford	Explorer	SUV	40000
3	Tom Lee	5	BMW	X5	SUV	55000
3	Tom Lee	1	Honda	Civic	Sedan	30000
3	Tom Lee	5	BMW	X5	SUV	55000
3	Tom Lee	2	Toyota	Corolla	Hatchback	25000
3	Tom Lee	6	Audi	A4	Sedan	48000
4	Lucy Chen	5	BMW	X5	SUV	55000
4	Lucy Chen	2	Toyota	Corolla	Hatchback	25000
4	Lucy Chen	5	BMW	X5	SUV	55000
4	Lucy Chen	4	Chevrolet	Camaro	Coupe	36000

5.What is the total revenue generated by each car type?

```sql
93    -- 5.What is the total revenue generated by each car type?
94    select type,sum(cost_$) as revenue
95    from sales
96    join salespersons using(salesman_id)
97    join cars using(car_id)
98    group by type
```

type	revenue
Civic	90000
Altima	52000
Corolla	100000
Explorer	80000
C-Class	120000
Camaro	72000
X5	220000
A4	48000

6. What are the details of the cars sold in the year 2021 by salesperson 'Emily Wong'?

```sql
101    -- 6.What are the details of the cars sold in the year 2021 by salesperson 'Emily Wong'?
102    select *
103    from cars
104    where car_id in (select car_id
105        from sales
106        join salespersons using(salesman_id)
107        where name='Emily Wong' and year(purchase_date)='2021')
```

car_id	make	type	style	cost_$
2	Toyota	Corolla	Hatchback	25000
4	Chevrolet	Camaro	Coupe	36000

7. What is the total revenue generated by the sales of hatchback cars?

```
109    -- 7. What is the total revenue generated by the sales of hatchback cars?
110    select style,sum(cost_$) as total_revenue
111    from cars
112    join sales
113    using(car_id)
114    where style='Hatchback'
115    |
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

style	total_revenue
Hatchback	100000

8. What is the total revenue generated by the sales of SUV cars in the year 2022?

```
117    -- 8.What is the total revenue generated by the sales of SUV cars in the year 2022?
118    select style,sum(cost_$)
119    from cars
120    join sales
121    using(car_id)
122    where style='SUV' and year(purchase_date)='2022'
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

style	sum(cost_$)
SUV	150000

9. What is the name and city of the salesperson who sold the most number of cars in the year 2023?

```
125    -- 9.What is the name and city of the salesperson who sold the most number of cars in the year 2023?
126    select name,city
127    from sales
128    join salespersons  using(salesman_id)
129    where year(purchase_date)='2023'
130    group by salesman_id
131    limit 1
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

name	city
John Smith	New York

10. What is the name and age of the salesperson who generated the highest revenue in the year 2022?

```
132    -- 10.What is the name and age of the salesperson who generated the highest revenue in the year 2022?
133    select name,city, sum(cost_$) as total_revenue
134    from sales
135    join salespersons using(salesman_id)
136    join cars using(car_id)
137    where year(purchase_date)='2022'
138    group by salesman_id
139    order by total_revenue desc
140    limit 1
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

name	city	total_revenue
Emily Wong	San Fran	116000