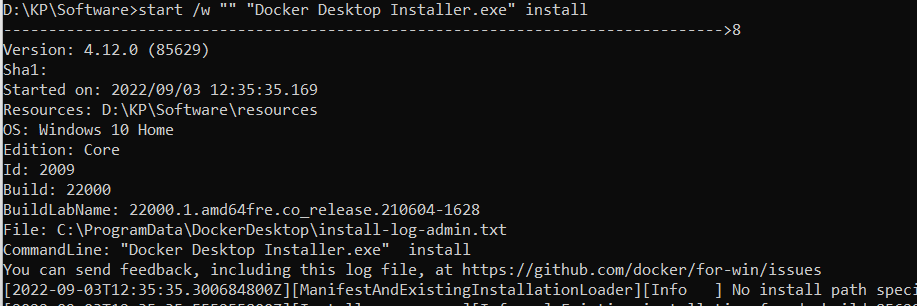
## Section 2: Databases

### Download and install docker desktop for windows

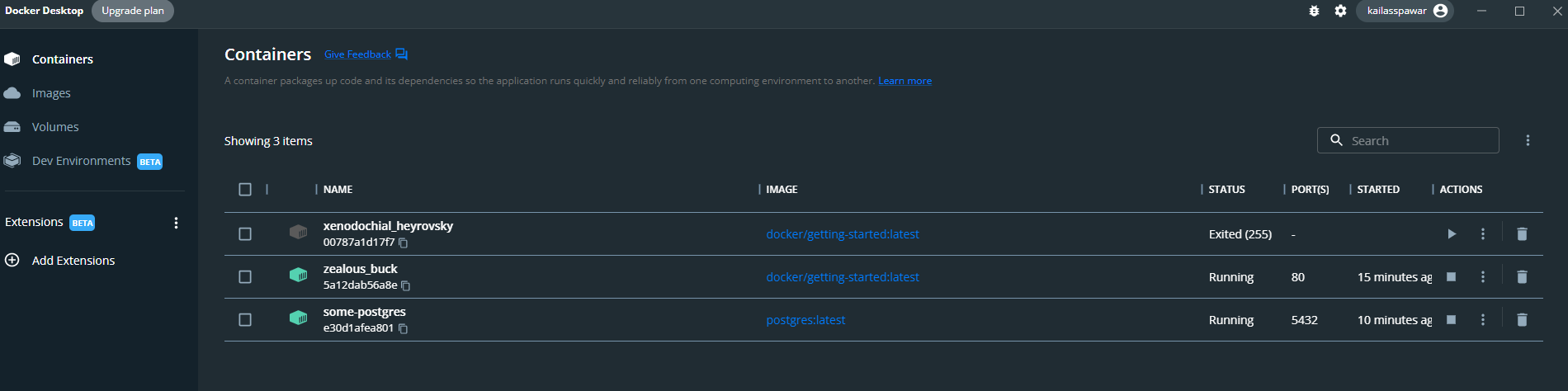
Download docker desktop installer from docker official site.

### Open cmd and cd to location where installer is copied and execute below command

start /w "" "Docker Desktop Installer.exe" install

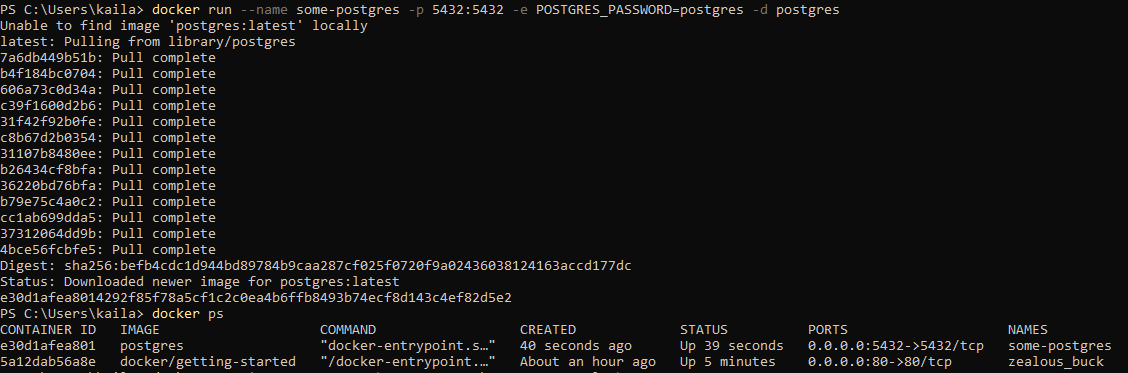


### Login to docker hub and start container

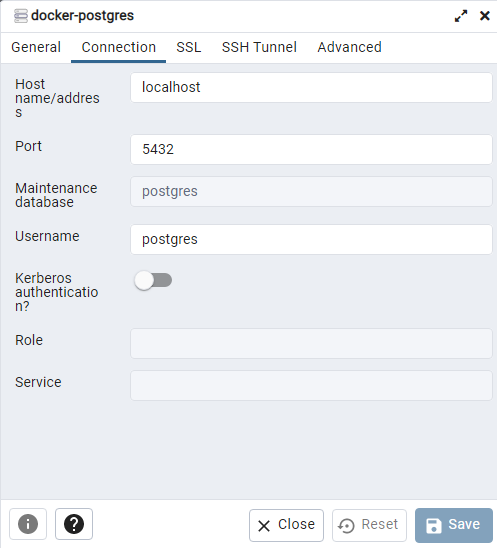


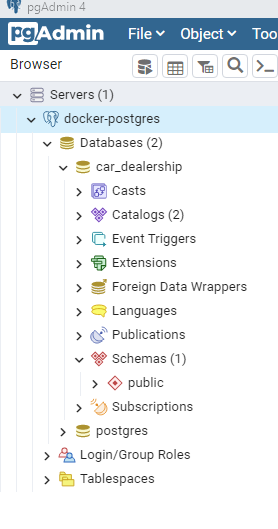
### Open PowerShell login to docker hub and execute below command to install postgres

docker run --name some-postgres -p 5432:5432 -e POSTGRES\_PASSWORD=postgres -d postgres

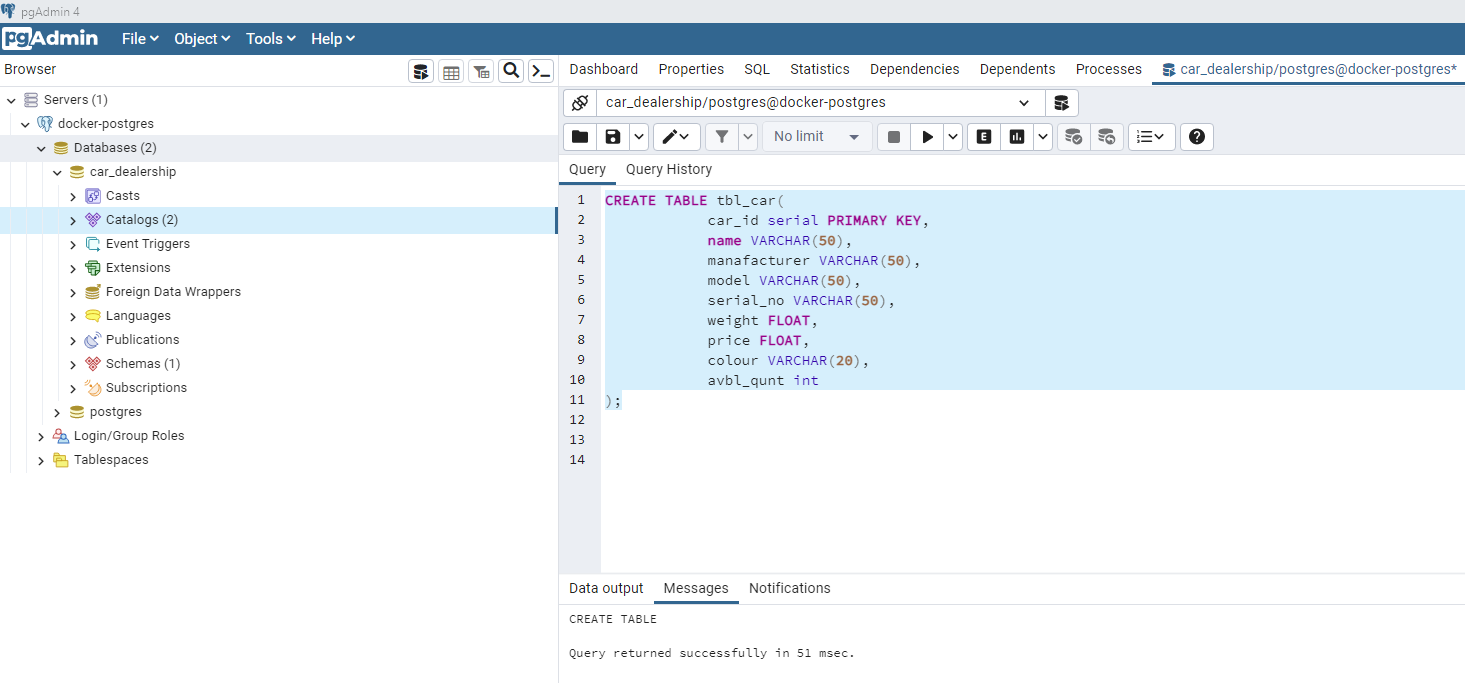


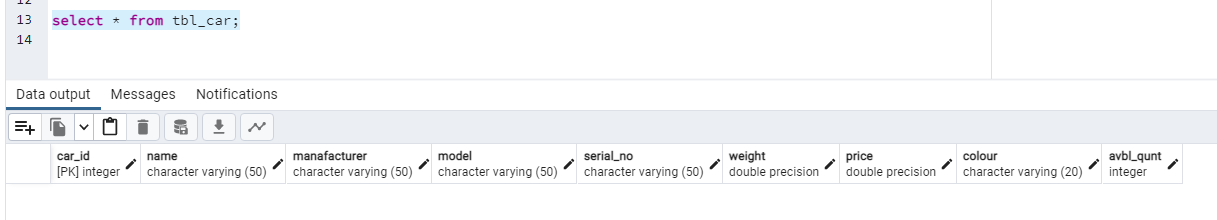
### Once Postgres is installed, Download and install PgAdmin to connect docker imaged postgres.

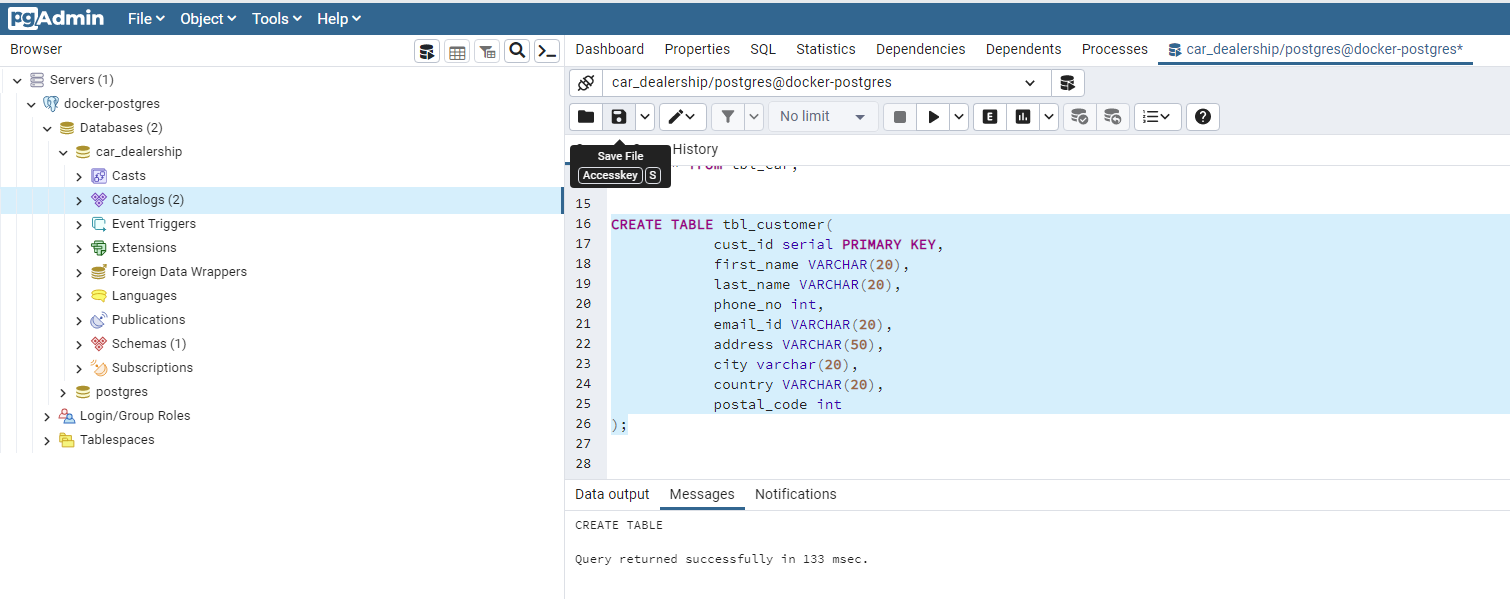


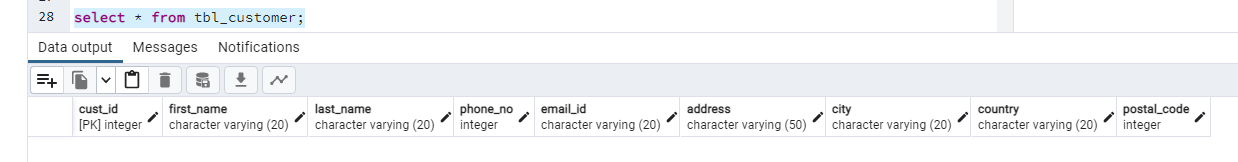


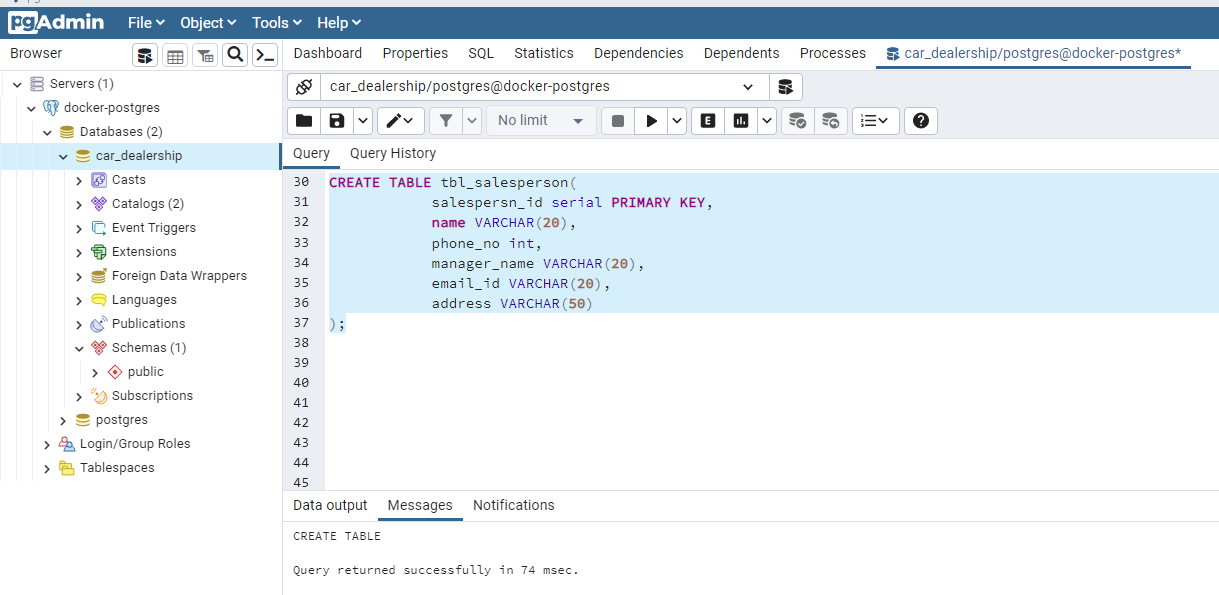
### Create the tables required to solve this challenge

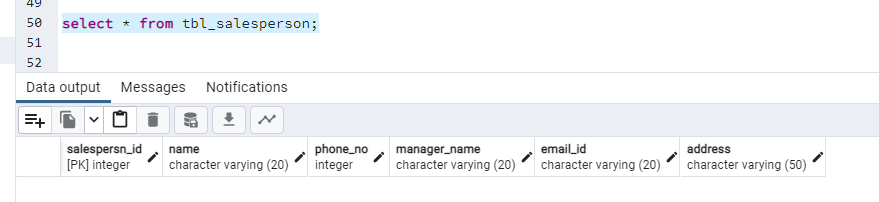


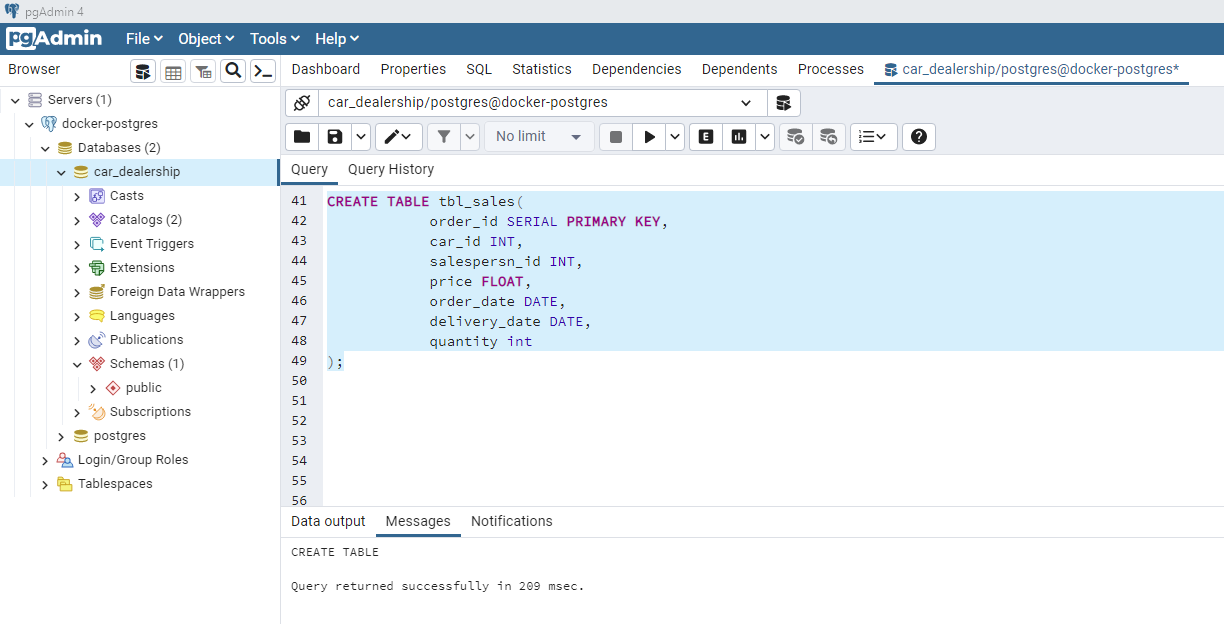


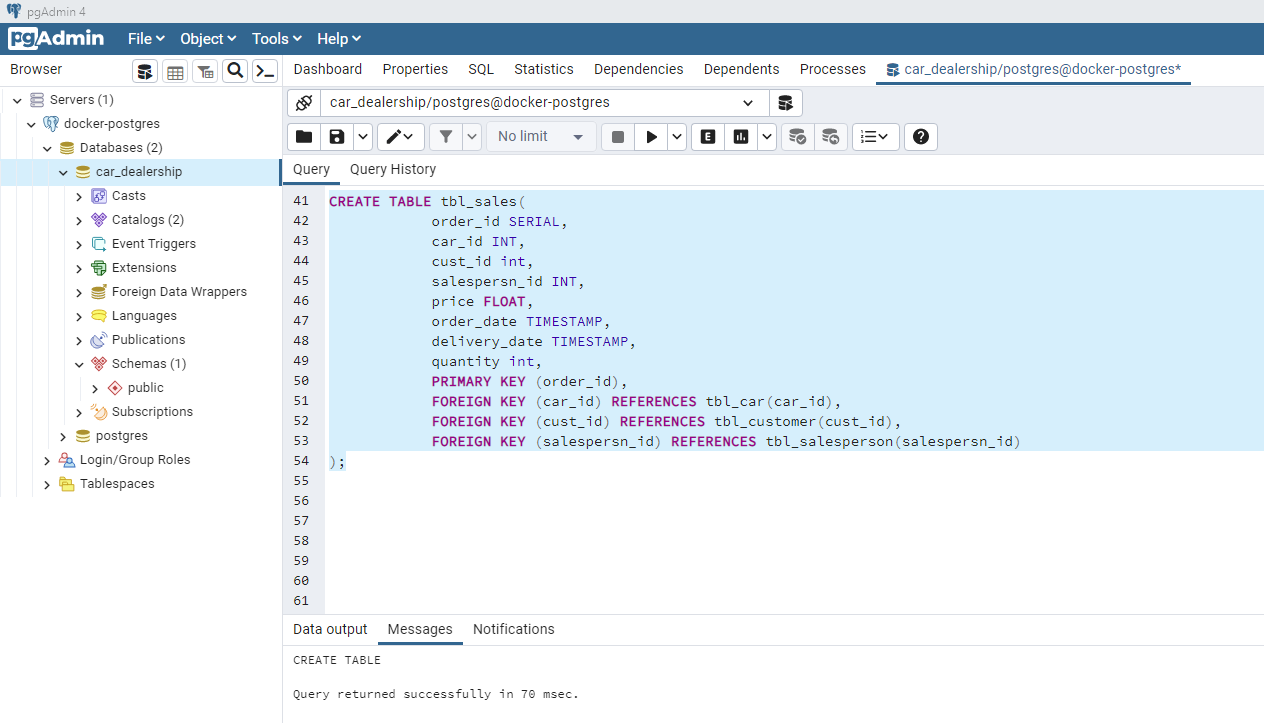


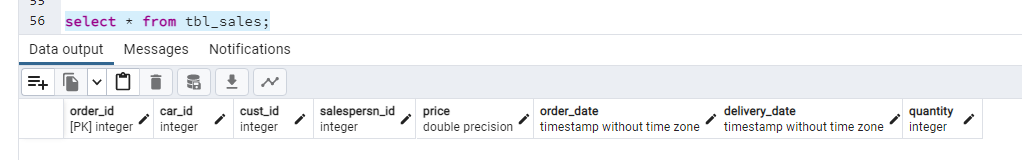










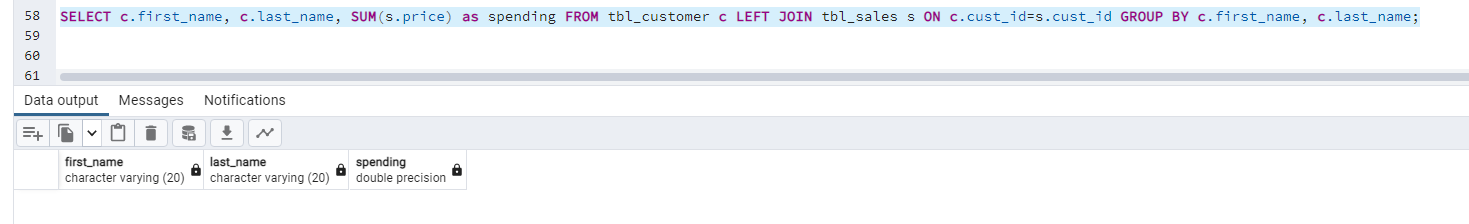


### DDL and select statement of all these tables

|  |
| --- |
| CREATE TABLE tbl\_car(  car\_id serial PRIMARY KEY,  name VARCHAR(50),  manafacturer VARCHAR(50),  model VARCHAR(50),  serial\_no VARCHAR(50),  weight FLOAT,  price FLOAT,  colour VARCHAR(20),  avbl\_qunt int  );  select \* from tbl\_car;  CREATE TABLE tbl\_customer(  cust\_id serial PRIMARY KEY,  first\_name VARCHAR(20),  last\_name VARCHAR(20),  phone\_no int,  email\_id VARCHAR(20),  address VARCHAR(50),  city varchar(20),  country VARCHAR(20),  postal\_code int  );  select \* from tbl\_customer;  CREATE TABLE tbl\_salesperson(  salespersn\_id serial PRIMARY KEY,  name VARCHAR(20),  phone\_no int,  manager\_name VARCHAR(20),  email\_id VARCHAR(20),  address VARCHAR(50)  );  select \* from tbl\_salesperson;  CREATE TABLE tbl\_sales(  order\_id SERIAL,  car\_id INT,  cust\_id int,  salespersn\_id INT,  price FLOAT,  order\_date TIMESTAMP,  delivery\_date TIMESTAMP,  quantity int,  PRIMARY KEY (order\_id),  FOREIGN KEY (car\_id) REFERENCES tbl\_car(car\_id),  FOREIGN KEY (cust\_id) REFERENCES tbl\_customer(cust\_id),  FOREIGN KEY (salespersn\_id) REFERENCES tbl\_salesperson(salespersn\_id)  );  select \* from tbl\_sales; |

### First question - I want to know the list of our customers and their spending.

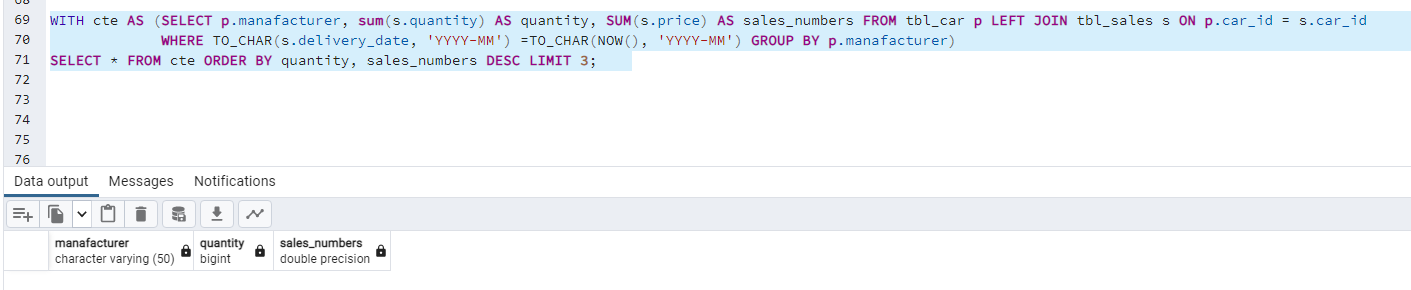
|  |
| --- |
| SELECT c.first\_name, c.last\_name, SUM(s.price) as spending FROM tbl\_customer c LEFT JOIN tbl\_sales s ON c.cust\_id=s.cust\_id GROUP BY c.first\_name, c.last\_name; |



### 2nd Question - I want to find out the top 3 car manufacturers that customers bought by sales (quantity) and the sales number for it in the current month.

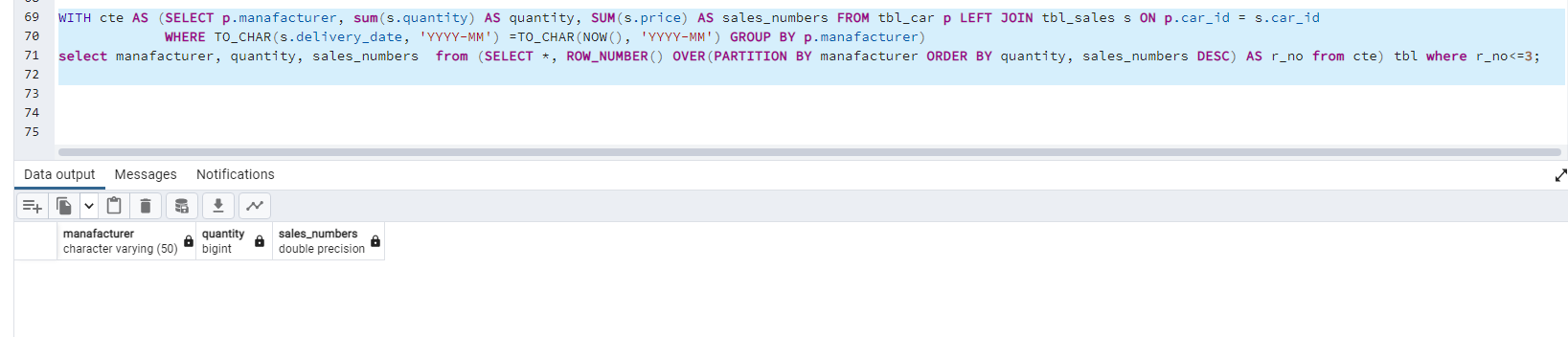
#### Method – 1

|  |
| --- |
| WITH cte AS (SELECT p.manafacturer, sum(s.quantity) AS quantity, SUM(s.price) AS sales\_numbers FROM tbl\_car p LEFT JOIN tbl\_sales s ON p.car\_id = s.car\_id  WHERE TO\_CHAR(s.delivery\_date, 'YYYY-MM') =TO\_CHAR(NOW(), 'YYYY-MM') GROUP BY p.manafacturer)  SELECT \* FROM cte ORDER BY quantity, sales\_numbers DESC LIMIT 3; |



#### Method – 2

|  |
| --- |
| WITH cte AS (SELECT p.manafacturer, sum(s.quantity) AS quantity, SUM(s.price) AS sales\_numbers FROM tbl\_car p LEFT JOIN tbl\_sales s ON p.car\_id = s.car\_id  WHERE TO\_CHAR(s.delivery\_date, 'YYYY-MM') =TO\_CHAR(NOW(), 'YYYY-MM') GROUP BY p.manafacturer)  select manafacturer, quantity, sales\_numbers from (SELECT \*, ROW\_NUMBER() OVER(PARTITION BY manafacturer ORDER BY quantity, sales\_numbers DESC) AS r\_no from cte) tbl where r\_no<=3; |



1. ERD Diagram

Sorry, since I don’t have any software to draw ERD I used MS Word to prepare ERD

