



Challenge 1 – Steve's Car Showroom



 STEEL DATA



SQL CASE STUDY



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?



SQL



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 |

Questions



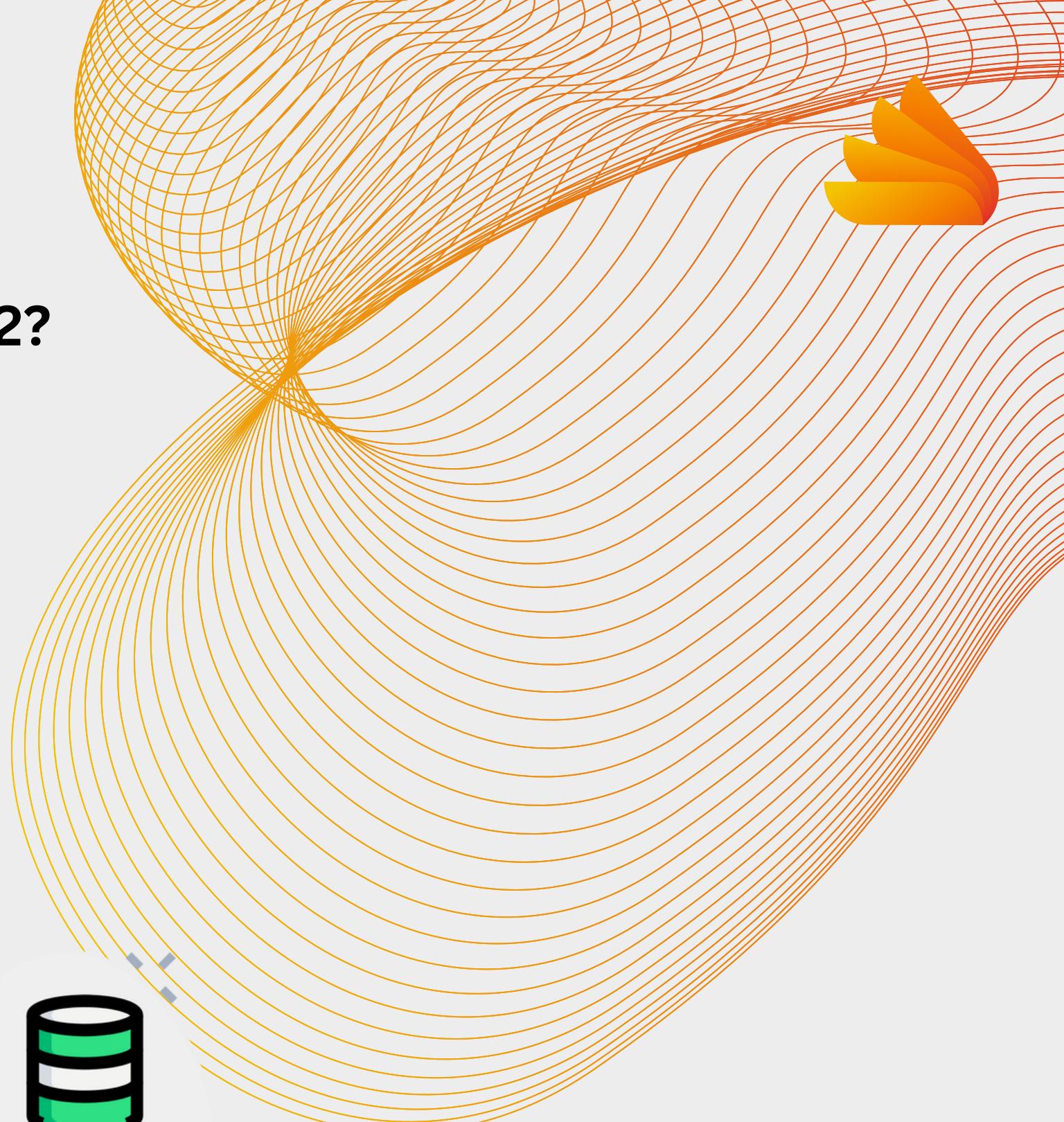
- 1. What are the **details of all cars purchased in the year 2022?**
- 2. What is the **total number of cars sold by each salesperson?**
- 3. What is the **total revenue generated by each salesperson?**
- 4. What are the **details of the cars sold by each salesperson?**
- 5. What is the **total revenue generated by each car type?**
- 6. What are the **details of the cars sold in the year 2021 by salesperson 'Emily Wong'?**
- 7. What is the **total revenue generated by the sales of hatchback cars?**
- 8. What is the **total revenue generated by the sales of SUV cars in the year 2022?**
- 9. What is the **name and city of the salesperson who sold the most number of cars in the year 2023?**
- 10. What is the **name and age of the salesperson who generated the highest revenue in the year 2022?**

Question 1:

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

```
SELECT  
c.car_id,c.make,c.model,c.type,c.style,c.cost_$,s.sale_id,  
s.salesman_id,s.purchase_date  
FROM cars c  
JOIN sales s ON c.car_id=s.car_id  
WHERE YEAR(s.purchase_date)=2022;
```

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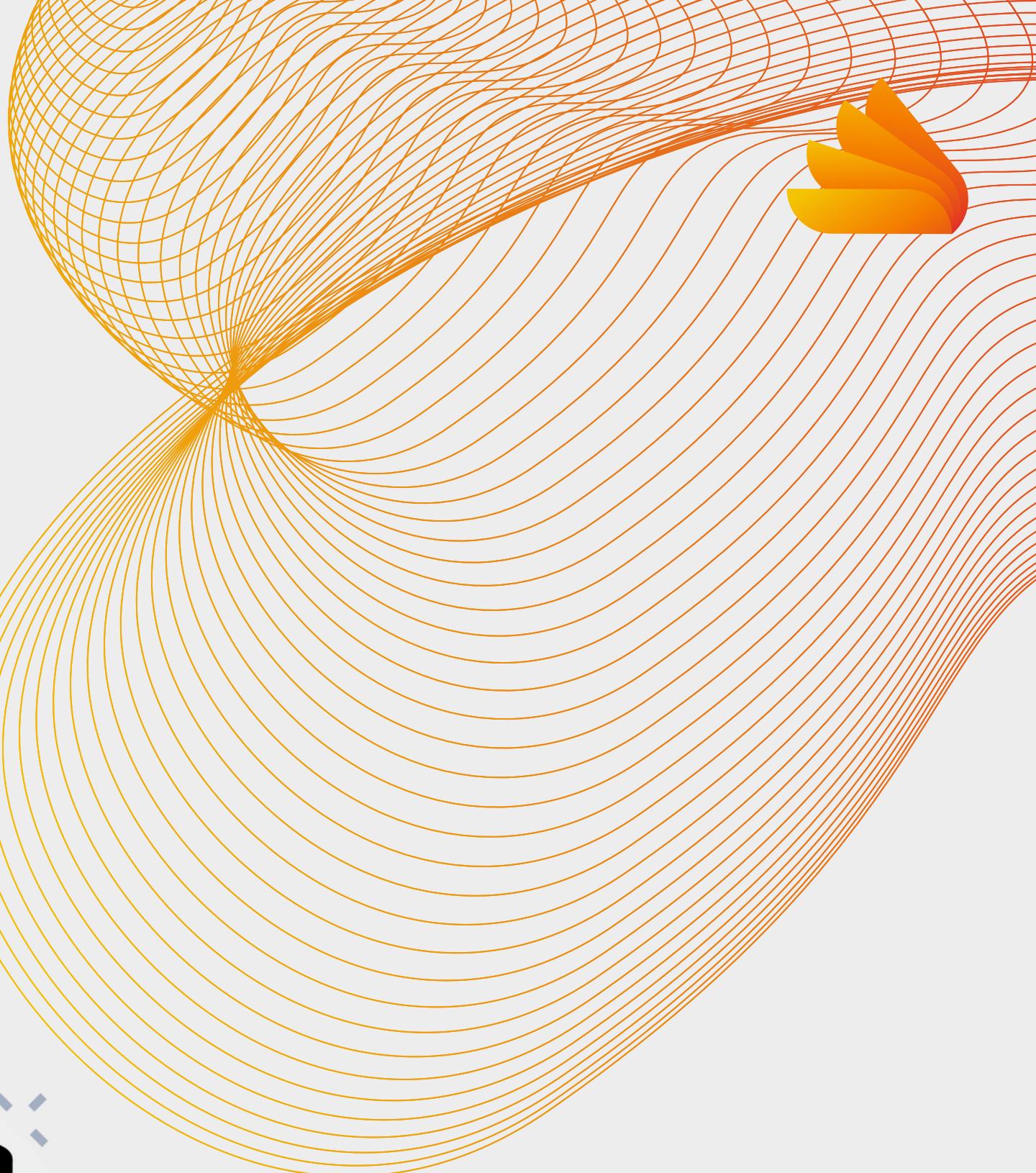
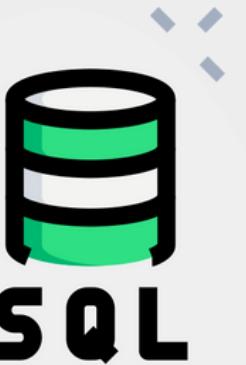
Question 2:

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



```
SELECT  
    s.salesman_id ,  
    sp.name as salesperson,  
    count(sale_id) AS total_cars_sold  
FROM salespersons sp  
JOIN sales s ON sp.salesman_id = s.salesman_id  
GROUP BY sp.name, s.salesman_id ;
```

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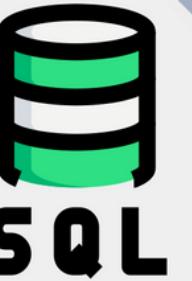
Question 3:

What is the total revenue generated by each salesperson?



```
SELECT  
    s.salesman_id , sp.name as salesperson,  
    SUM(cost$_) AS total_revenue FROM salespersons sp  
JOIN sales s ON sp.salesman_id = s.salesman_id  
JOIN cars c ON s.car_id=c.car_id  
GROUP BY sp.name, s.salesman_id ;
```

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Question 4:

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

```
SELECT  
sp.salesman_id , sp.name , c.car_id,c.make,  
c.type,c.style,c.cost_$  
FROM salespersons sp  
JOIN sales s ON sp.salesman_id=s.salesman_id  
JOIN cars c ON s.car_id=c.car_id  
GROUP BY s.salesman_id ,c.car_id,sp.name ;
```

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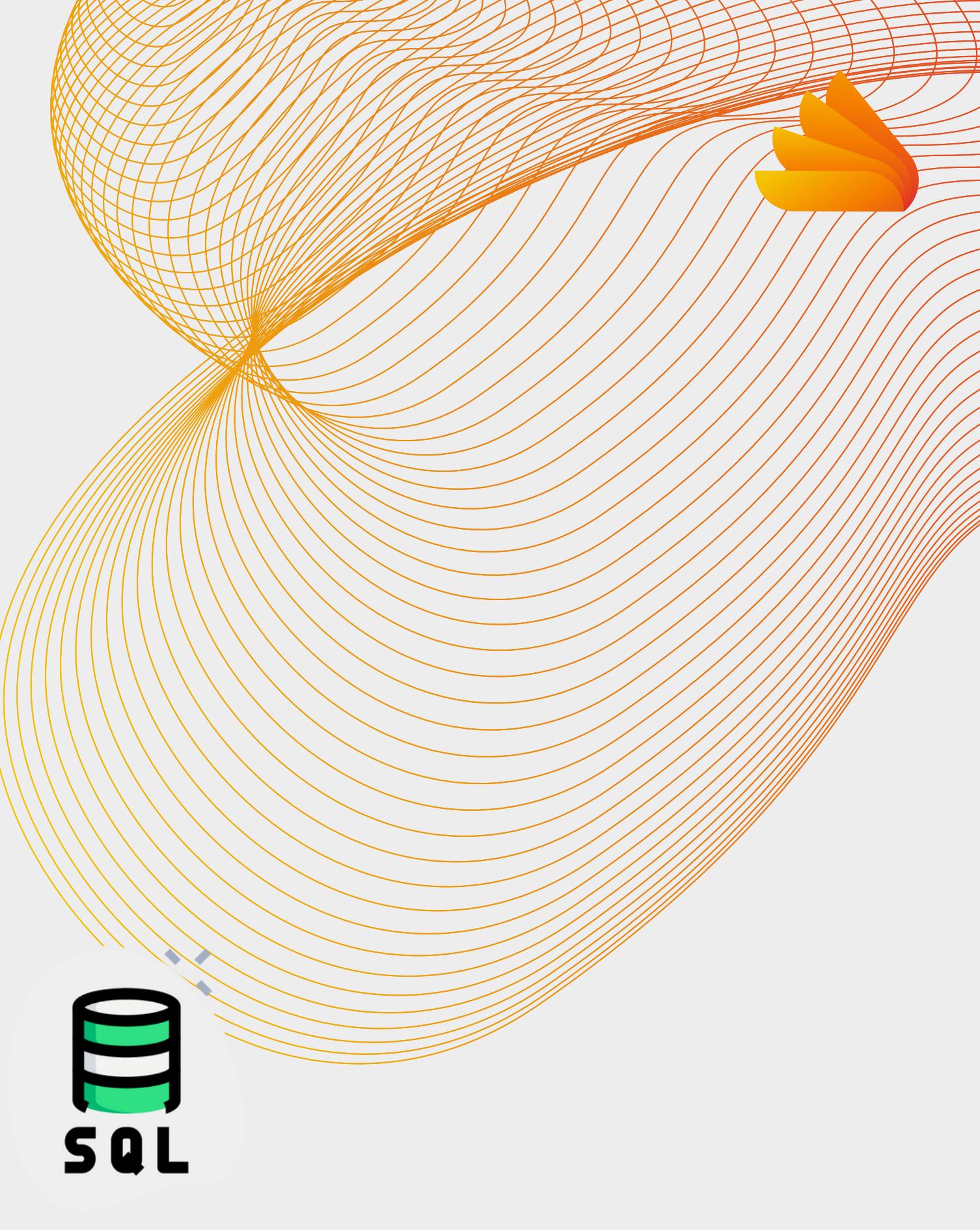
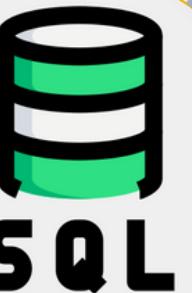
Question 5:

What is the total revenue generated by each car type?



```
SELECT  
c.car_id, c.type, sum(cost$_) AS total_revenue  
FROM cars c  
JOIN sales s ON c.car_id = s.car_id  
GROUP BY c.type, c.car_id;
```

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Question 6:

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



```
SELECT
    sp.name, s.salesman_id, c.car_id,
    c.make, c.type, c.style, c.cost_$
FROM cars c JOIN sales s ON c.car_id=s.car_id
JOIN salespersons sp ON s.sale_id = sp.salesman_id
WHERE YEAR(s.purchase_date)=2021
AND sp.name='Emily Wong';
```

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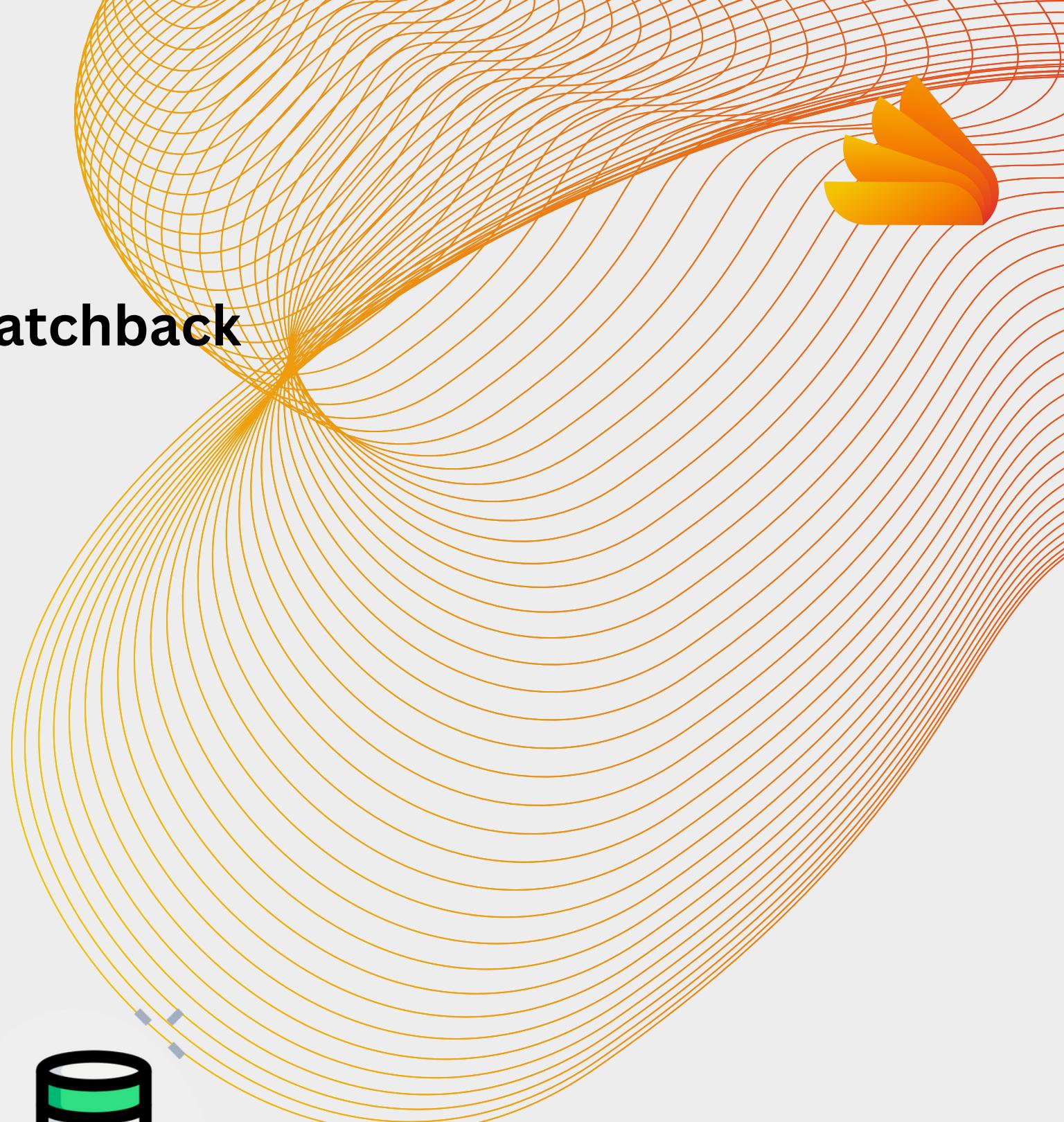


Question 7:

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

```
SELECT
    style ,sum(cost$_) AS revenue_from_hatchback_cars
FROM cars
JOIN sales ON cars.car_id=sales.car_id
WHERE style = "hatchback";
```

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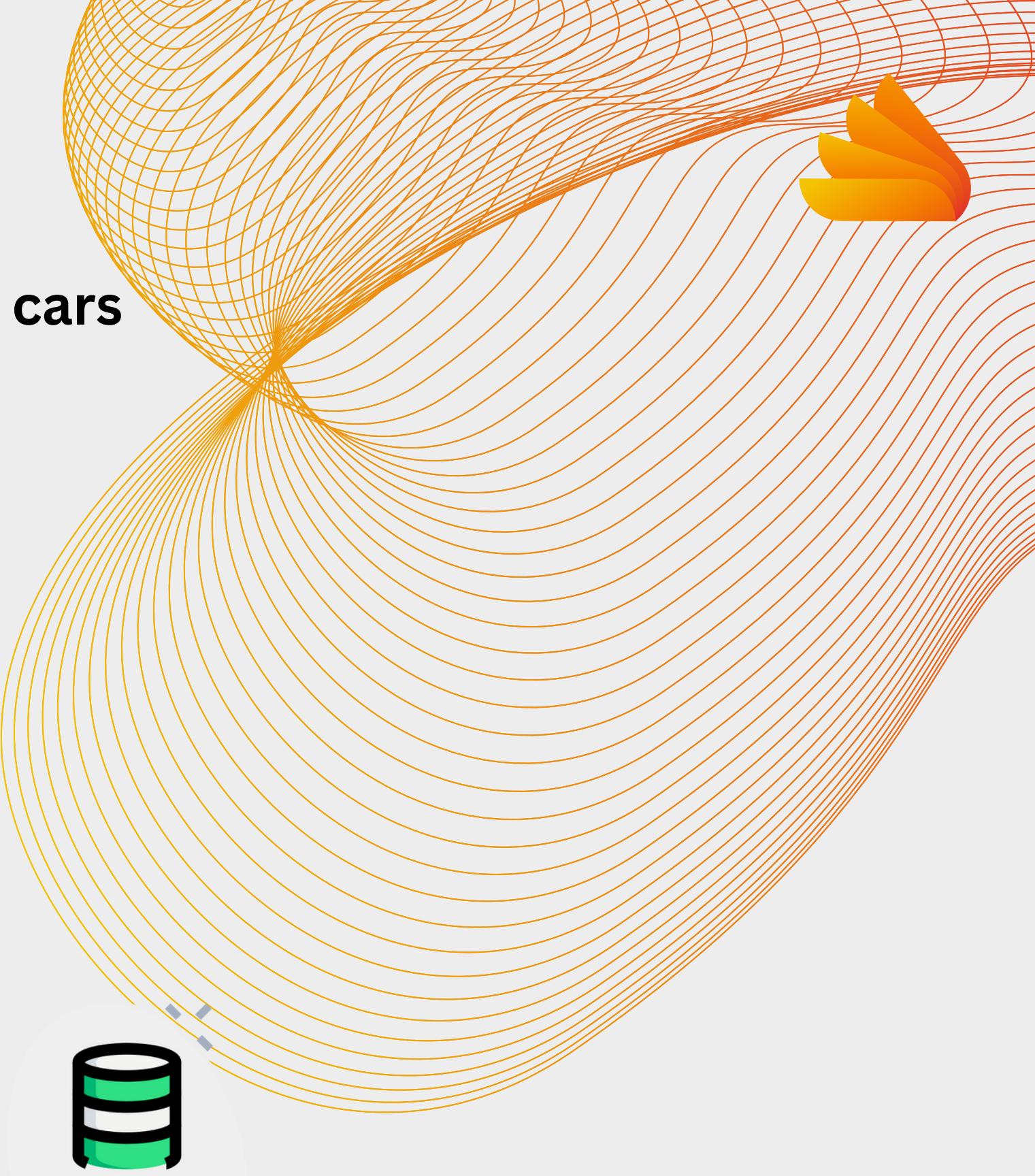


Question 8:

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

```
SELECT  
    sum(cost$_) AS revenue_from_SUV_cars_2022 FROM cars  
JOIN sales ON cars.car_id=sales.car_id  
WHERE style = "SUV"  
AND YEAR(purchase_date)=2022;
```

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Question 9 :

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

```
SELECT
    sp.salesman_id,sp.name,sp.city,
    count(s.sale_id) AS total_car_sold_2023
FROM salespersons sp
JOIN sales s ON sp.salesman_id=s.salesman_id
WHERE YEAR(s.purchase_date)=2023
GROUP BY sp.salesman_id,sp.name,sp.city
ORDER BY COUNT(s.sale_id) DESC LIMIT 1 ;
```



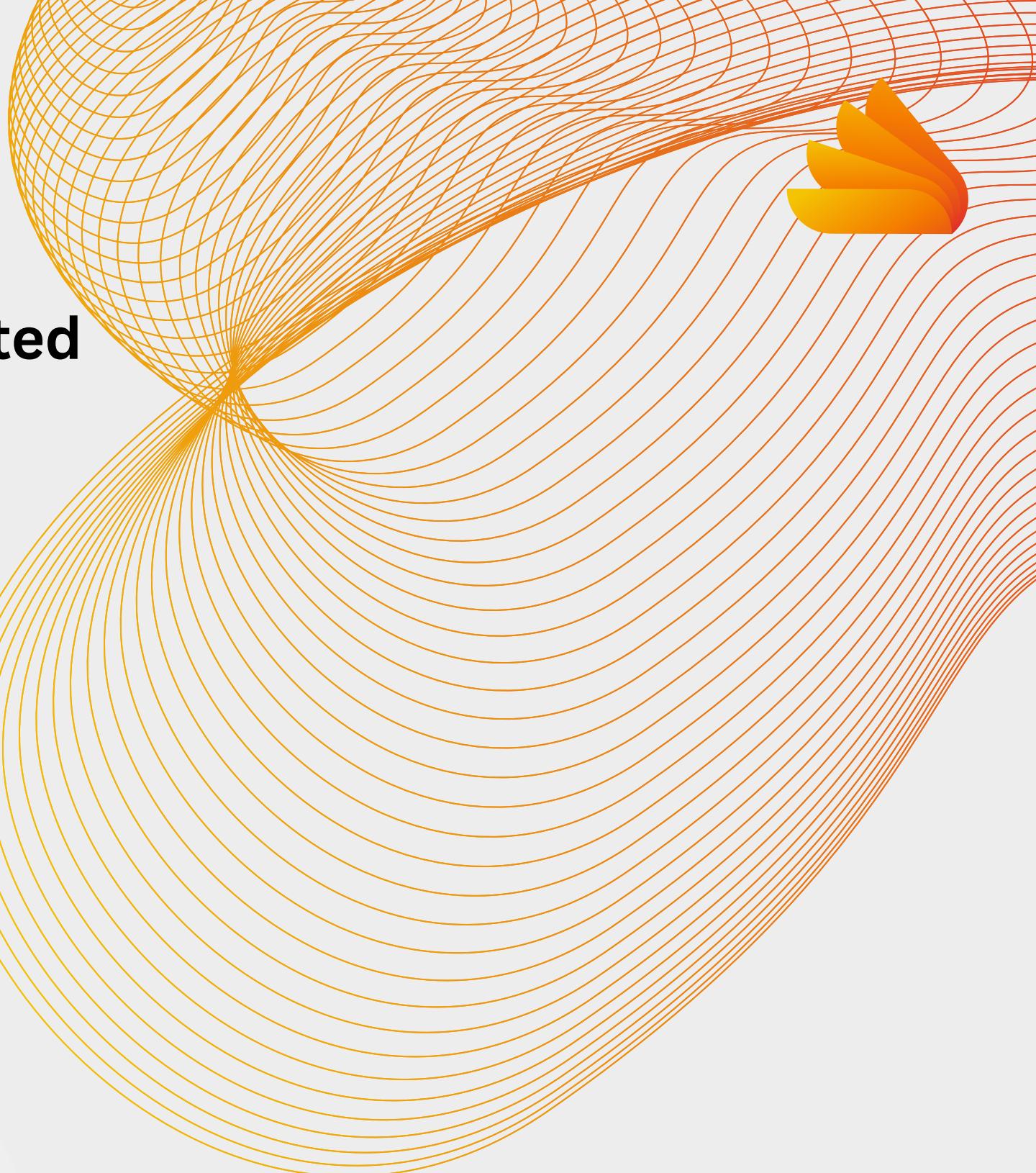
Question 10:

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



```
SELECT
    sp.name,sp.age,SUM(c.cost$_) AS highest_revenue_2022
    FROM salespersons sp JOIN sales s
    ON s.salesman_id=sp.salesman_id
    JOIN cars c ON s.car_id = c.car_id
    WHERE YEAR(s.purchase_date) = 2022
    GROUP BY sp.name,sp.age
    ORDER BY SUM(c.cost$_) DESC LIMIT 1;
```

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Thank You

