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Cortana

ASSIGMENT 3 ABOUT SQL

SQL 3.1

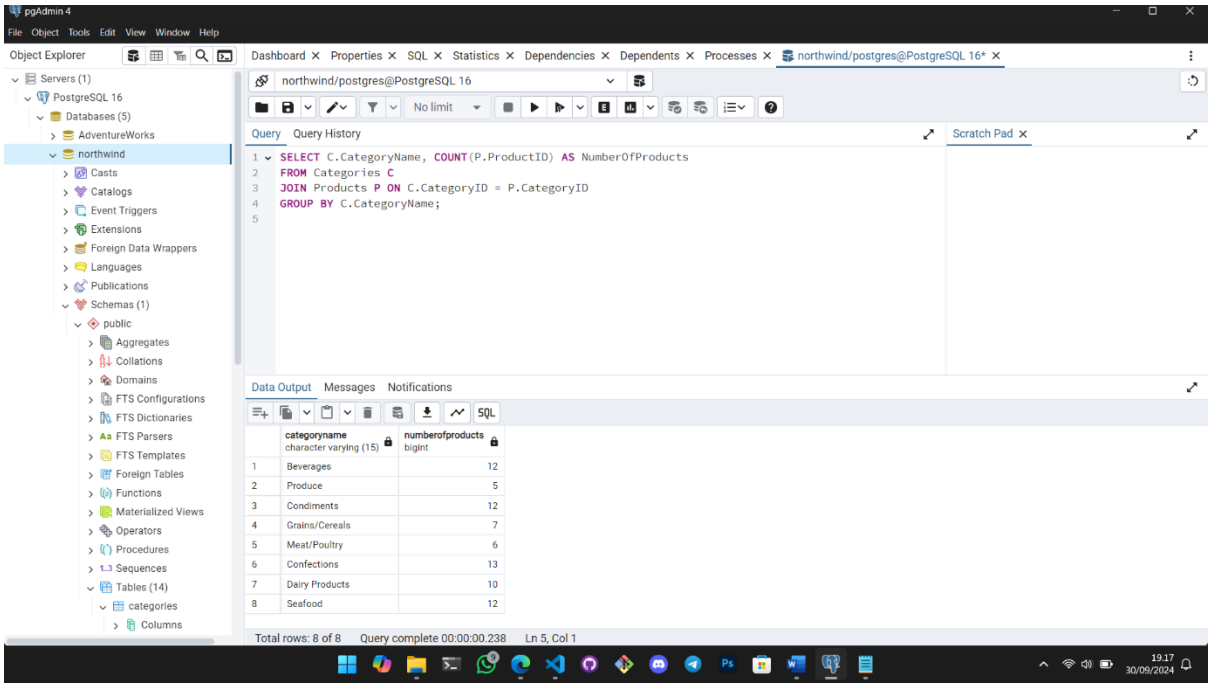
1. What is the number of products for each category (do it with joins)

SELECT C.CategoryName, COUNT(P.ProductID) AS NumberOfProducts

FROM Categories C

JOIN Products P ON C.CategoryID = P.CategoryID

GROUP BY C.CategoryName;



2. Total value of each product sold for year of 1997

SELECT p.ProductID, SUM(od.UnitPrice * od.Quantity) AS total_value

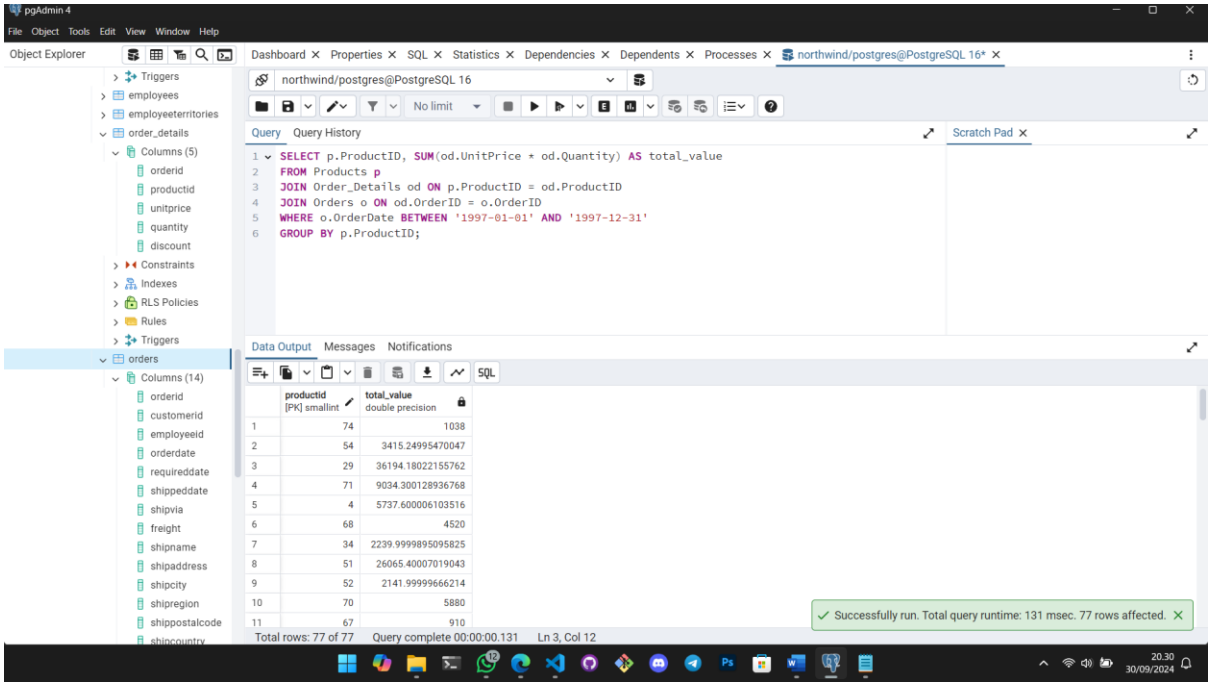
FROM Products p

JOIN Order_Details od ON p.ProductID = od.ProductID

JOIN Orders o ON od.OrderID = o.OrderID

WHERE o.OrderDate BETWEEN '1997-01-01' AND '1997-12-31'

GROUP BY p.ProductID;



3. Customers that have bought more than $5000 of products

SELECT c.CustomerID, c.CompanyName, SUM(od.UnitPrice * od.Quantity) AS total_spent

FROM Customers c

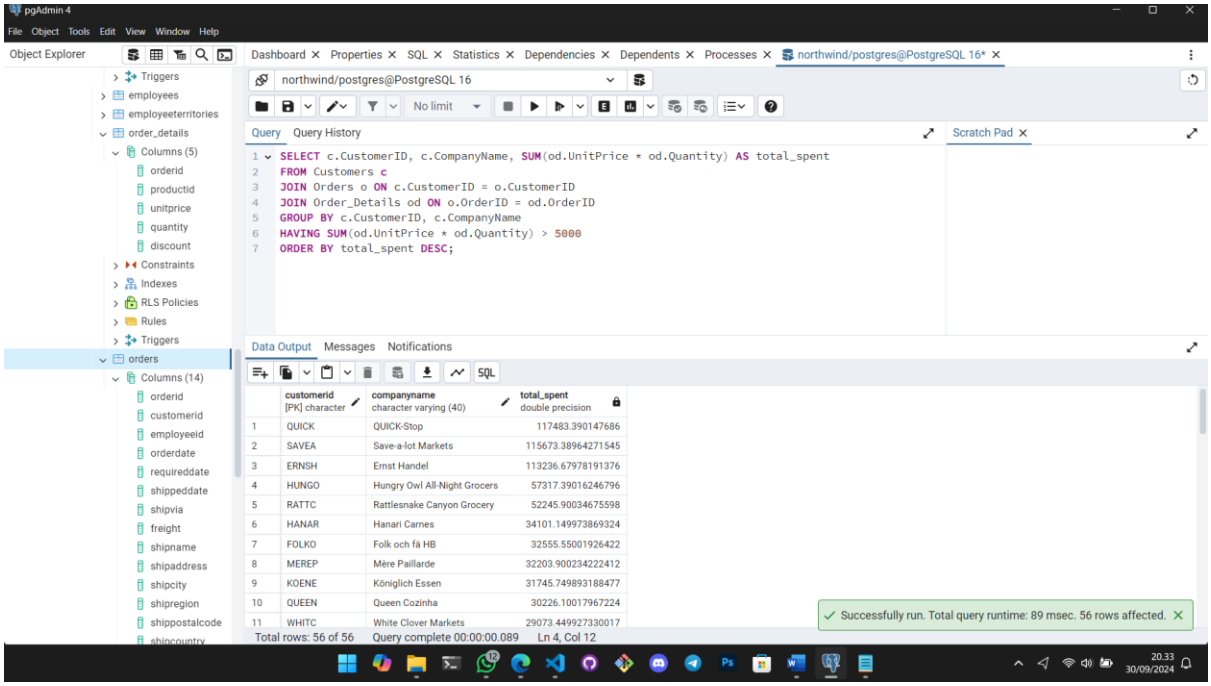
JOIN Orders o ON c.CustomerID = o.CustomerID

JOIN Order_Details od ON o.OrderID = od.OrderID

GROUP BY c.CustomerID, c.CompanyName

HAVING SUM(od.UnitPrice * od.Quantity) > 5000

ORDER BY total_spent DESC;



4. Customers that have bought more than $5000 of products with order date in first six month of the year of 1997 (see the effect of WHERE clause)

SELECT c.CustomerID, c.CompanyName, SUM(od.UnitPrice * od.Quantity) AS total_spent

FROM Customers c

JOIN Orders o ON c.CustomerID = o.CustomerID

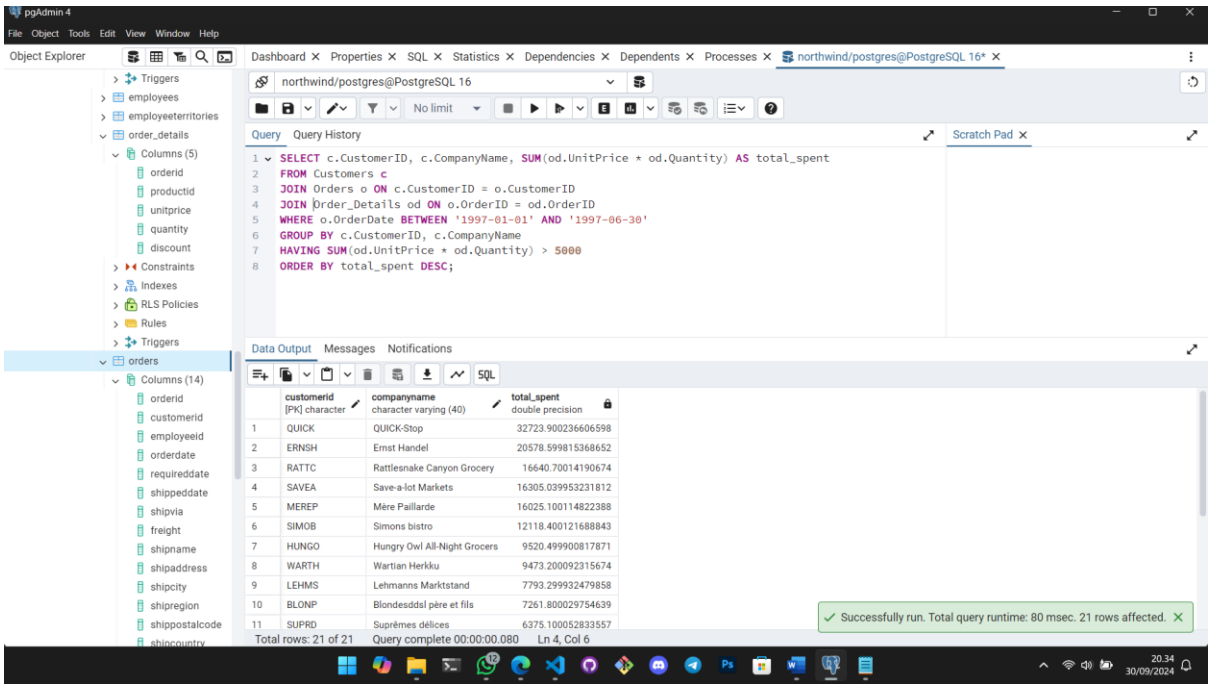
JOIN Order_Details od ON o.OrderID = od.OrderID

WHERE o.OrderDate BETWEEN '1997-01-01' AND '1997-06-30'

GROUP BY c.CustomerID, c.CompanyName

HAVING SUM(od.UnitPrice * od.Quantity) > 5000

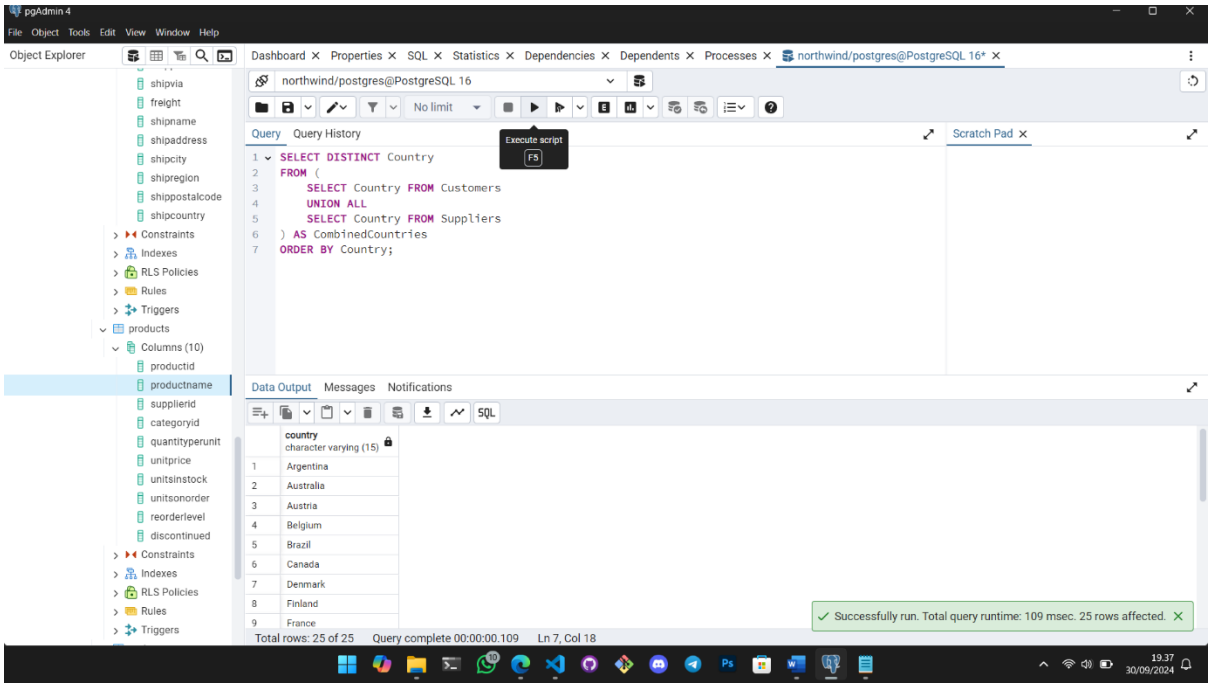
ORDER BY total_spent DESC;



SQL 3.2

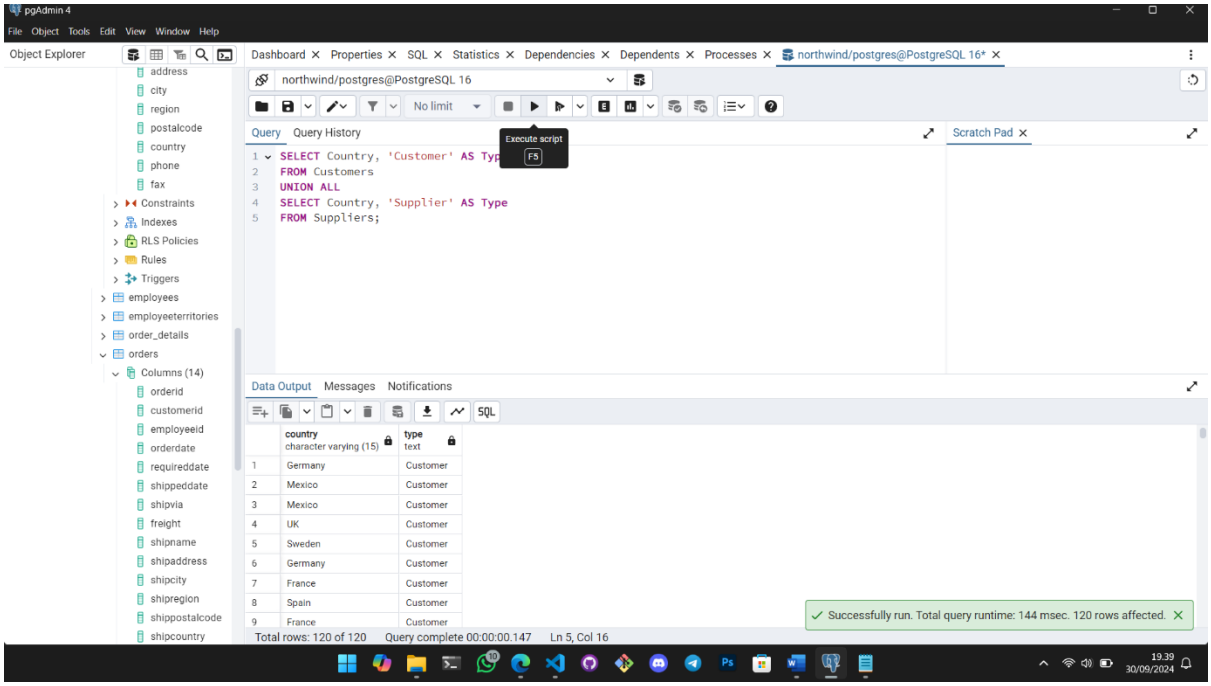
1. Distinct countries of all our customers and suppliers in alphabetical order

```
SELECT DISTINCT Country
FROM (
    SELECT Country FROM Customers
    UNION ALL
    SELECT Country FROM Suppliers
) AS CombinedCountries
ORDER BY Country;
```



2. All list of countries of our suppliers and customers, with a record for each one

```
SELECT Country, 'Customer' AS Type
FROM Customers
UNION ALL
SELECT Country, 'Supplier' AS Type
FROM Suppliers;
```

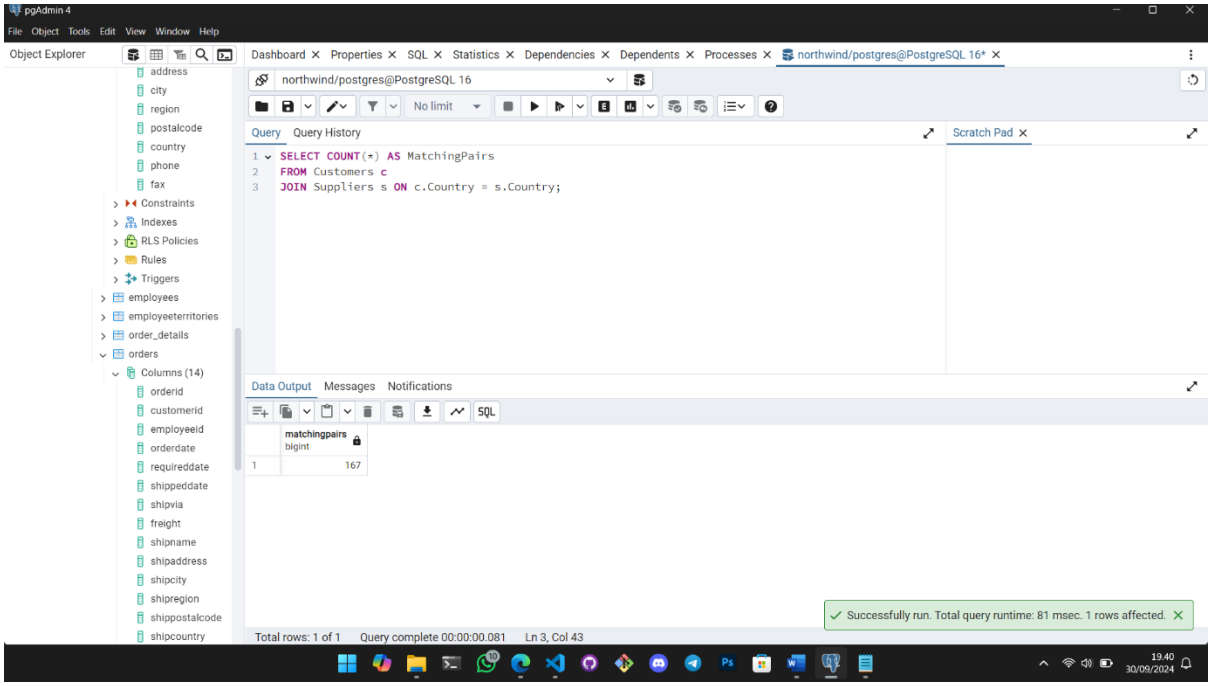


3. Find the number of customer and supplier pairs that are in the same country

SELECT COUNT(*) AS MatchingPairs

FROM Customers c

JOIN Suppliers s ON c.Country = s.Country;



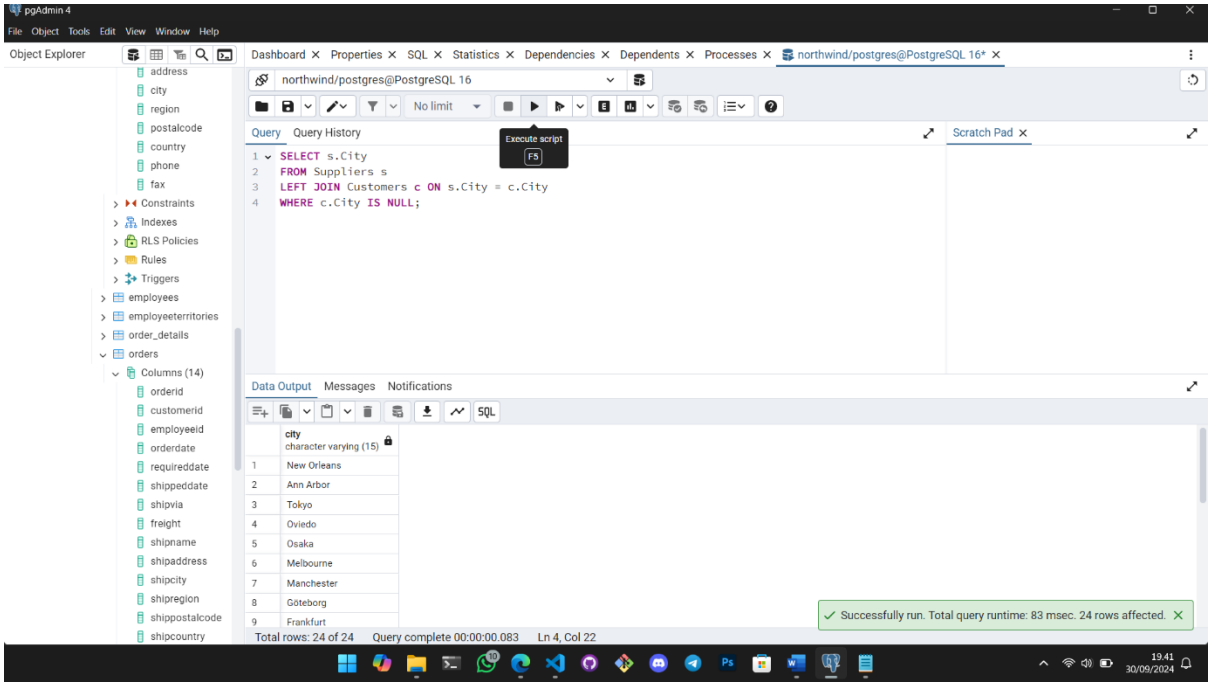
4. Cities that have a supplier with no customer

SELECT s.City

FROM Suppliers s

LEFT JOIN Customers c ON s.City = c.City

WHERE c.City IS NULL;



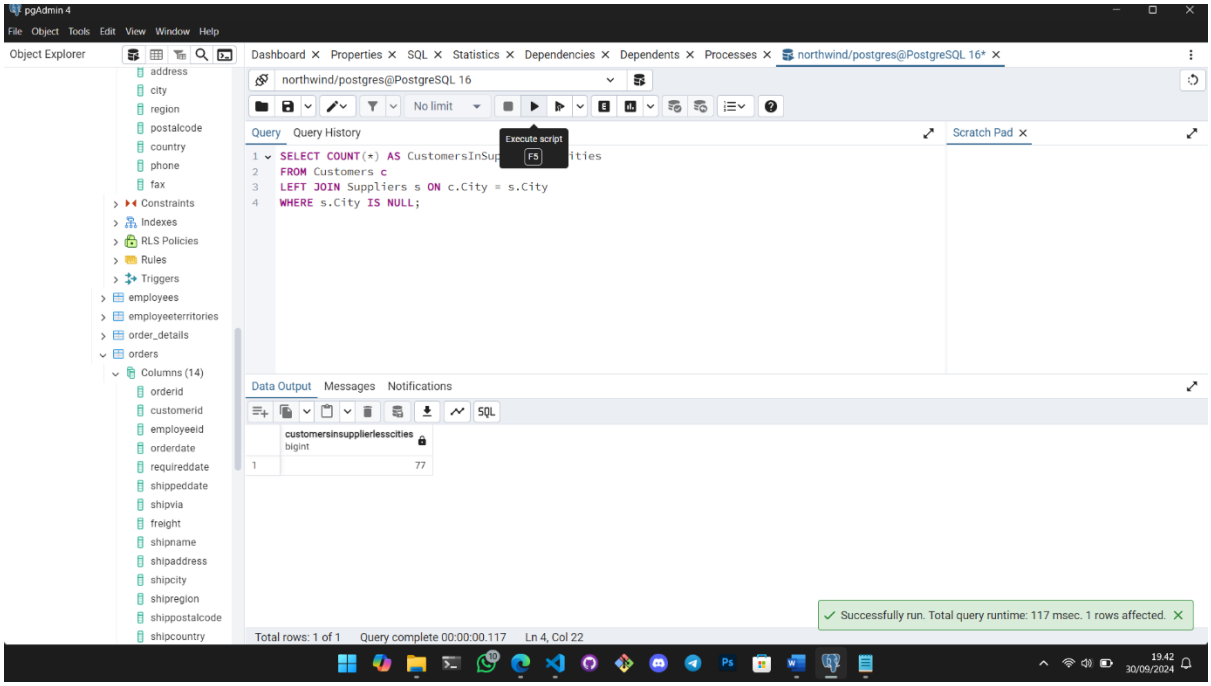
5. How many customers do we have in cities without suppliers

SELECT COUNT(*) AS CustomersInSupplierlessCities

FROM Customers c

LEFT JOIN Suppliers s ON c.City = s.City

WHERE s.City IS NULL;



SQL 3.3

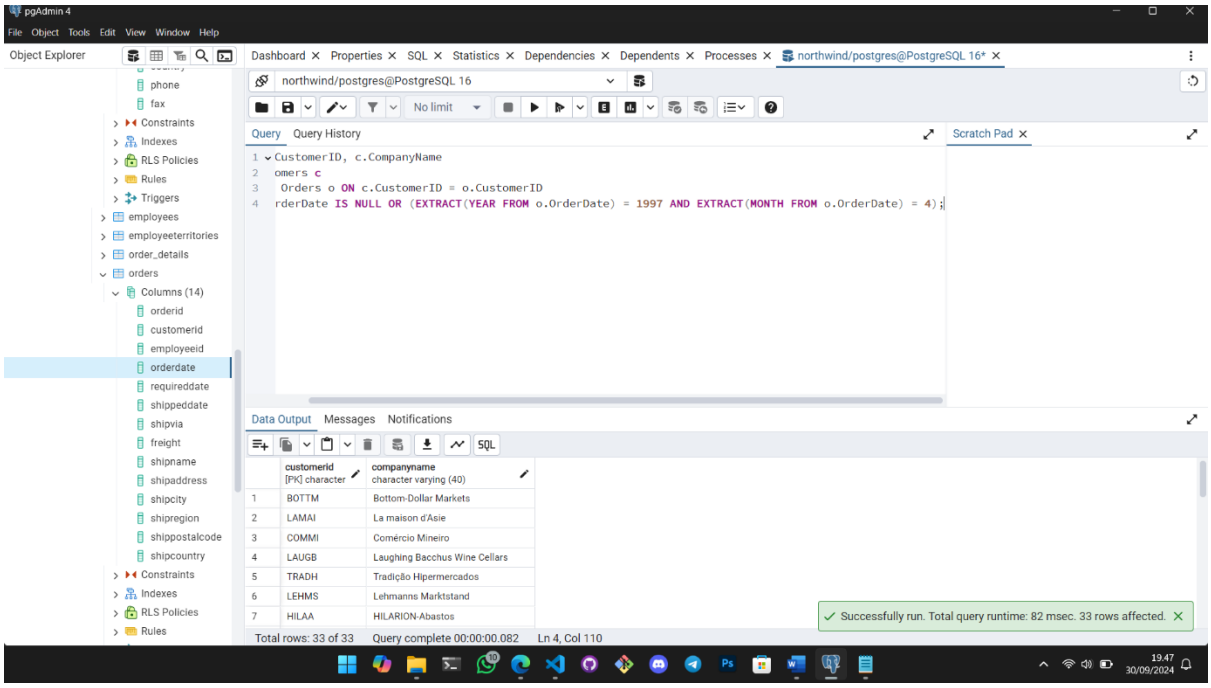
1. How do you find customers who didn't have an order in April, 1997

SELECT c.CustomerID, c.CompanyName

FROM Customers c

LEFT JOIN Orders o ON c.CustomerID = o.CustomerID

WHERE o.OrderDate IS NULL OR (EXTRACT(YEAR FROM o.OrderDate) = 1997 AND EXTRACT(MONTH FROM o.OrderDate) = 4);



2. Find all suppliers that have had an order with 1 item

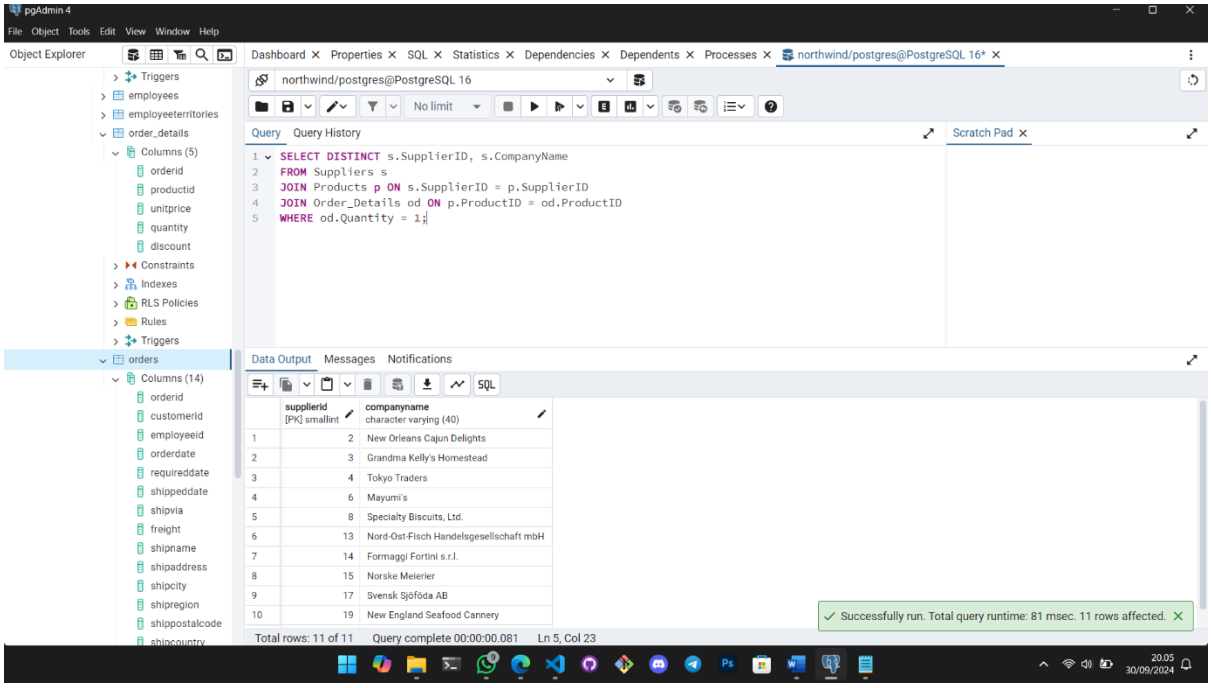
SELECT DISTINCT s.SupplierID, s.CompanyName

FROM Suppliers s

JOIN Products p ON s.SupplierID = p.SupplierID

JOIN Order_Details od ON p.ProductID = od.ProductID

WHERE od.Quantity = 1;



3. Find all distinct customers that ordered more in one item than the average orderamount per item of all customers

WITH AvgOrderItemQuantity AS (

  SELECT AVG(od.Quantity) AS AvgQuantity

  FROM Order_Details od

)

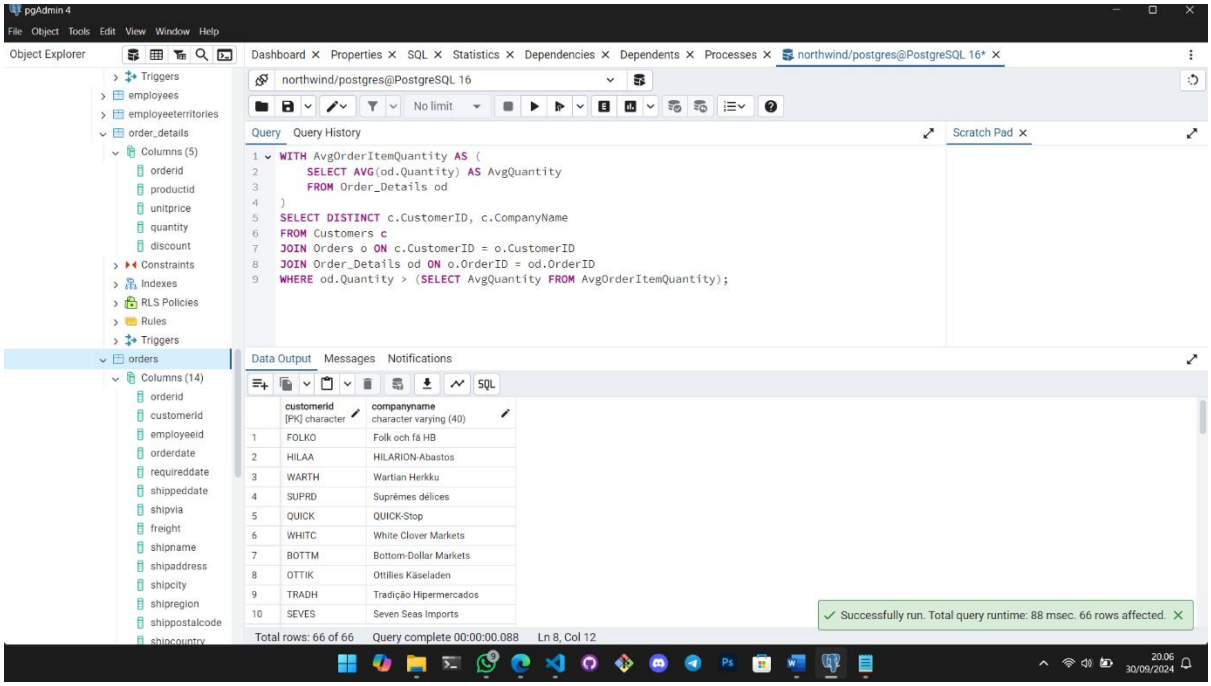
SELECT DISTINCT c.CustomerID, c.CompanyName

FROM Customers c

JOIN Orders o ON c.CustomerID = o.CustomerID

JOIN Order_Details od ON o.OrderID = od.OrderID

WHERE od.Quantity > (SELECT AvgQuantity FROM AvgOrderItemQuantity);

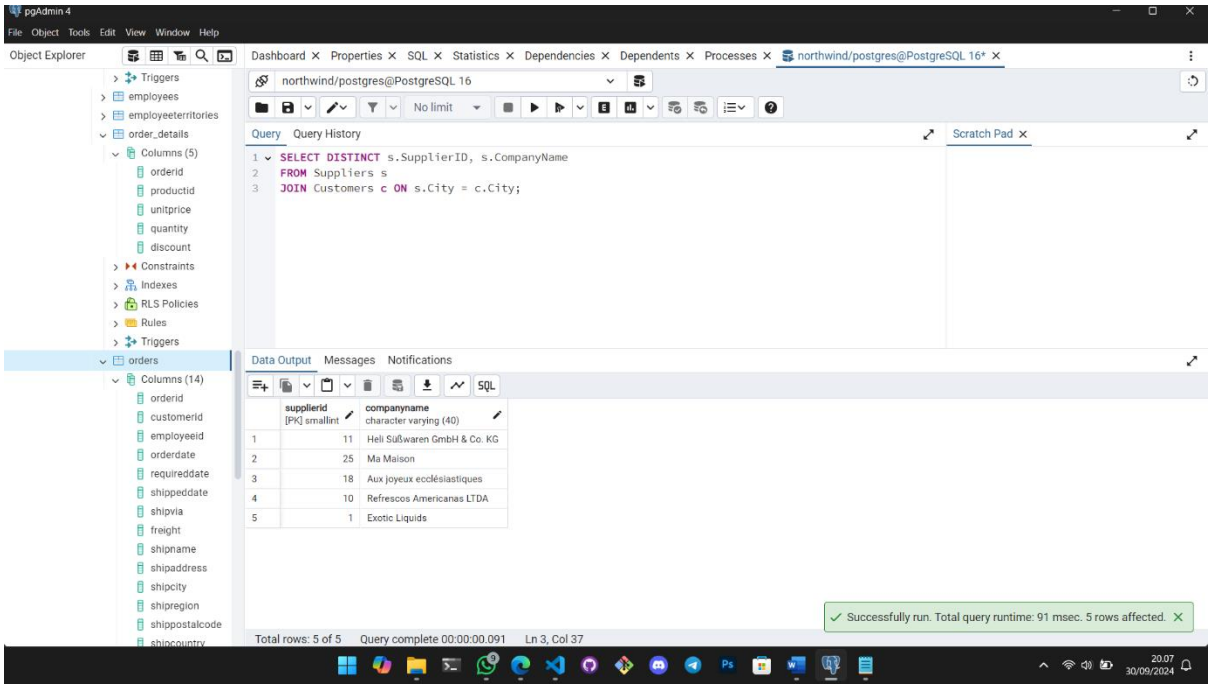


4. Find all suppliers that are in the same city as a customer

SELECT DISTINCT s.SupplierID, s.CompanyName

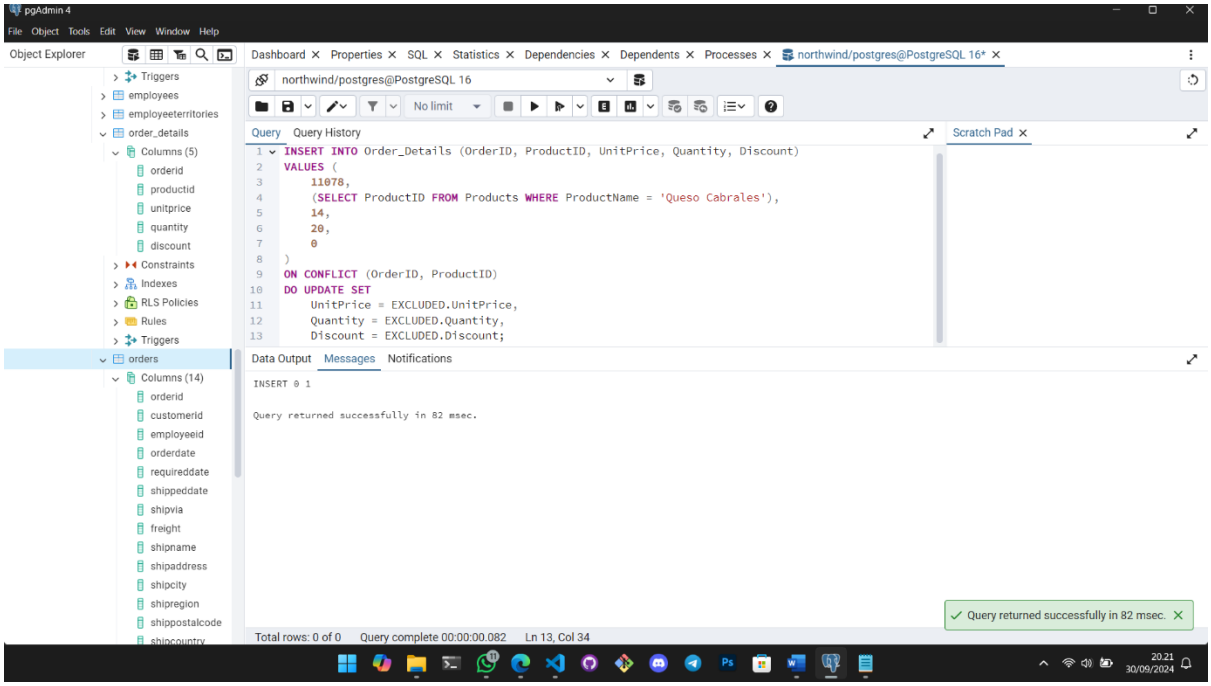
FROM Suppliers s

JOIN Customers c ON s.City = c.City;

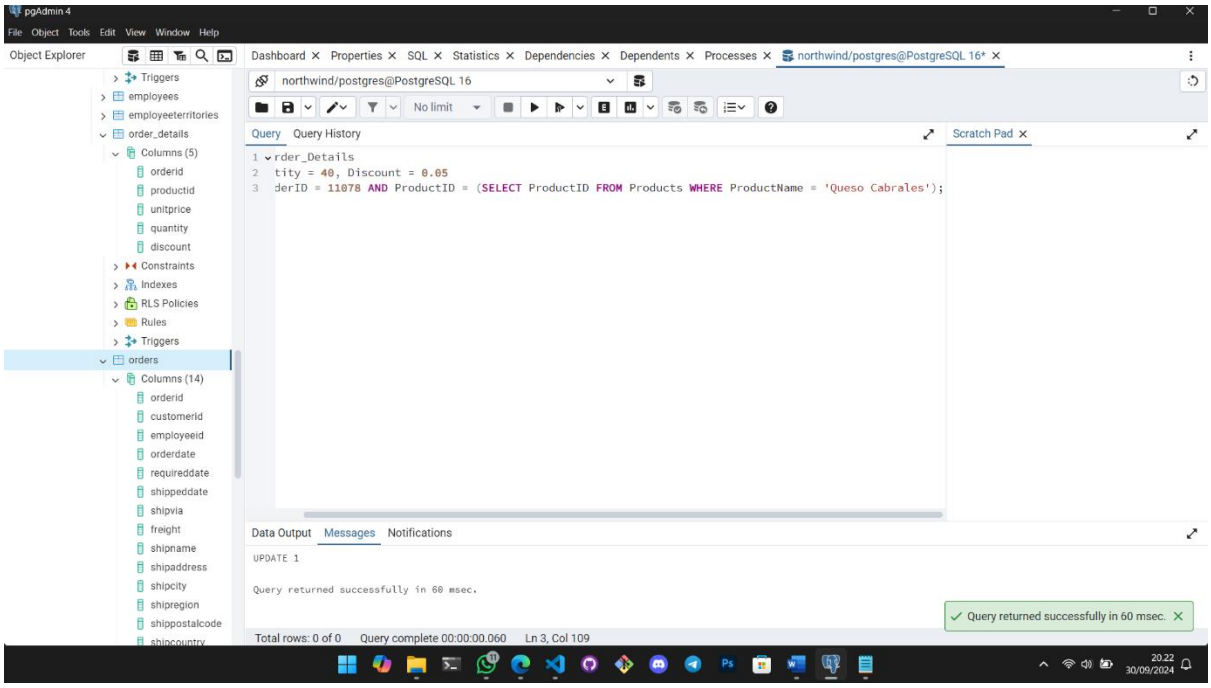


SQL 3.4

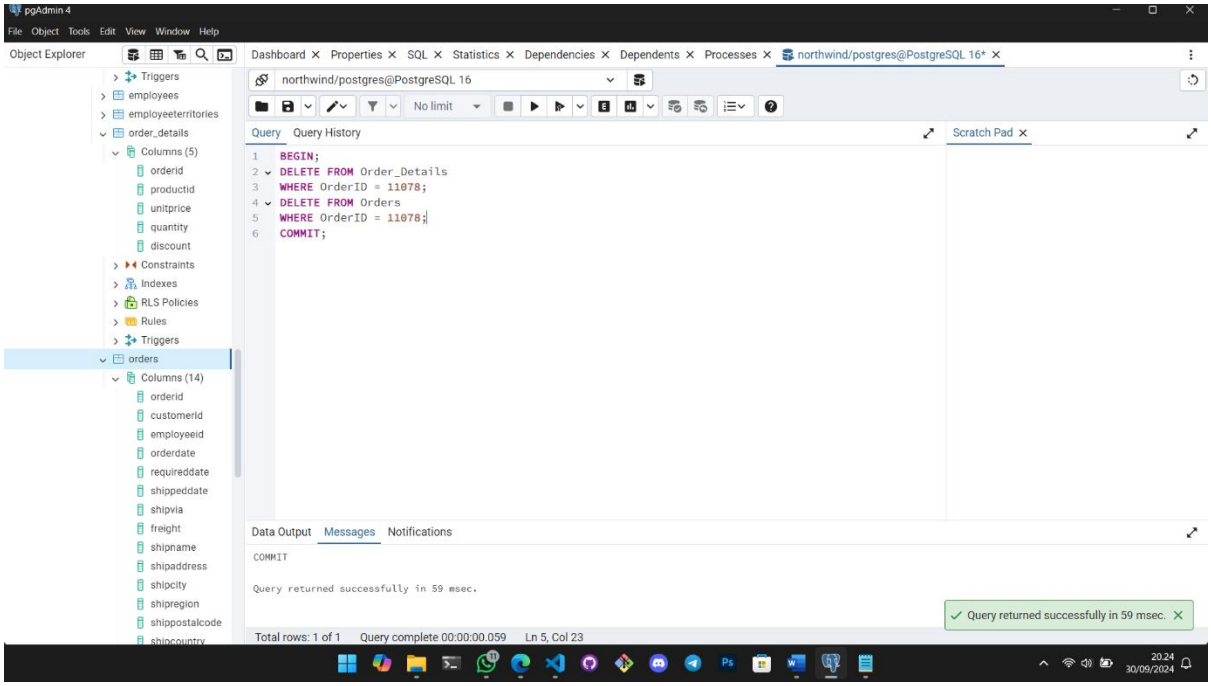
1. Insert an order detail for order we just created. Make it a quantity of 20 of Queso Cabrales (you will have to look up id) with a price of $14



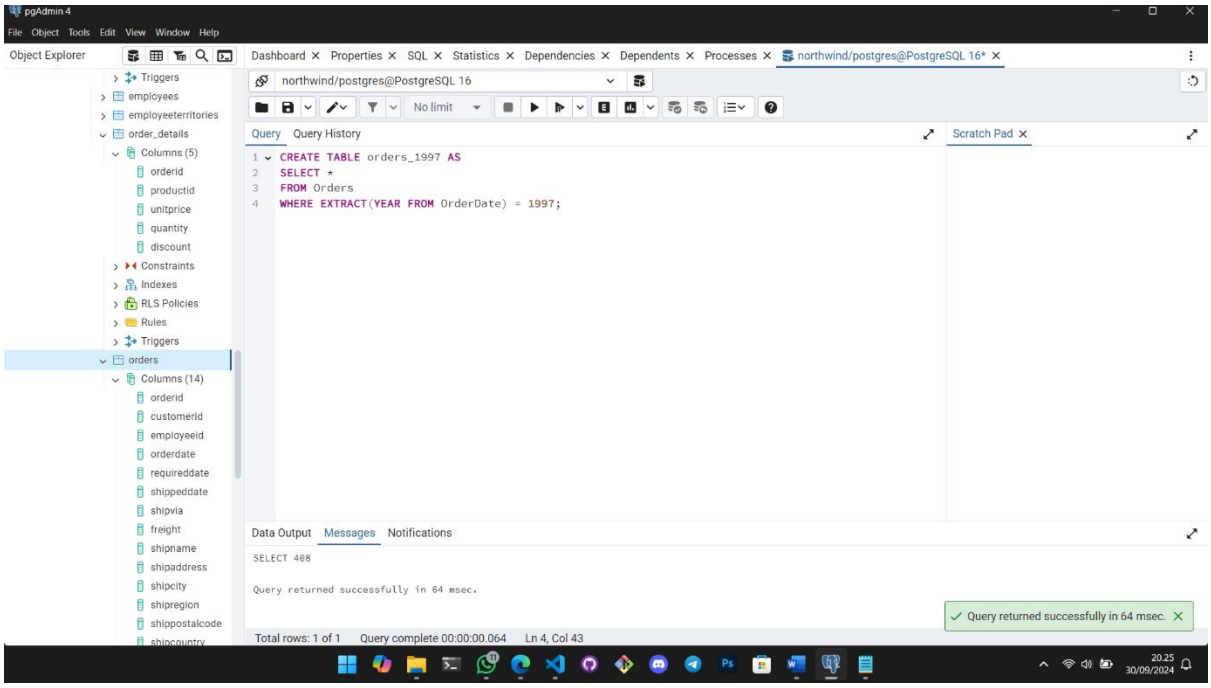
2. They also want 40 Queso Cabrales instead of 20 and we are giving a discount of 0.05. (trick is the WHERE clause to make sure we update the right order_details since there is no order detail id field)



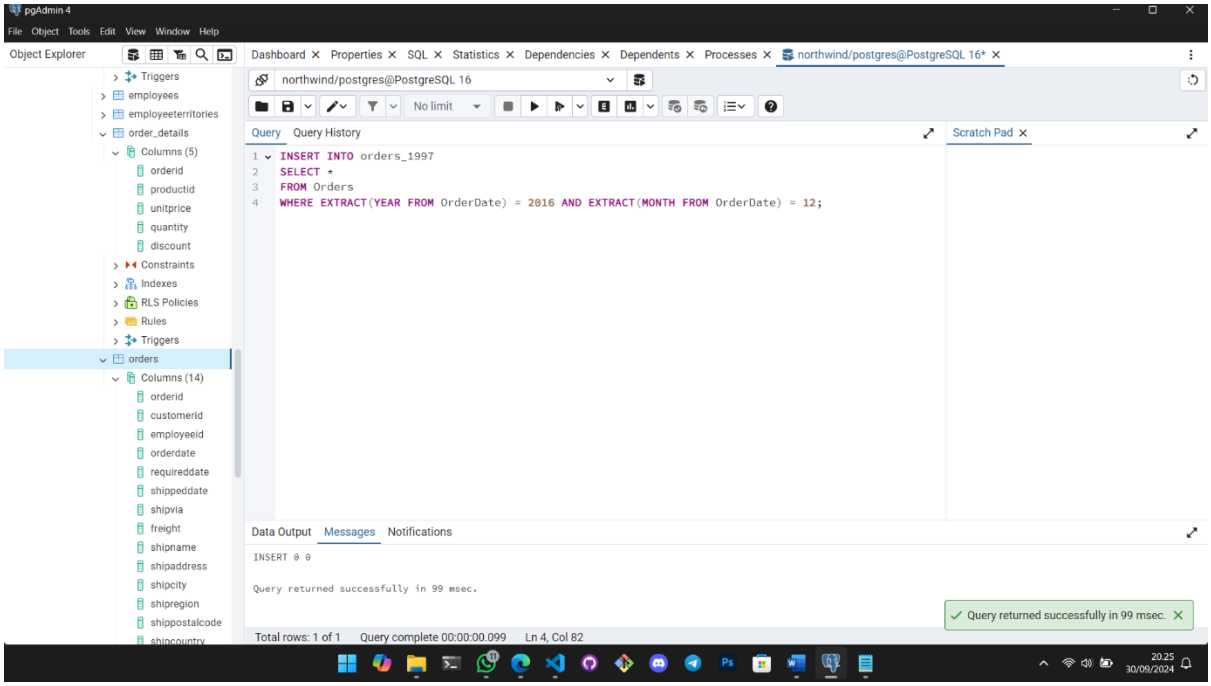
3. Delete the order for the customer using the order id 11078



4. Backup orders in the year 1997 to a new table orders_1997



5. Add orders from December 2016 to table orders_1997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File Object Tools Edit View Window Help
Object Explorer
Dashboard Properties SQL Statistics Dependencies Dependents Processes northwind/postgres@PostgreSQL 16*
northwind/postgres@PostgreSQL 16
No limit
Query Query History
Scratch Pad
INSERT INTO orders_1997
SELECT *
FROM Orders
WHERE EXTRACT(YEAR FROM OrderDate) = 2016 AND EXTRACT(MONTH FROM OrderDate) = 12;
Data Output Messages Notifications
INSERT 0 0
Query returned successfully in 99 msec.
Query returned successfully in 99 msec.
Total rows: 1 of 1 Query complete 00:00:00.099 Ln 4, Col 82
Triggers
employees
employeeterritories
order_details
Columns (5)
orderid
productid
unitprice
quantity
discount
Constraints
Indexes
RLS Policies
Rules
Triggers
orders
Columns (14)
orderid
customerid
employeeid
orderdate
requireddate
shippeddate
shipvia
freight
shipname
shipaddress
shipcity
shipregion
shippostalcode
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