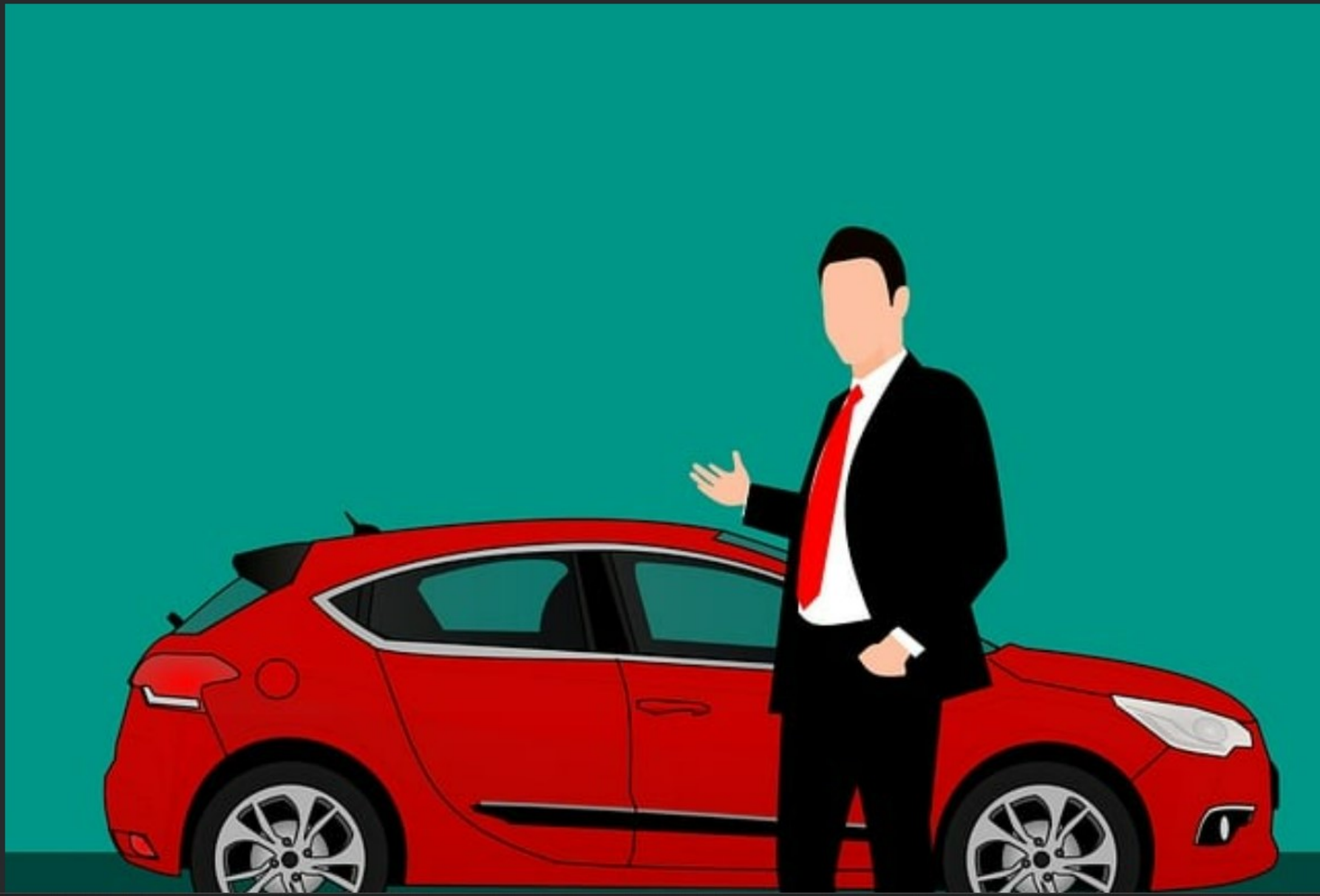
Challenge 1 - Steve's Car Showroom



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

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

SELECT c.*, s.sale_id, s.salesman_id, s.purchase_date
FROM
    sales s
    JOIN cars c
    ON s.car_id = c.car_id
WHERE
    YEAR(s.purchase_date) = 2022
ORDER BY
    s.purchase_date;
```

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

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

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

SELECT s.salesman_id, sp.name, COUNT(s.sale_id) AS Cars_Sold
FROM
    sales s
    JOIN salespersons sp
    ON s.salesman_id = sp.salesman_id
GROUP BY
    s.salesman_id
    , sp.name;
```

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

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

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

SELECT s.salesman_id, sp.name, CONCAT("$", SUM(c.cost_$)) AS Total_revenue_generated
FROM
    sales s
    JOIN cars c
    ON s.car_id = c.car_id
    JOIN salespersons sp
    ON s.salesman_id = sp.salesman_id
GROUP BY
    s.salesman_id
    , sp.name;
```

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

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

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

SELECT s.salesman_id
        , c.*
FROM
    sales s
    LEFT JOIN cars c
    ON s.car_id = c.car_id
ORDER BY
    s.salesman_id;
```

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

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

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

SELECT c.*, CONCAT("$", count(s.car_id) * c.cost_$) AS Total_revenue_generated
FROM
    sales s
    LEFT JOIN cars c
    ON s.car_id = c.car_id
GROUP BY
    s.car_id;
```

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

car_id	make	type	style	cost_$	Total_revenue_generated
1	Honda	Civic	Sedan	30000	$90000
2	Toyota	Corolla	Hatchback	25000	$100000
3	Ford	Explorer	SUV	40000	$80000
4	Chevrolet	Camaro	Coupe	36000	$72000
5	BMW	X5	SUV	55000	$220000
6	Audi	A4	Sedan	48000	$48000
7	Mercedes	C-Class	Coupe	60000	$120000
8	Nissan	Altima	Sedan	26000	$52000

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

SELECT c.*
FROM
    sales s
    JOIN cars c
    ON s.car_id = c.car_id
    JOIN salespersons sp
    ON s.salesman_id = sp.salesman_id
WHERE
    sp.name = "Emily Wong"
    AND YEAR(s.purchase_date) = 2021;
```

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

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

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

SELECT CONCAT("$", (count(s.car_id) * c.cost_$)) AS Total_revenue_from_hatchback
FROM
    sales s
    JOIN cars c
    ON s.car_id = c.car_id
WHERE
    c.style = "Hatchback"
GROUP BY
    s.car_id;
```

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

Total_revenue_from_hatchback
$100000

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

SELECT c.style
    , YEAR(s.purchase_date) AS year
    , CONCAT("$", SUM(c.cost_$)) AS Total_revenue_from_SUV_in_2022
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
    , YEAR(s.purchase_date);
```

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

style	year	Total_revenue_from_SUV_in_2022
SUV	2022	$150000

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

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

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

salesman_id	name	city	Count_of_cars_sold
3	Tom Lee	Seattle	2

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

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

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

salesman_id	name	city	Highest_revenue_generated
2	Emily Wong	San Fran	116000