

STEVE'S CAR SHOWROOM ANALYSIS

SQL CASE STUDY



**Created By
MAHESH G D**



MY ROLE

**STEVE RUNS A TOP-END CAR SHOWROOM
BUT HIS DATA ANALYST HAS JUST QUIT
AND LEFT HIM WITHOUT HIS CRUCIAL
INSIGHTS.**

**I AM GOING TO ANALYSE THE
FOLLOWING DATA TO PROVIDE HIM
WITH ALL THE ANSWERS HE REQUIRES.**

HERE ARE THE TABLES THAT 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?

```
3 SELECT C.*,S.sale_id,S.salesman_id,S.purchase_date
4 FROM sales as S
5 JOIN cars as C on C.car_id=S.car_id
6 WHERE YEAR(S.purchase_date) =2022
7 ORDER BY S.purchase_date;
```

OUTPUT

Query #1

Execution time: 1ms

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

2. WHAT IS THE TOTAL NUMBER OF CARS SOLD BY EACH SALESPERSON?

```
3 SELECT SP.*,COUNT(S.sale_id) AS TOTAL ,SP.salesman_id
4 FROM sales AS S
5 JOIN salespersons AS SP ON SP.salesman_id =S.salesman_id
6 GROUP BY SP.salesman_id;
```

OUTPUT

salesman_id	name	age	city	TOTAL
1	John Smith	28	New York	5
2	Emily Wong	35	San Fran	5
3	Tom Lee	42	Seattle	6
4	Lucy Chen	31	LA	4

3. WHAT IS THE TOTAL REVENUE GENERATED BY EACH SALESPERSON?

```
3 SELECT S.salesman_id,SP.name,SUM(C.cost_$) AS revenue
4 FROM sales AS S
5 JOIN salespersons AS SP ON SP.salesman_id =S.salesman_id
6 JOIN cars AS C ON C.car_id = S.car_id
7 GROUP BY SP.salesman_id,SP.name;
```


OUTPUT

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

4. WHAT ARE THE DETAILS OF THE CARS SOLD BY EACH SALESPERSON?

```
2 SELECT S.salesman_id,SP.name,C.*
3 FROM sales AS S
4 JOIN salespersons AS SP ON S.salesman_id =SP.salesman_id
5 JOIN cars as C ON C.car_id =S.car_id
6 ORDER BY S.salesman_id,C.car_id
```

OUTPUT

salesman_id	name	car_id	make	type	style	cost_
1	John Smith	1	Honda	Civic	Sedan	30000
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
1	John Smith	8	Nissan	Altima	Sedan	26000
2	Emily Wong	1	Honda	Civic	Sedan	30000
2	Emily Wong	2	Toyota	Corolla	Hatchback	25000
2	Emily Wong	4	Chevrolet	Camaro	Coupe	36000
2	Emily Wong	7	Mercedes	C-Class	Coupe	60000
2	Emily Wong	8	Nissan	Altima	Sedan	26000
3	Tom Lee	1	Honda	Civic	Sedan	30000
3	Tom Lee	2	Toyota	Corolla	Hatchback	25000

5. WHAT IS THE TOTAL REVENUE GENERATED BY EACH CAR TYPE?

```
3 SELECT C.type,S.car_id, SUM(C.cost_$) AS revenue
4 FROM cars AS C
5 JOIN sales AS S ON C.car_id = S.car_id
6 GROUP BY S.car_id ;
```

OUTPUT

type	car_id	revenue
Civic	1	90000
Corolla	2	100000
Explorer	3	80000
Camaro	4	72000
X5	5	220000
A4	6	48000
C-Class	7	120000
Altima	8	52000

6. WHAT ARE THE DETAILS OF THE CARS SOLD IN THE YEAR 2021 BY SALESPERSON 'EMILY WONG'?

```
3 SELECT C.make,C.type,C.style,C.cost_$,S.purchase_date,SP.name
4 FROM cars AS C
5 JOIN sales AS S ON C.car_id =S.car_id
6 JOIN salespersons AS SP ON S.salesman_id = SP.salesman_id
7 WHERE YEAR(S.purchase_date)=2021 AND SP.name = 'Emily Wong';
```


OUTPUT

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

7. WHAT IS THE TOTAL REVENUE GENERATED BY THE SALES OF HATCHBACK CARS?

```
3 SELECT SUM(C.cost_$) AS revenue
4 FROM cars AS C
5 JOIN
6 sales AS S ON C.car_id = S.car_id
7 WHERE C.style = "Hatchback";
```

OUTPUT

revenue
100000

8. WHAT IS THE TOTAL REVENUE GENERATED BY THE SALES OF SUV CARS IN THE YEAR 2022?

```
3 SELECT SUM(C.cost_$) AS revenue
4 FROM cars AS C
5 JOIN sales AS S ON C.car_id = S.car_id
6 WHERE C.style = "SUV" AND YEAR(purchase_date) = 2022;
```

OUTPUT

revenue
150000

9. WHAT IS THE NAME AND CITY OF THE SALESPERSON WHO SOLD THE MOST NUMBER OF CARS IN THE YEAR 2023?

```
3 SELECT SP.name,SP.city,COUNT(C.car_id)
4 FROM sales AS S
5 JOIN cars AS C ON C.car_id =S.car_id
6 JOIN salespersons AS SP ON S.salesman_id =SP.salesman_id
7 WHERE YEAR(S.purchase_date) =2023
8 GROUP BY SP.name,SP.city
9 ORDER BY COUNT(C.car_id) DESC
10 LIMIT 1;
```


OUTPUT

name	city	COUNT(C.car_id)
Tom Lee	Seattle	2

10. WHAT IS THE NAME AND AGE OF SALESPERSON WHO GENERATED THE HIGHEST REVENUE IN THE YEAR 2022?

```
3 SELECT SP.name,SP.age,SUM(C.cost_$) AS revenue
4 FROM salespersons AS SP
5 JOIN sales AS S ON SP.salesman_id = S.salesman_id
6 JOIN cars AS C ON C.car_id = S.car_id
7 WHERE YEAR(purchase_date) =2022
8 GROUP BY SP.name,SP.age
9 ORDER BY SUM(C.cost_$) DESC
10 LIMIT 1;
```

OUTPUT

name	age	revenue
Emily Wong	35	116000



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MAHESH G D**