SQL Challenge-1

[Steve's Car Showroom]

Dataset and challenge credit-Steel Data and Matthew Steel

Database: steves_car ;
Tables: sales, cars, salespersons.

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

Challenge intro

Steve runs a top-end car showroom but his data analyst has just quit and left him without his crucial insights.
Can you analyze the following data to provide him with all the answers he requires?

Query 1: What are the details of all cars purchased in the year 2022?

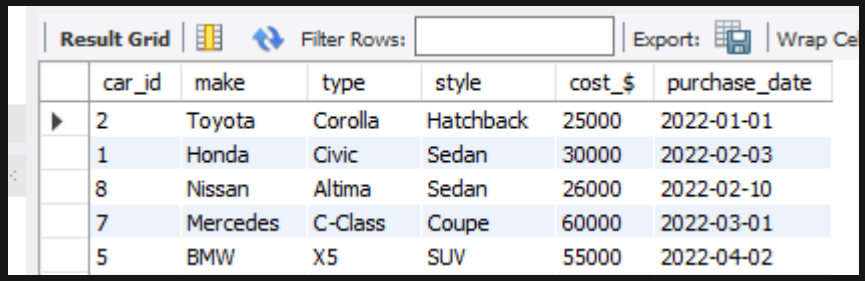
```
select c.car_id,c.make,c.type,c.style,c.cost_$,s.purchase_date

from cars as c inner join sales as s

on c.car_id=s.car_id

where s.purchase_date between '2022-01-01' and '2022-12-31' ;
```

Output 1:

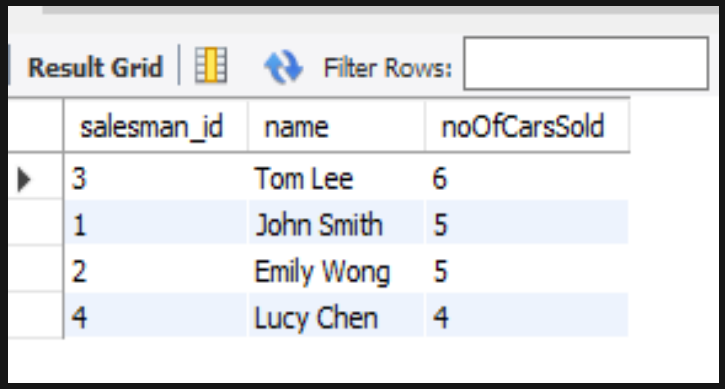


car_id	make	type	style	cost_$	purchase_date
2	Toyota	Corolla	Hatchback	25000	2022-01-01
1	Honda	Civic	Sedan	30000	2022-02-03
8	Nissan	Altima	Sedan	26000	2022-02-10
7	Mercedes	C-Class	Coupe	60000	2022-03-01
5	BMW	X5	SUV	55000	2022-04-02

Query 2: What is the total number of cars sold by each salesperson?

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

Output 2:

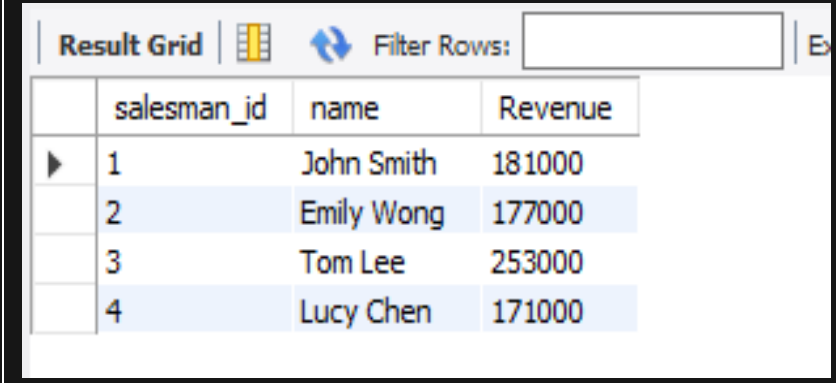


salesman_id	name	noOfCarsSold
3	Tom Lee	6
1	John Smith	5
2	Emily Wong	5
4	Lucy Chen	4

Query 3: What is the total revenue generated by each salesperson?

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

Output 3:

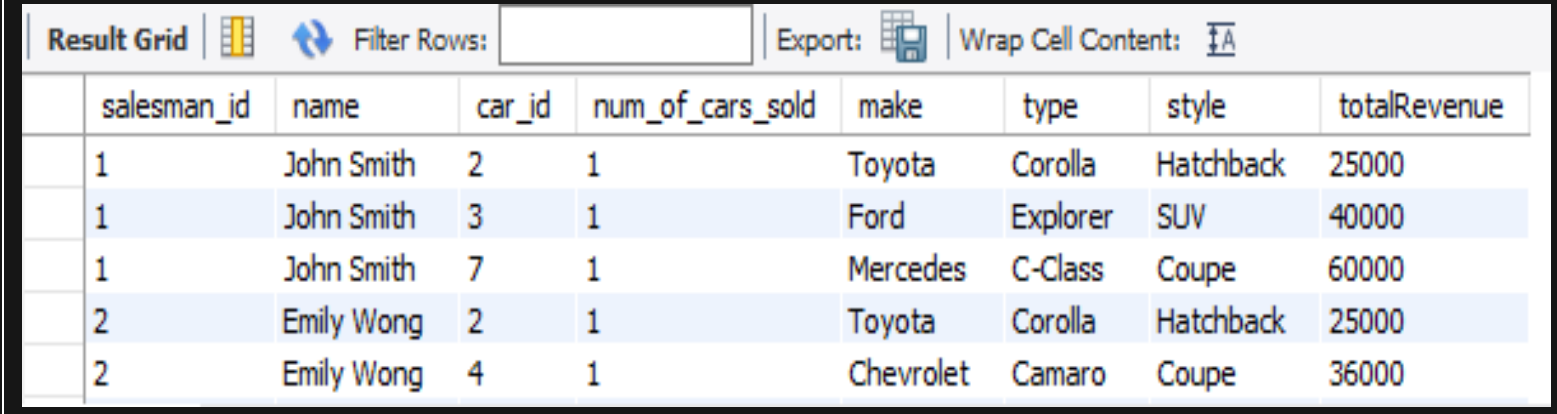


salesman_id	name	Revenue
1	John Smith	181000
2	Emily Wong	177000
3	Tom Lee	253000
4	Lucy Chen	171000

Query 4: What are the details of the cars sold by each salesperson?

```
select s.salesman_id,sp.name,c.car_id,count(s.car_id) as num_of_cars_sold,c.make,c.type,c.style,sum(c.cost_$) as totalRevenue
from sales as s inner join cars as c
on s.car_id=c.car_id
inner join salespersons as sp
on sp.salesman_id=s.salesman_id
group by s.salesman_id,s.car_id ;
```

Output 4:



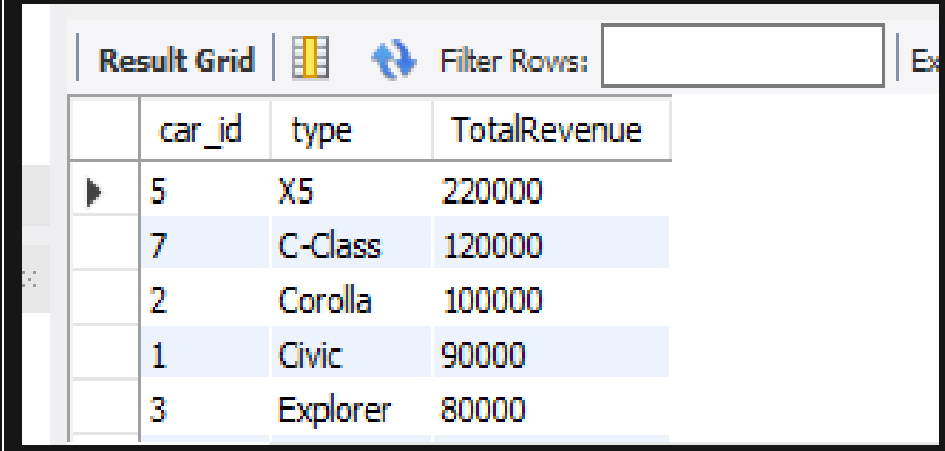
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

salesman_id	name	car_id	num_of_cars_sold	make	type	style	totalRevenue
1	John Smith	2	1	Toyota	Corolla	Hatchback	25000
1	John Smith	3	1	Ford	Explorer	SUV	40000
1	John Smith	7	1	Mercedes	C-Class	Coupe	60000
2	Emily Wong	2	1	Toyota	Corolla	Hatchback	25000
2	Emily Wong	4	1	Chevrolet	Camaro	Coupe	36000

Query 5: What is the total revenue generated by each car type?

```
select s.car_id, c.type,sum(c.cost_$) TotalRevenue
from cars as c inner join sales as s
on s.car_id=c.car_id
group by s.car_id,c.type
order by TotalRevenue desc;
```

Output 5:



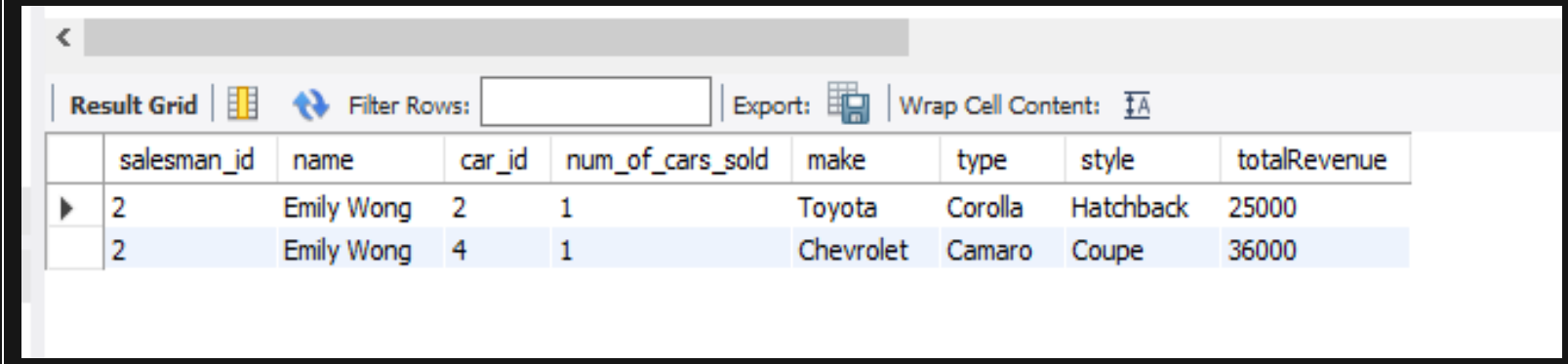
Result Grid | Filter Rows:

car_id	type	TotalRevenue
5	X5	220000
7	C-Class	120000
2	Corolla	100000
1	Civic	90000
3	Explorer	80000

Query 6: What are the details of the cars sold in the year 2021 by salesperson 'Emily Wong'?

```
select s.salesman_id,sp.name,c.car_id,count(s.car_id) as num_of_cars_sold,c.make,c.type,c.style,
sum(c.cost_$) as totalRevenue
from sales as s inner join cars as c
on s.car_id=c.car_id
inner join salespersons as sp
on sp.salesman_id=s.salesman_id
where sp.name='Emily Wong' and Year(purchase_date)=2021
group by s.salesman_id,s.car_id ;
```

Output 6:

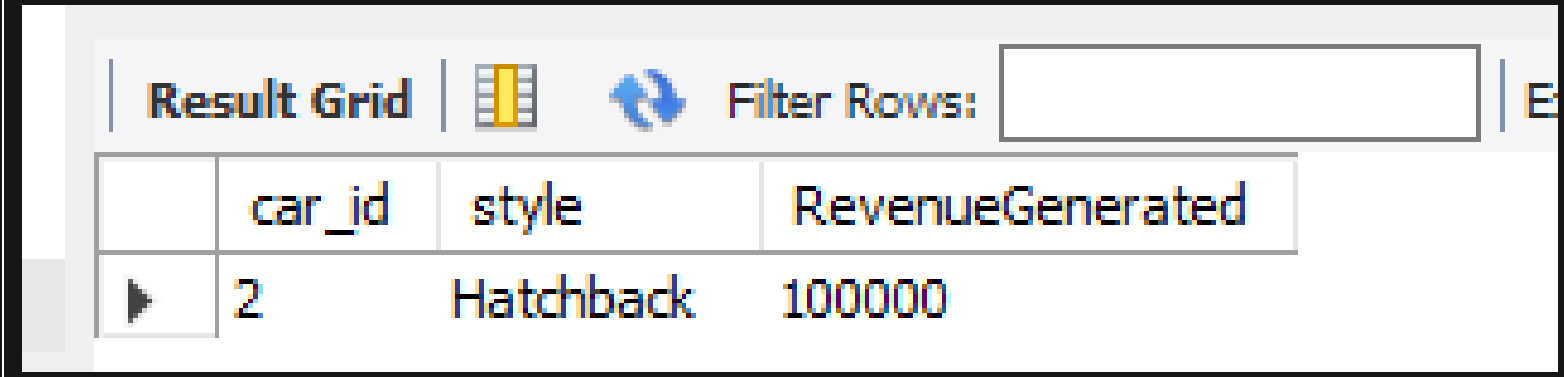


salesman_id	name	car_id	num_of_cars_sold	make	type	style	totalRevenue
2	Emily Wong	2	1	Toyota	Corolla	Hatchback	25000
2	Emily Wong	4	1	Chevrolet	Camaro	Coupe	36000

Query 7: What is the total revenue generated by the sales of hatchback cars?

```
select s.car_id,c.style,sum(cost_$) as RevenueGenerated
from sales as s inner join cars as c
on s.car_id=c.car_id
where c.style= 'Hatchback'
Group by s.car_id;
```

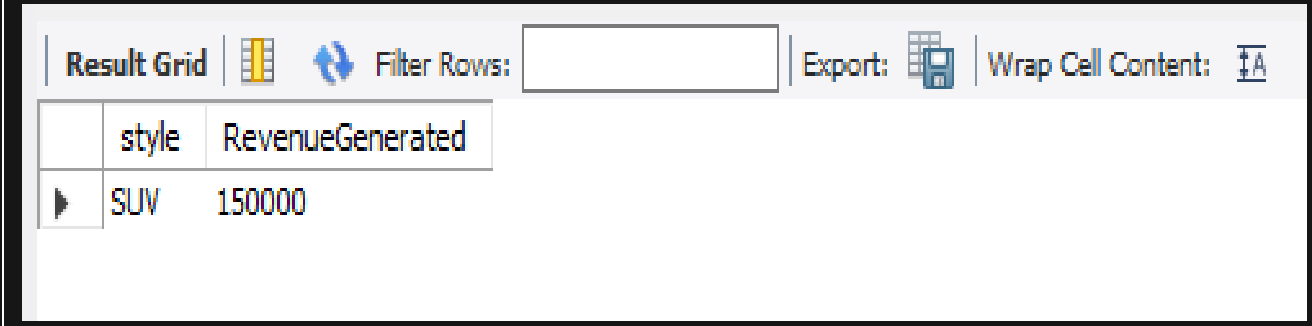
Output 7:



Query 8: What is the total revenue generated by the sales of SUV cars in the year 2022?

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

Output 8:

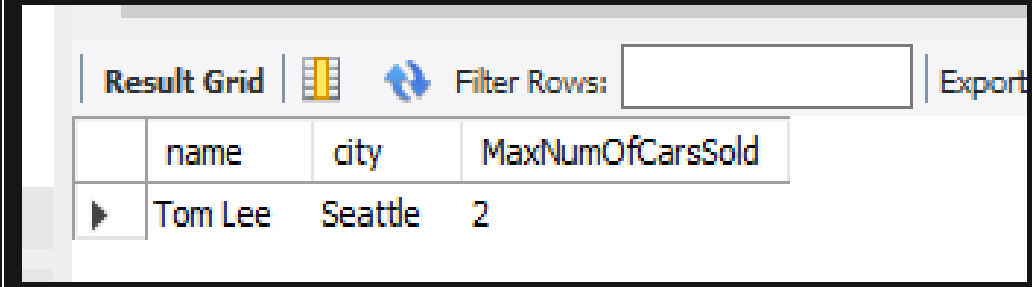


style	RevenueGenerated
SUV	150000

Query 9: What is the name and city of the salesperson who sold the most number of cars in the year 2023?

```
select sp.name,sp.city,count(s.car_id) as MaxNumOfCarsSold
from salespersons as sp inner join sales as s
on sp.salesman_id=s.salesman_id
where Year(s.purchase_date)='2023'
Group by sp.city,sp.name
order by MaxNumOfCarsSold desc
limit 1 ;
```

Output 9:



Query 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 MaximumRevenue
from salespersons as sp inner join sales as s
on sp.salesman_id=s.salesman_id
inner join cars as c
on s.car_id=c.car_id
where Year(s.purchase_date)='2022'
Group by sp.age,sp.name
order by  MaximumRevenue desc
limit 1 ;
```

Output 10: