

SQL CHALLENGE 1

STEVE'S CAR SHOWROOM

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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?

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

QUESTION 1

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

```
select * from cars join  
sales using (car_id)  
where year(purchase_date)=2022;
```

	car_id	make	type	style	cost_	sale_id	salesman_id	purchase_date
▶	2	Toyota	Corolla	Hatchback	25000	9	4	2022-01-01
	1	Honda	Civic	Sedan	30000	10	3	2022-02-03
	8	Nissan	Altima	Sedan	26000	11	2	2022-02-10
	7	Mercedes	C-Class	Coupe	60000	12	2	2022-03-01
	5	BMW	X5	SUV	55000	13	3	2022-04-02
	3	Ford	Explorer	SUV	40000	14	1	2022-05-05
	5	BMW	X5	SUV	55000	15	4	2022-06-07
	1	Honda	Civic	Sedan	30000	16	2	2022-07-09

QUESTION 2

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

```
select name, count(sale_id) as no_of_cars_sold from salespersons sp join  
sales s on s.salesman_id=sp.salesman_id  
group by name;
```

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

QUESTION 3

What is the total revenue generated by each salesperson?

```
select name, sum(cost_$) as total_revenue_generated from salespersons sp join  
sales s on s.salesman_id=sp.salesman_id  
join cars c using(car_id)  
group by s.salesman_id;
```

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

QUESTION 4

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

```
select sp.salesman_id,name,car_id,make,type,style,cost_$ from salespersons sp join
sales s on s.salesman_id=sp.salesman_id
join cars c using(car_id);
```

salesman_id	name	car_id	make	type	style	cost_\$
1	John Smith	1	Honda	Civic	Sedan	30000
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

QUESTION 5

What is the total revenue generated by each car type?

```
select type, sum(cost_$) from cars  
group by type;
```

	type	sum(cost_\$)
▶	Civic	30000
	Corolla	25000
	Explorer	40000
	Camaro	36000
	X5	55000
	A4	48000
	C-Class	60000
	Altima	26000

QUESTION 6

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

```
select name,make,type,style,cost_$,purchase_date from salespersons sp join  
sales s on s.salesman_id=sp.salesman_id  
join cars c using(car_id)  
where year(purchase_date)=2021 and name = 'Emily Wong';
```

	name	make	type	style	cost_	purchase_date
▶	Emily Wong	Toyota	Corolla	Hatchback	25000	2021-02-10
	Emily Wong	Chevrolet	Camaro	Coupe	36000	2021-06-07

QUESTION 7

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

```
select sum(cost_$) as hatchback_revenue from cars
where style = 'Hatchback'
group by style;
```

	hatchback_revenue
▶	25000

QUESTION 8

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

```
select sum(cost_$) as SUV_revenue_2022 from cars  
join sales using(Car_id)  
where style = 'SUV' and year(purchase_date)=2022  
group by style;
```

	SUV_revenue_2022
▶	150000

QUESTION 9

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

```
select name,city,count(sale_id) as no_of_cars_sold from salespersons sp join  
sales s on s.salesman_id=sp.salesman_id  
where year(purchase_date)=2023  
group by s.salesman_id  
order by no_of_cars_Sold desc limit 1;
```

	name	city	no_of_cars_sold
▶	Tom Lee	Seattle	2

QUESTION 10

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

```
select name,age,sum(cost_$) as revenue_generated from salespersons sp join
sales s on s.salesman_id=sp.salesman_id
join cars c using(car_id)
where year(purchase_date)=2022
group by sp.salesman_id
order by revenue_generated desc limit 1;
```

	name	age	revenue_generated
▶	Emily Wong	35	116000

Thank You