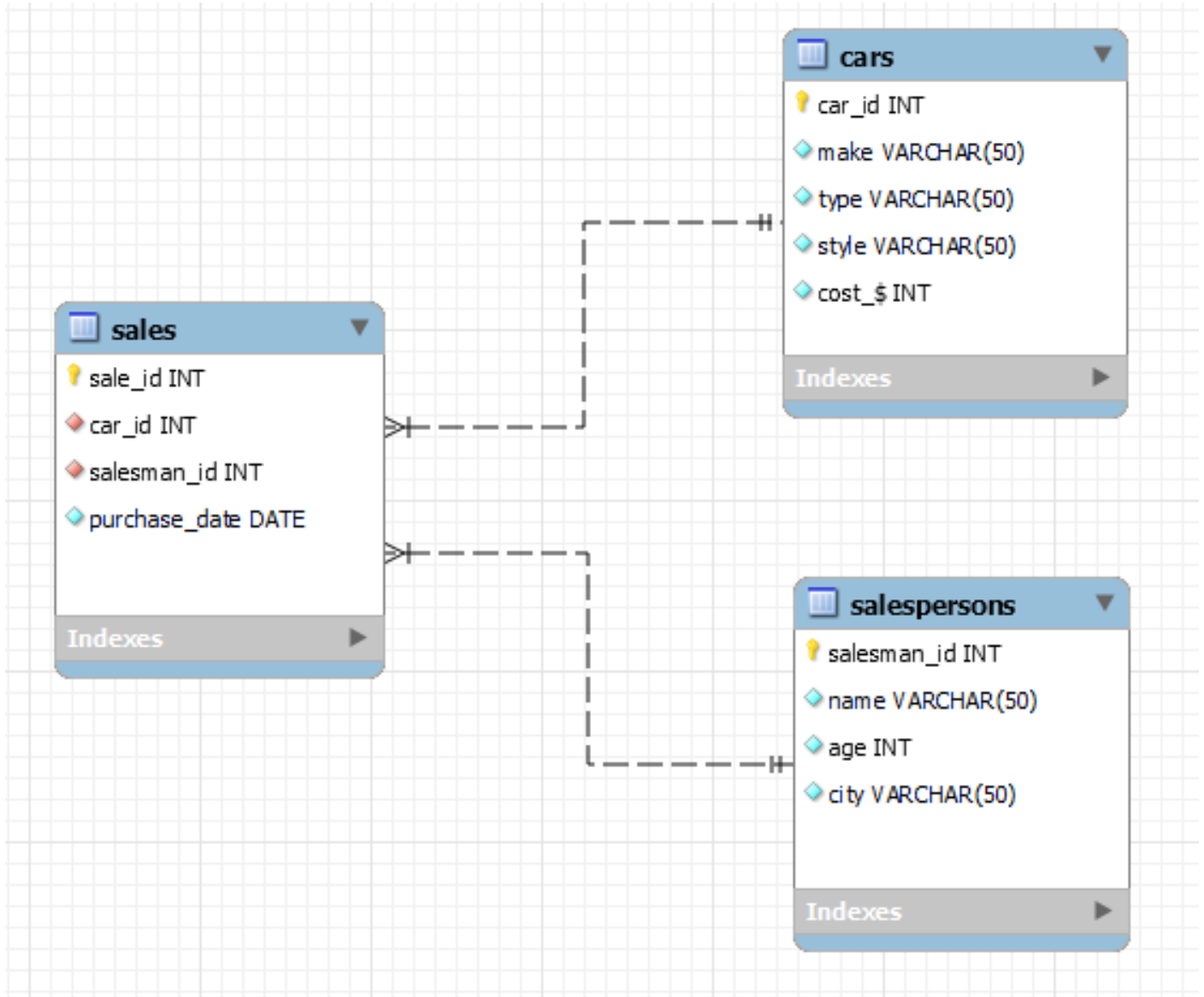
SQL Challenge 1: Steve's Car Showroom


cars
car_id INT
make VARCHAR(50)
type VARCHAR(50)
style VARCHAR(50)
cost_$ INT
Indexes
sales
sale_id INT
car_id INT
salesman_id INT
purchase_date DATE
Indexes
salespersons
salesman_id INT
name VARCHAR(50)
age INT
city VARCHAR(50)
Indexes

Tables

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

Q1. What are the details of all cars purchased in the year 2022?

```
select c.* from cars c
join sales s on c.car_id = s.car_id
where year(s.purchase_date) = 2022
```

82 %

Results | Messages

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

Q2. What is the total number of cars sold by each salesperson?

```sql
select sp.name,
count(s.car_id) as Total_car_sold from sales s
join salespersons sp on s.salesman_id = sp.salesman_id
group by sp.name
order by Total_car_sold
```

2 %

Results | Messages

	name	Total_car_sold
1	Lucy Chen	4
2	Emily Wong	5
3	John Smith	5
4	Tom Lee	6

Q3. What is the total revenue generated by each salesperson?

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

82 %

Results | Messages

	name	Total_revenue
1	Lucy Chen	171000
2	Emily Wong	177000
3	John Smith	181000
4	Tom Lee	253000

Q4. What are the details of the cars sold by each salesperson?

```
select sp.salesman_id,sp.name,c.car_id,c.make,c.style,c.type,c.cost_$
 from sales s
join salespersons sp on s.salesman_id = sp.salesman_id
join cars c on s.car_id = c.car_id
group by sp.salesman_id,sp.name,c.car_id,c.make,c.style,c.type,c.cost_$
order by sp.salesman_id
```

82 %

Results | Messages

	salesman_id	name	car_id	make	style	type	cost_$
1	1	John Smith	1	Honda	Sedan	Civic	30000
2	1	John Smith	2	Toyota	Hatchback	Corolla	25000
3	1	John Smith	3	Ford	SUV	Explorer	40000
4	1	John Smith	7	Mercedes	Coupe	C-Class	60000
5	1	John Smith	8	Nissan	Sedan	Altima	26000
6	2	Emily Wong	1	Honda	Sedan	Civic	30000
7	2	Emily Wong	2	Toyota	Hatchback	Corolla	25000
8	2	Emily Wong	4	Chevrolet	Coupe	Camaro	36000
9	2	Emily Wong	7	Mercedes	Coupe	C-Class	60000
10	2	Emily Wong	8	Nissan	Sedan	Altima	26000
11	3	Tom Lee	1	Honda	Sedan	Civic	30000
12	3	Tom Lee	2	Toyota	Hatchback	Corolla	25000
13	3	Tom Lee	3	Ford	SUV	Explorer	40000
14	3	Tom Lee	5	BMW	SUV	X5	55000
15	3	Tom Lee	6	Audi	Sedan	A4	48000
16	4	Lucy Chen	2	Toyota	Hatchback	Corolla	25000
17	4	Lucy Chen	4	Chevrolet	Coupe	Camaro	36000
18	4	Lucy Chen	5	BMW	SUV	X5	55000

Q5. What is the total revenue generated by each car type?

```sql
select s.car_id,c.make ,sum(c.cost_$) Total_car_revenue
from sales s
join cars c on s.car_id = c.car_id
group by s.car_id,c.make
```

82 %

Results | Messages

	car_id	make	Total_car_revenue
1	1	Honda	90000
2	2	Toyota	100000
3	3	Ford	80000
4	4	Chevrolet	72000
5	5	BMW	220000
6	6	Audi	48000
7	7	Mercedes	120000
8	8	Nissan	52000

Q6. What are the details of the cars sold in the year 2021 by salesperson 'Emily Wong'?

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

82 %

Results | Messages

	car_id	make	style	type	cost_$
1	2	Toyota	Hatchback	Corolla	25000
2	4	Chevrolet	Coupe	Camaro	36000

Q7. What is the total revenue generated by the sales of hatchback cars?

```sql
select c.style,
sum(c.cost_$) as hatchback_revenue
from sales s
join cars c on s.car_id = c.car_id
where c.style = 'Hatchback'
group by c.style
```

82 %

Results | Messages

	style	hatchback_revenue
1	Hatchback	100000

Q8. What is the total revenue generated by the sales of SUV cars in the year 2022?

```sql
select c.style,
sum(c.cost_$) as SUV_revenue
from sales s
join cars c on s.car_id = c.car_id
where c.style = 'SUV' and Year(s.purchase_date) = 2022
group by c.style
```

82 %

Results | Messages

	style	SUV_revenue
1	SUV	150000

Q9. What is the name and city of the salesperson who sold the most number of cars in the year 2023?

```sql
with cte as(
select sp.name,sp.city,count(s.car_id) as Total_car_sell,
ROW_NUMBER() over(order by count(s.car_id) desc) as rnk
from sales s
join salespersons sp on s.salesman_id = sp.salesman_id
where year(s.purchase_date) = 2023
group by sp.name,sp.city
)

select name,city, Total_car_sell from cte
where rnk = 1
```

82 %

Results | Messages

	name	city	Total_car_sell
1	Tom Lee	Seattle	2

Q10. What is the name and age of the salesperson who generated the highest revenue in the year 2022?

```sql
with cte as(
select sp.name,sp.age,sum(c.cost_$) as Total_revenue,
ROW_NUMBER() over(order by sum(c.cost_$) desc) as rnk
from sales s
join salespersons sp on s.salesman_id = sp.salesman_id
join cars c on s.car_id = c.car_id
where year(s.purchase_date) = 2022
group by sp.name,sp.age
)

select name,age, Total_revenue from cte
where rnk = 1
```

82 %

Results | Messages

	name	age	Total_revenue
1	Emily Wong	35	116000