**Challenge 1 - Steve's Car Showroom**

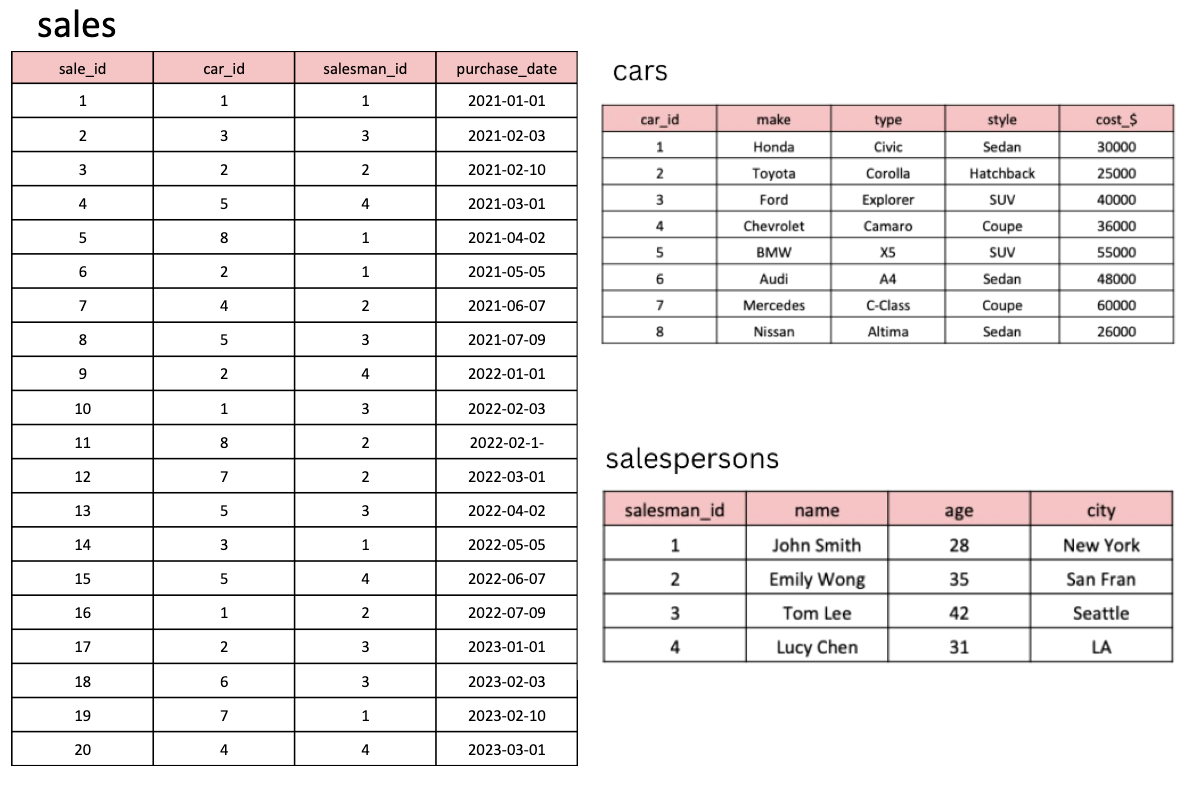


**Intro**

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?

**Tables**



CREATE TABLE cars (

car\_id INT PRIMARY KEY,

make VARCHAR(50),

type VARCHAR(50),

style VARCHAR(50),

cost\_$ INT

);

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INSERT INTO cars (car\_id, make, type, style, cost\_$)

VALUES (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);

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CREATE TABLE salespersons (

salesman\_id INT PRIMARY KEY,

name VARCHAR(50),

age INT,

city VARCHAR(50)

);

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INSERT INTO salespersons (salesman\_id, name, age, city)

VALUES (1, 'John Smith', 28, 'New York'),

(2, 'Emily Wong', 35, 'San Fran'),

(3, 'Tom Lee', 42, 'Seattle'),

(4, 'Lucy Chen', 31, 'LA');

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CREATE TABLE sales (

sale\_id INT PRIMARY KEY,

car\_id INT,

salesman\_id INT,

purchase\_date DATE,

FOREIGN KEY (car\_id) REFERENCES cars(car\_id),

FOREIGN KEY (salesman\_id) REFERENCES salespersons(salesman\_id)

);

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INSERT INTO sales (sale\_id, car\_id, salesman\_id, purchase\_date)

VALUES (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, '2022-02-10'),

(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');

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

select \*

from cars c

join sales s on c.car\_id=s.car\_id

WHERE YEAR(s.purchase\_date)=2022;

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

select sp.salesman\_id, sp.name, count(s.sale\_id) as cars\_sold

from salespersons sp join sales s

on sp.salesman\_id=s.salesman\_id

group by s.salesman\_id

order by cars\_sold desc;

#3. What is the total revenue generated by each salesperson?

select sp.salesman\_id, sp.name, sum(c.cost\_$) as revenue\_generated

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

order by revenue\_generated desc;

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

select sp.\*, c.\*

from salespersons sp join sales s

on sp.salesman\_id=s.salesman\_id

join cars c

on s.car\_id=c.car\_id;

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

select c.type, sum(c.cost\_$) as revenue\_generated

from sales s

join cars c

on s.car\_id=c.car\_id

group by c.type

order by revenue\_generated desc;

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

select s.salesman\_id, sp.name, c.\*

from salespersons sp join sales s

on sp.salesman\_id=s.salesman\_id

join cars c

on s.car\_id=c.car\_id

where year(s.purchase\_date)=2021 and sp.name='Emily Wong';

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

select c.style, sum(c.cost\_$) as revenue\_generated

from sales s

join cars c

on s.car\_id=c.car\_id

where c.style='Hatchback';

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

select c.style, sum(c.cost\_$) as revenue\_generated

from sales s

join cars c

on s.car\_id=c.car\_id

where c.style='SUV' and year(purchase\_date)=2022;

#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.sale\_id) as cars\_sold

from salespersons sp join sales s

on sp.salesman\_id=s.salesman\_id

where year(s.purchase\_date)=2023

group by s.salesman\_id

order by cars\_sold desc limit 1;

#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 revenue\_generated

from salespersons sp join sales s

on sp.salesman\_id=s.salesman\_id

join cars c

on s.car\_id=c.car\_id

where year(purchase\_date)=2022

group by s.salesman\_id

order by revenue\_generated desc limit 1;