Database Management System

LAB 06

Session: 2022 – 2026

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Home Task Queries

Question 01

Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate)

Query:

```
SELECT CustomerID,
    (SELECT TOP 1 OrderID FROM Northwind.dbo.Orders WHERE Customers.CustomerID = Orders.
    CustomerID) AS OrderID,( SELECT TOP 1 OrderDate FROM Northwind.dbo.Orders WHERE
    Customers.CustomerID = Orders.CustomerID) AS OrderDate
FROM Northwind.dbo.Customers;
```

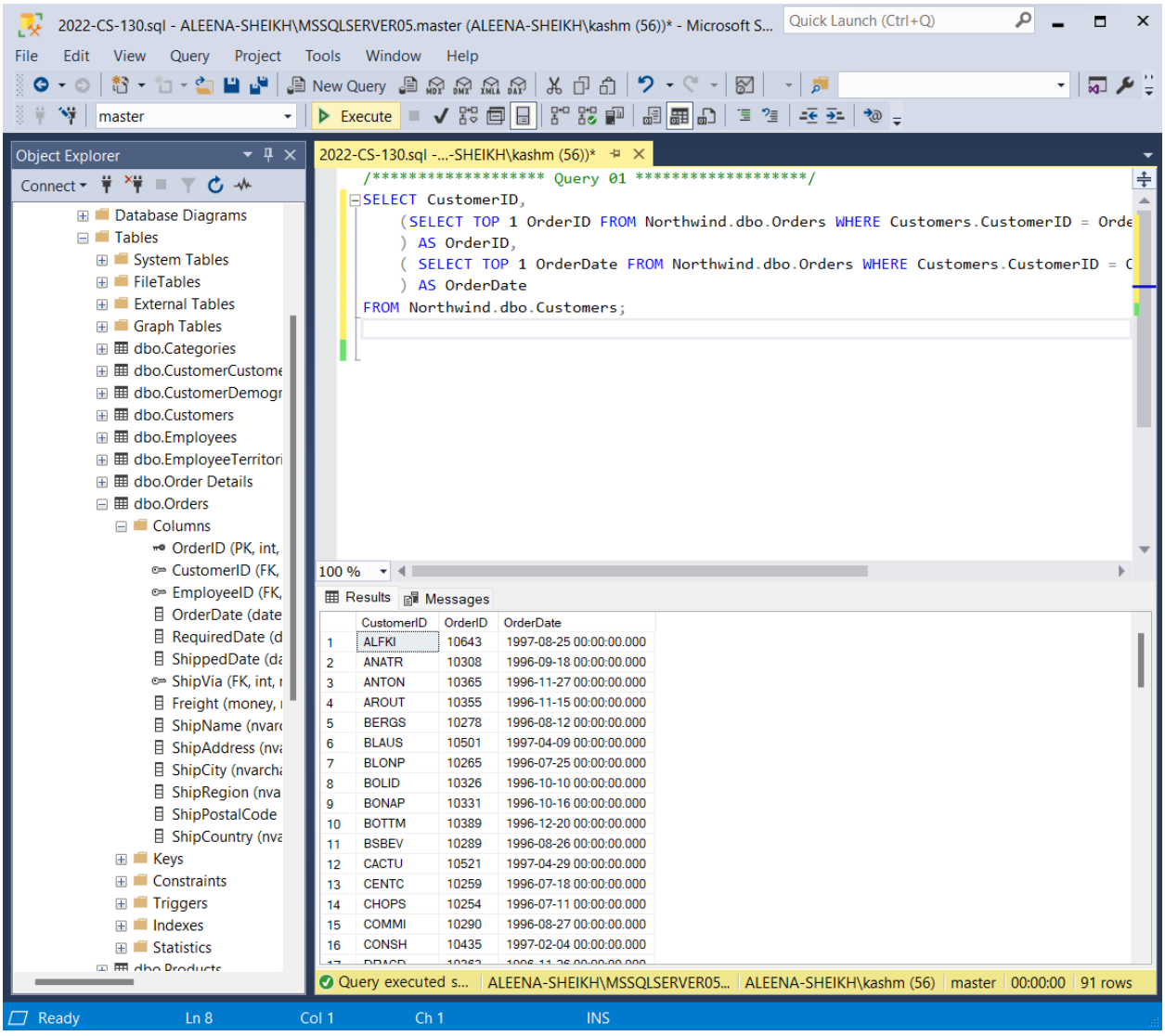

Figure 1: Query 01

Question 02

Report only those customer IDs who never placed any order. (CustomerID, OrderID, OrderDate)

Query:

```
SELECT CustomerID,
(SELECT TOP 1 OrderID FROM Northwind.dbo.Orders WHERE Customers.CustomerID = Orders.
 CustomerID) AS OrderID,( SELECT TOP 1 OrderDate FROM Northwind.dbo.Orders WHERE Customers.
 CustomerID = Orders.CustomerID) AS OrderDate
FROM Northwind.dbo.Customers
Where CustomerID NOT IN (SELECT DISTINCT CustomerID FROM Northwind.dbo.Orders);
```

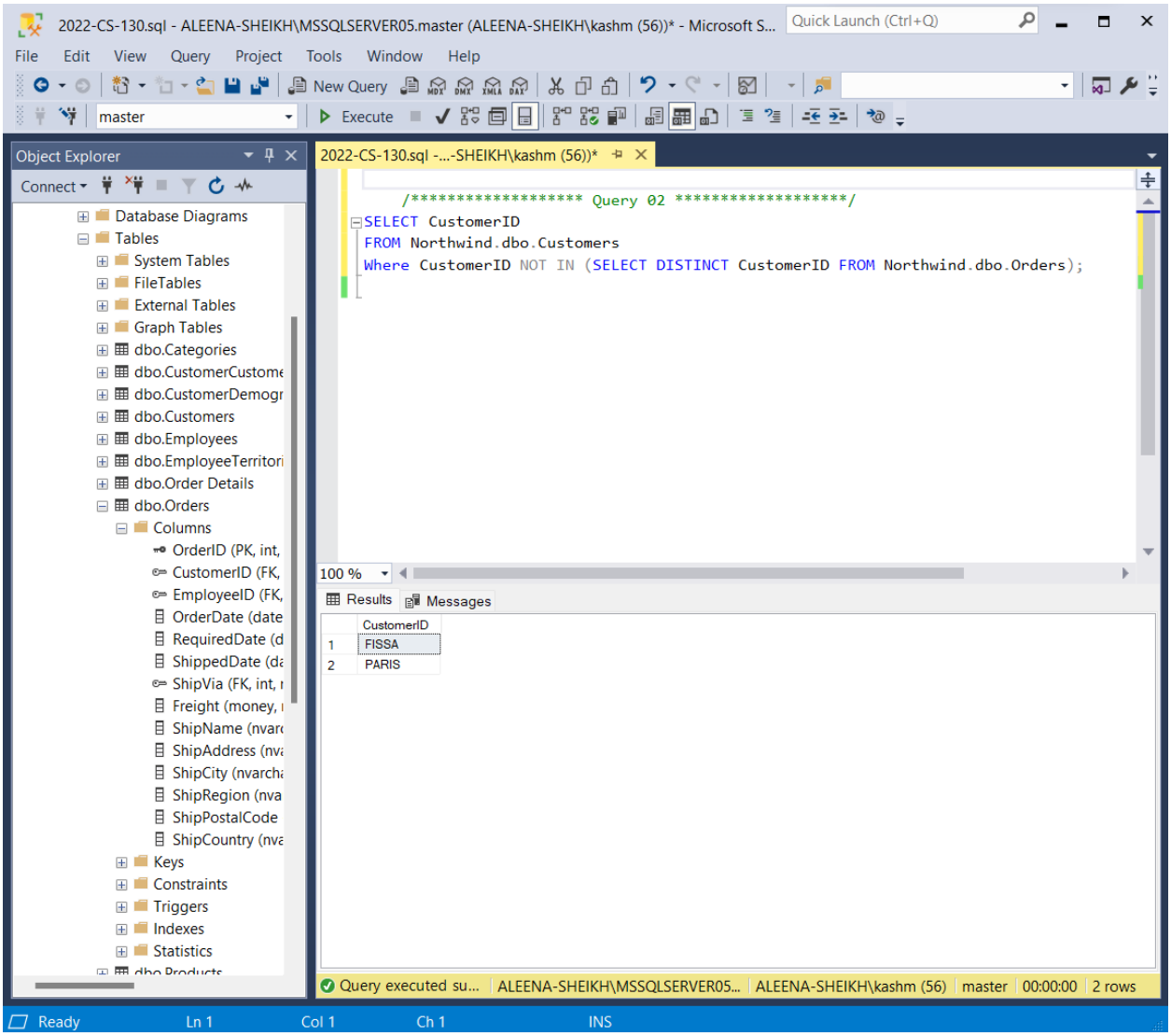

Figure 2: Query 02

Question 03

Report those customers who placed orders on July,1997. (CustomerID, OrderID, OrderDate)

Query:

```
SELECT CustomerID, OrderID, OrderDate
FROM Northwind.dbo.Orders
WHERE MONTH(OrderDate) = 7 AND YEAR(OrderDate) = 1997;
```

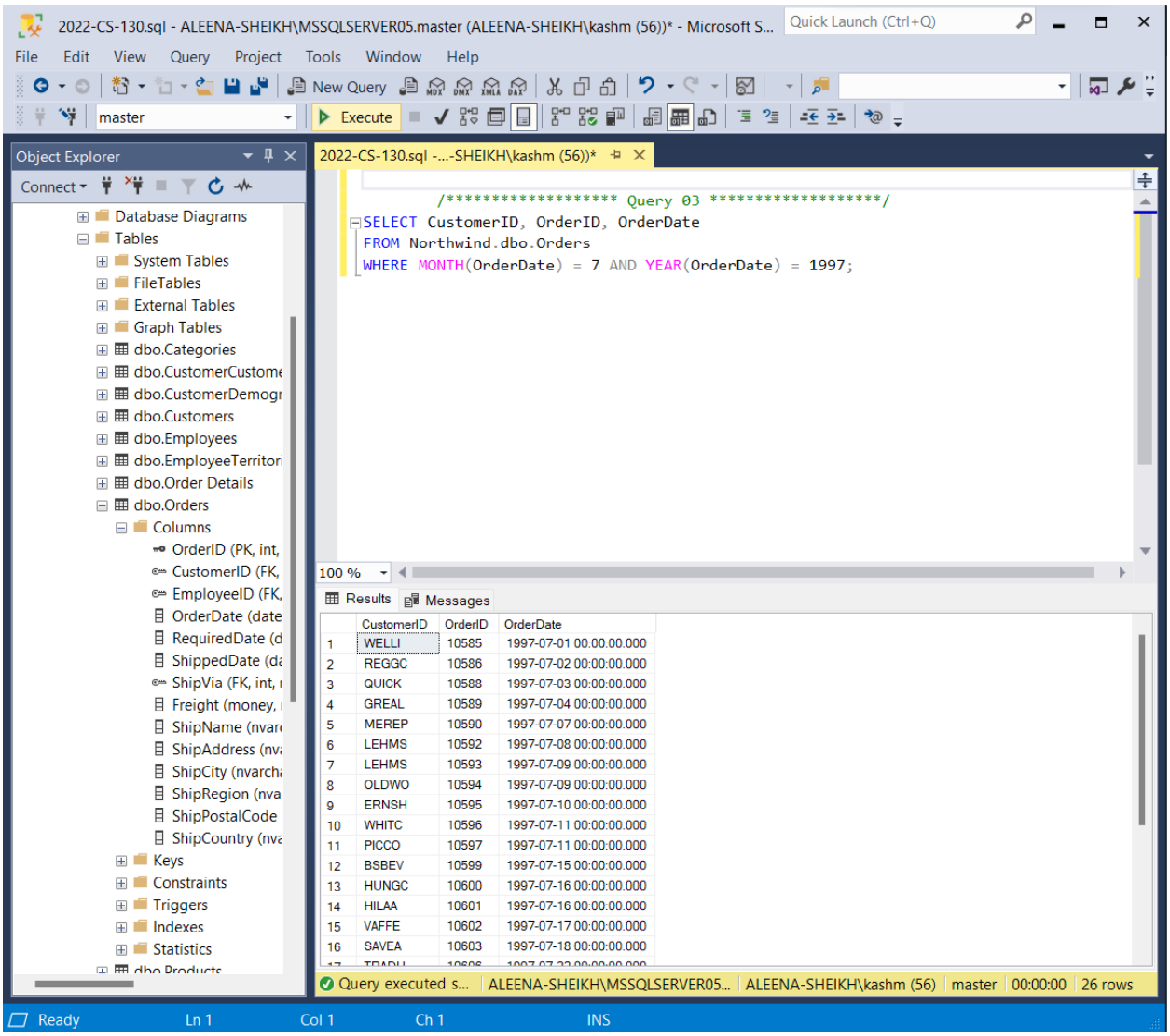

Figure 3: Query 03

Question 04

Report the total orders of each customer. (customerID, totalorders)

Query:

```
SELECT CustomerID,
    (SELECT Count(OrderID) FROM Northwind.dbo.Orders WHERE Customers.CustomerID = Orders.
    CustomerID) AS totalorders
FROM Northwind.dbo.Customers;
```

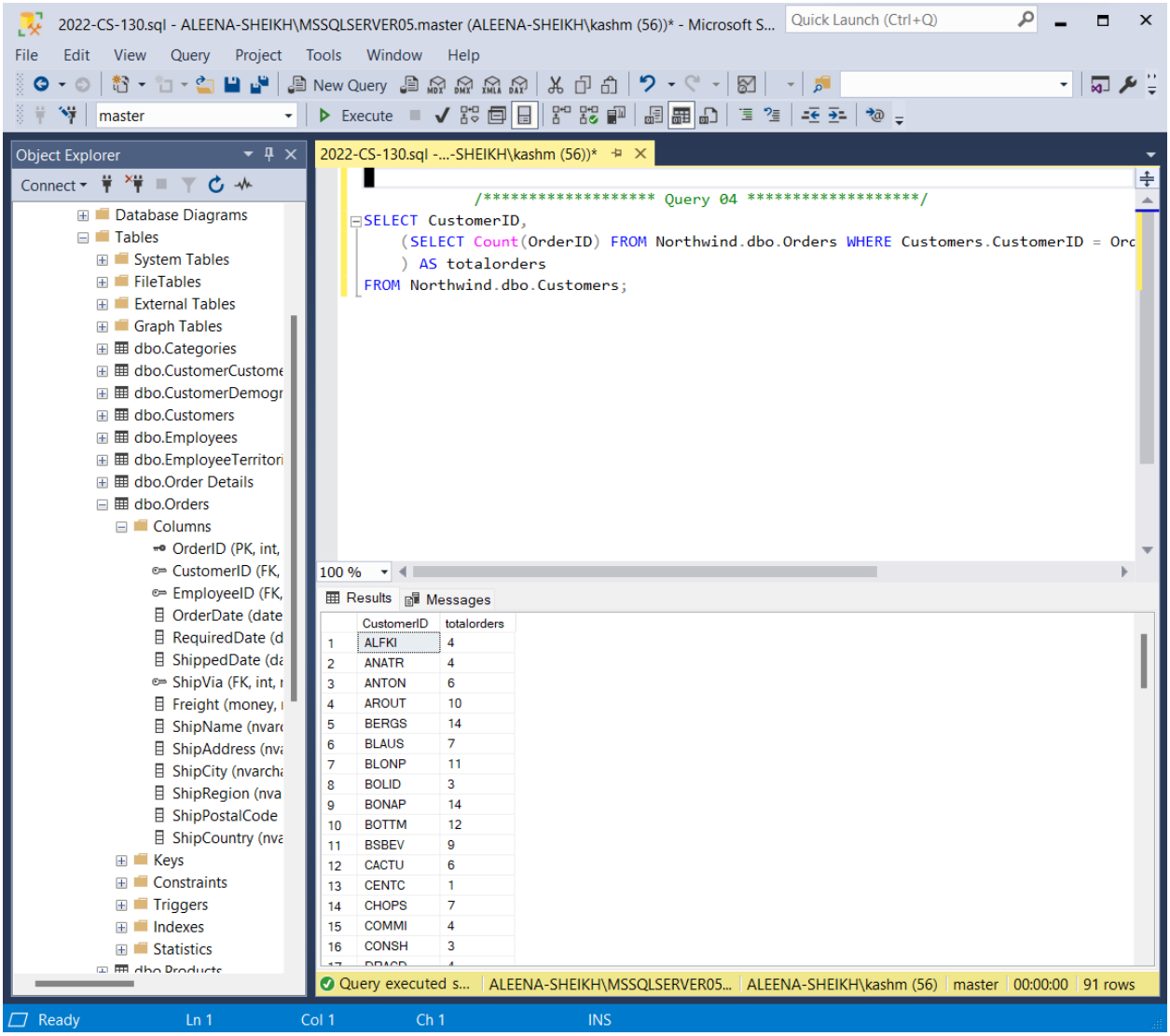

Figure 4: Query 04

Question 05

Write a query to generate a five copies of each employee. (EmployeeID, FirstName, LastName)

Query:

```
SELECT EmployeeID, FirstName, LastName
FROM Northwind.dbo.Employees,
    (SELECT 1 AS num UNION ALL SELECT 2 UNION ALL SELECT 3 UNION ALL SELECT 4 UNION ALL
    SELECT 5) AS copies
ORDER BY EmployeeID;
```

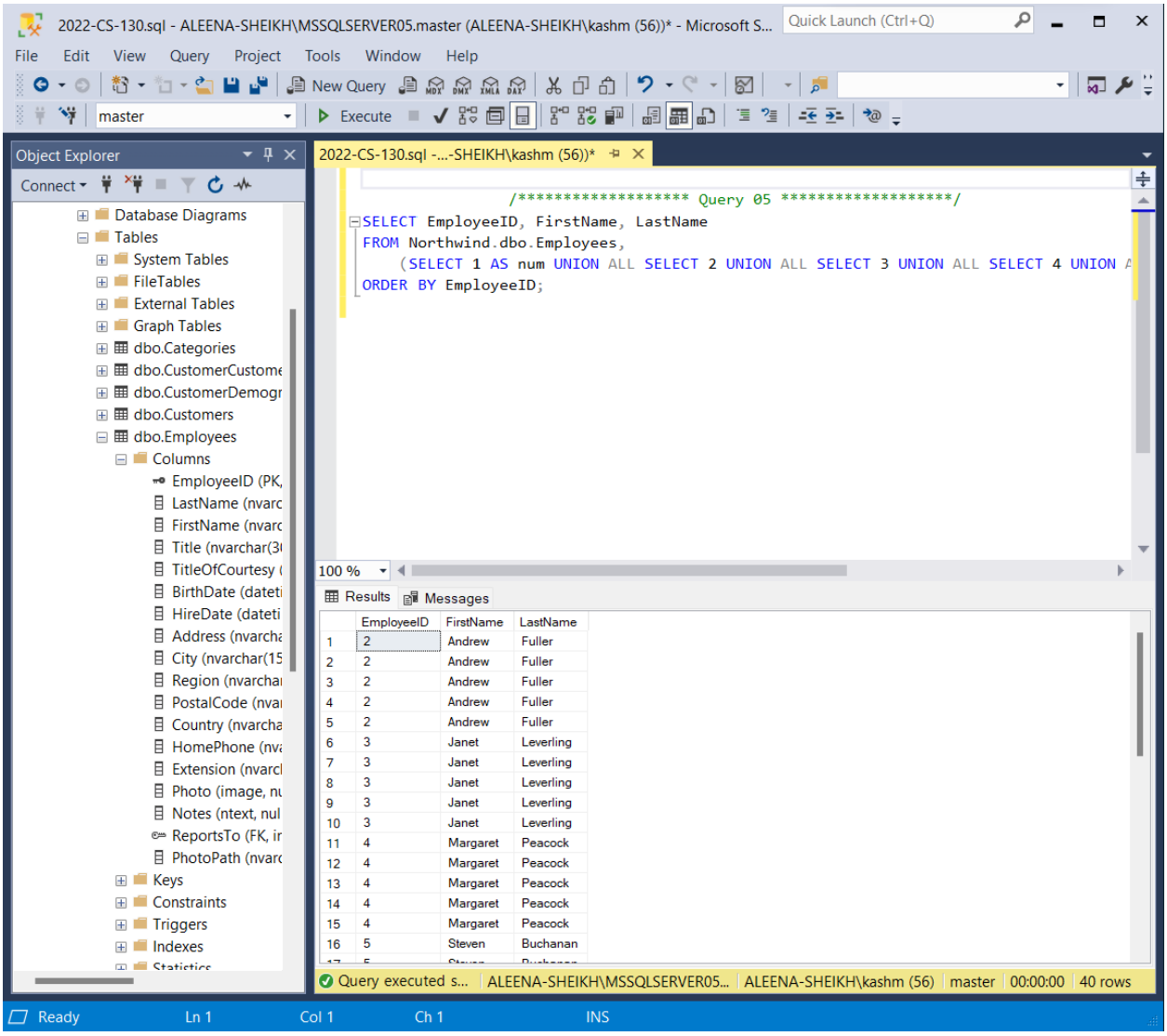

Figure 5: Query 05

Question 06

List all the products whose price is more than average price.

Query:

```
SELECT *
FROM Northwind.dbo.Products
WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Northwind.dbo.Products);
```

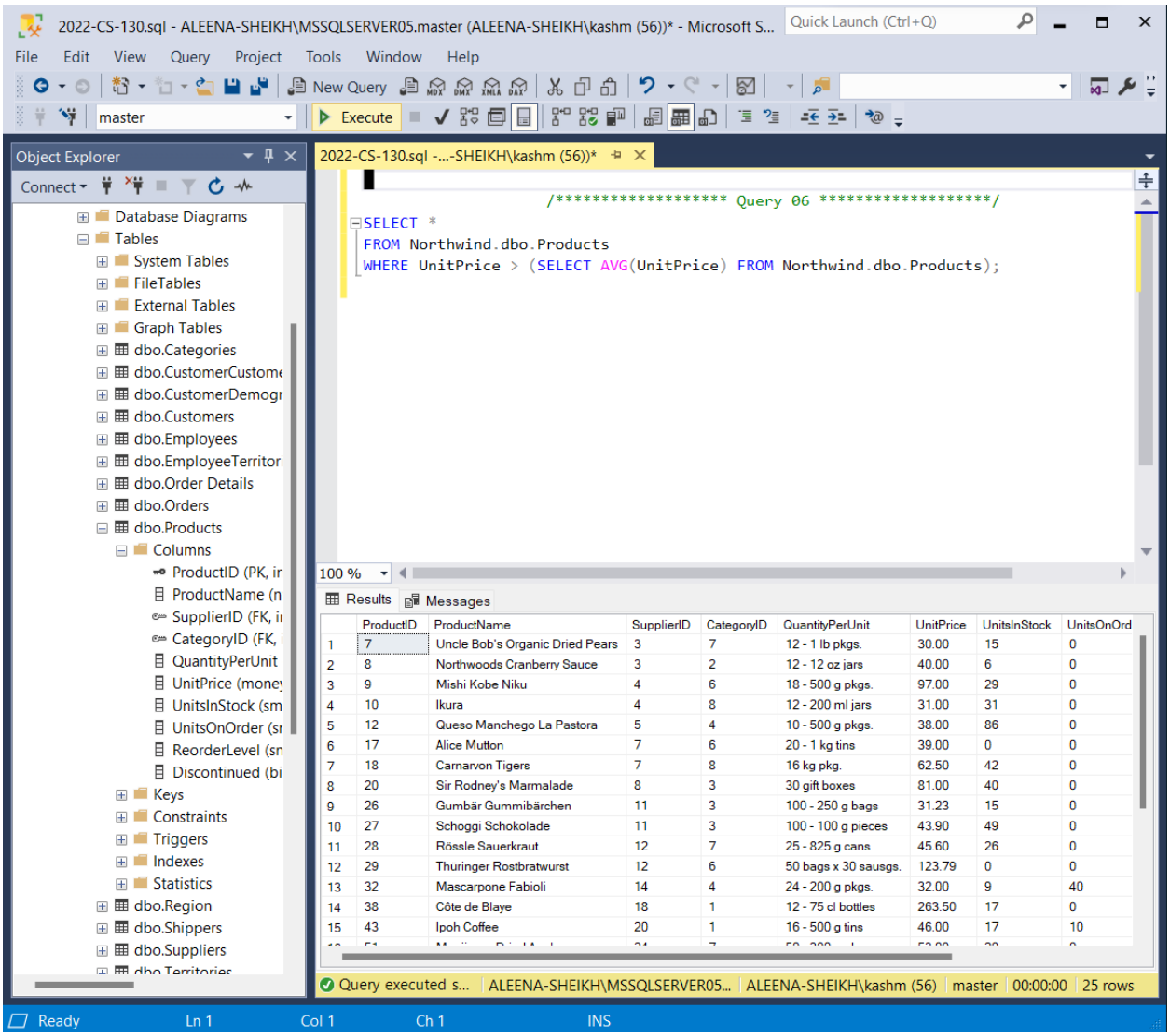

Figure 6: Query 06

Question 07

Find the second highest price of product.

Query:

```
SELECT TOP 1 *
FROM Northwind.dbo.Products
WHERE UnitPrice < (SELECT MAX(UnitPrice) FROM Northwind.dbo.Products)
ORDER BY UnitPrice DESC;
```

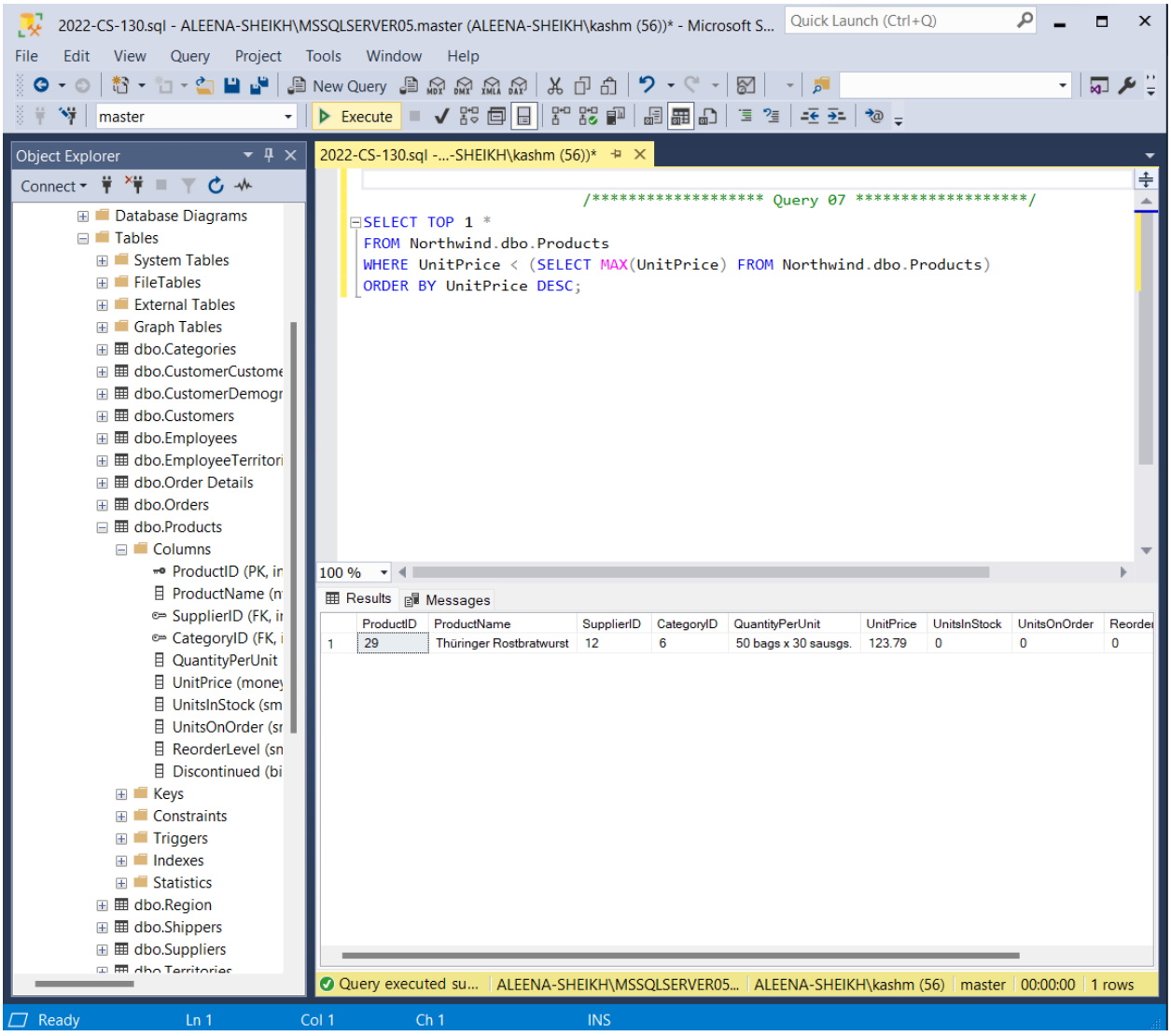

Figure 7: Query 07

Question 08

Write a query that returns a row for each employee and day in the range 04-07-1996 through 04-08-1997. (EmployeeID, Date)

Query:

```
SELECT EmployeeID, HireDate
FROM Northwind.dbo.Employees
WHERE HireDate BETWEEN 04-07-1996 AND 04-08-1997;
```

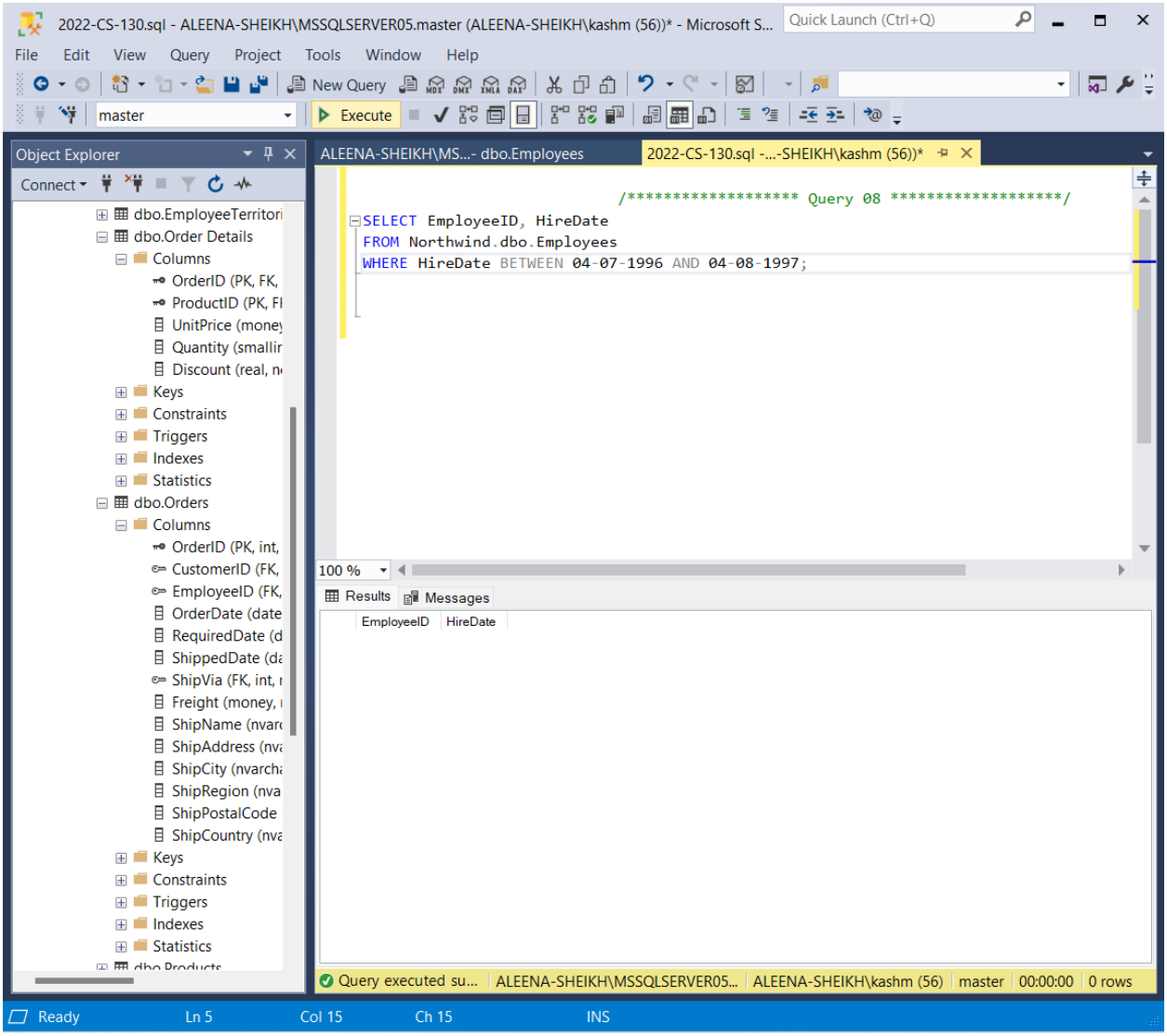

Figure 8: Query 08

Question 09

Return US customers, and for each customer return the total number of orders and total quantities. (CustomerID, Totalorders, totalquantity).

Query:

```
SELECT CustomerID,
(SELECT COUNT(OrderID) From Northwind.dbo.Orders WHERE CustomerID = c.CustomerID) AS
totalorders,(SELECT SUM(Quantity) From Northwind.dbo.[Order Details] WHERE OrderID IN
(SELECT OrderID FROM Northwind.dbo.Orders WHERE CustomerID = c.CustomerID)) AS
TotalQuantity
FROM Northwind.dbo.Customers c
WHERE Country = 'USA';
```

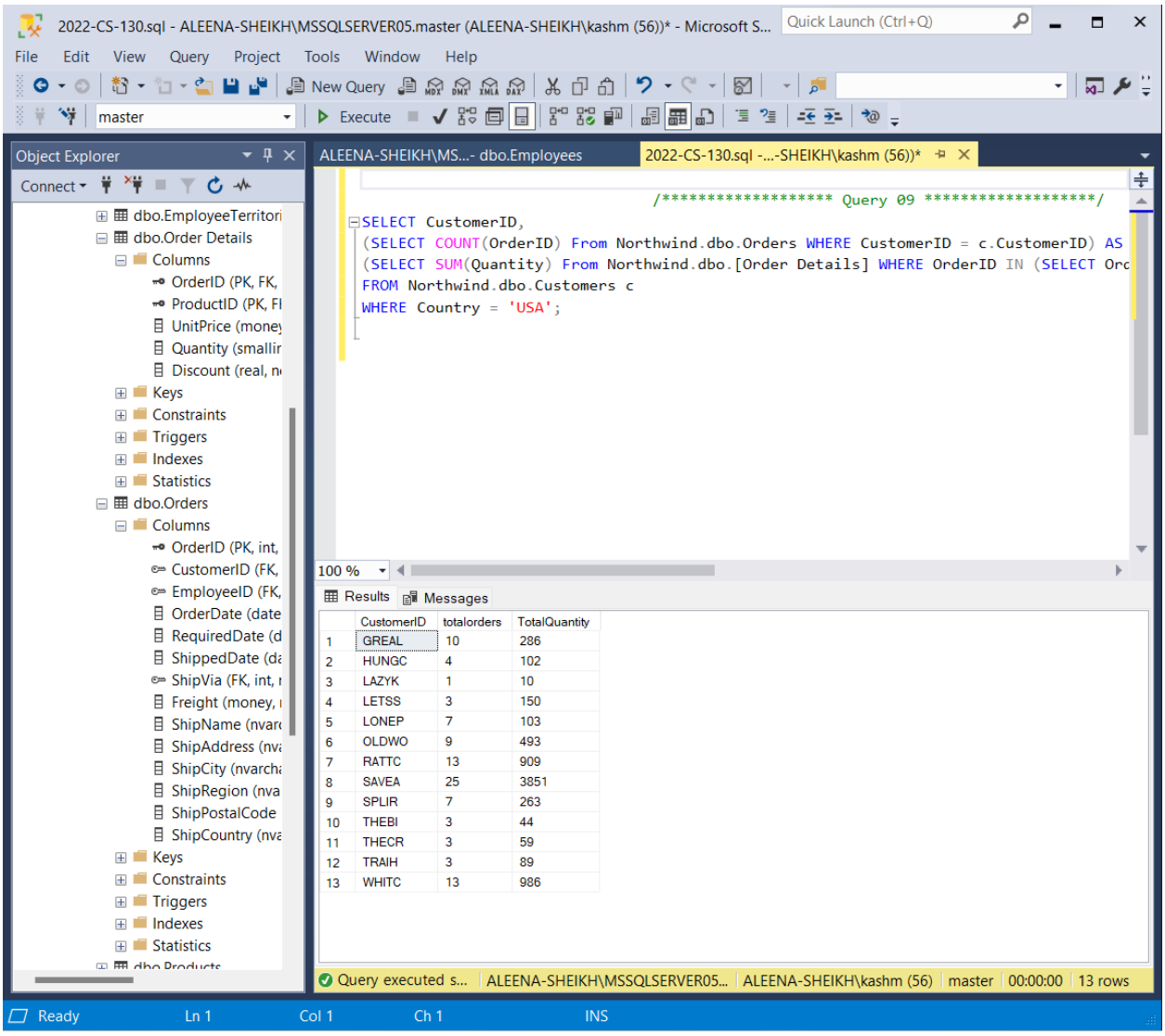

Figure 9: Query 09

Question 10

Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate)

Query:

```
SELECT CustomerID, CompanyName,
(SELECT TOP 1 OrderID FROM Northwind.dbo.Orders WHERE CustomerID = Customers.CustomerID)
AS OrderID,(SELECT TOP 1 OrderDate FROM Northwind.dbo.Orders WHERE DAY(OrderDate)= 4 AND
Month(OrderDate) = 7 AND YEAR(OrderDate) = 1997) AS OrderDate
FROM Northwind.dbo.Customers;
```

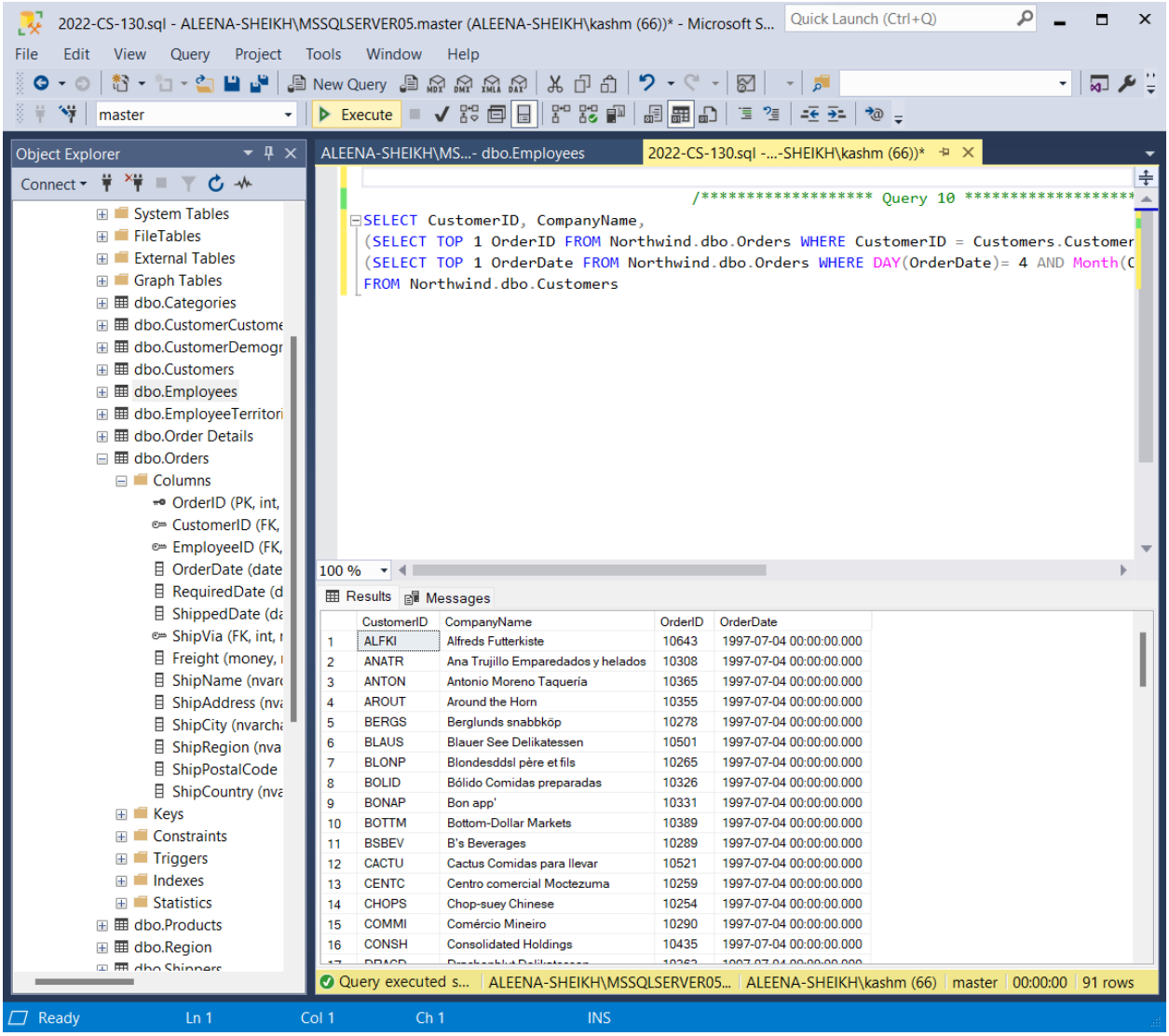

Figure 10: Query 10

Question 11

Are there any employees who are older than their managers?

Query:

```
SELECT EmployeeID,FirstName,LastName,BirthDate AS EmployeeBirthDate,
    (SELECT BirthDate FROM Northwind.dbo.Employees WHERE EmployeeID = ReportsTo) AS
    ManagerBirthDate
FROM Northwind.dbo.Employees
WHERE BirthDate > (SELECT BirthDate FROM Northwind.dbo.Employees WHERE EmployeeID =
ReportsTo);
```

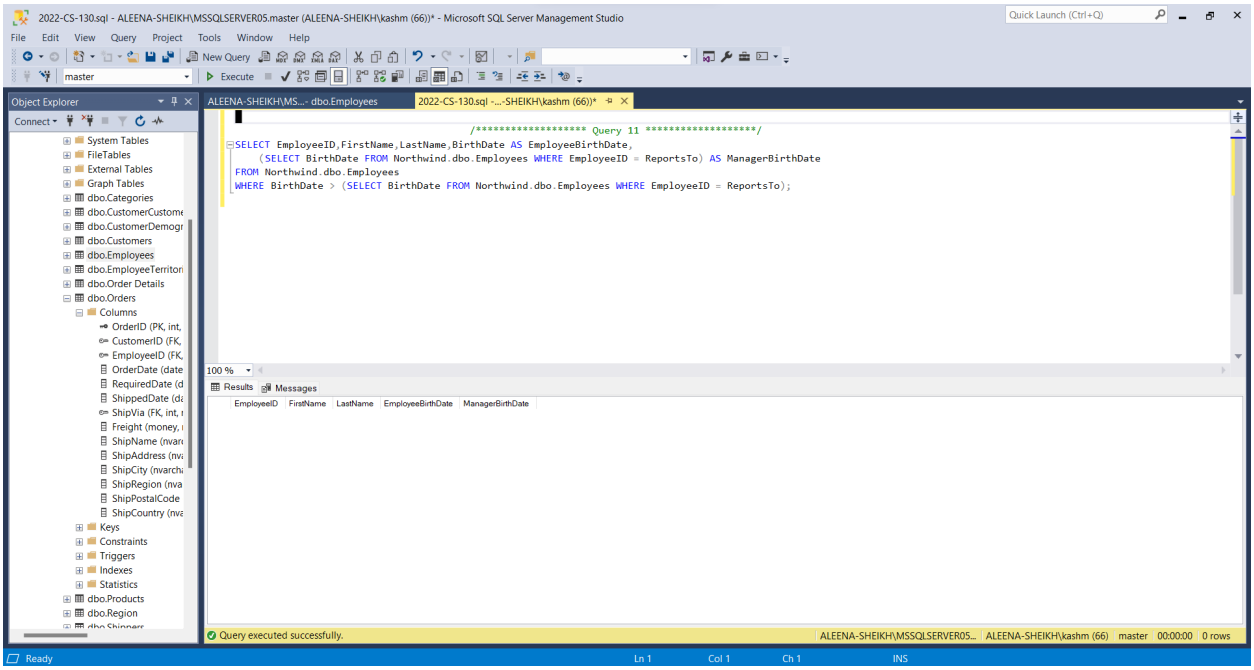

Figure 11: Query 11

Question 12

List that names of those employees and their ages. (EmployeeName, Age, Manager Age)

Query:

```
SELECT E.FirstName + ' ' + E.LastName AS EmployeeName, DATEDIFF(YEAR, E.BirthDate,
GETDATE()) AS Age,(SELECT DATEDIFF(YEAR, BirthDate, GETDATE()) FROM Northwind.dbo.Employees
WHERE EmployeeID = E.ReportsTo) AS ManagerAge
FROM Northwind.dbo.Employees E
WHERE E.BirthDate > (SELECT BirthDate FROM Northwind.dbo.Employees WHERE EmployeeID =
E.ReportsTo);
```

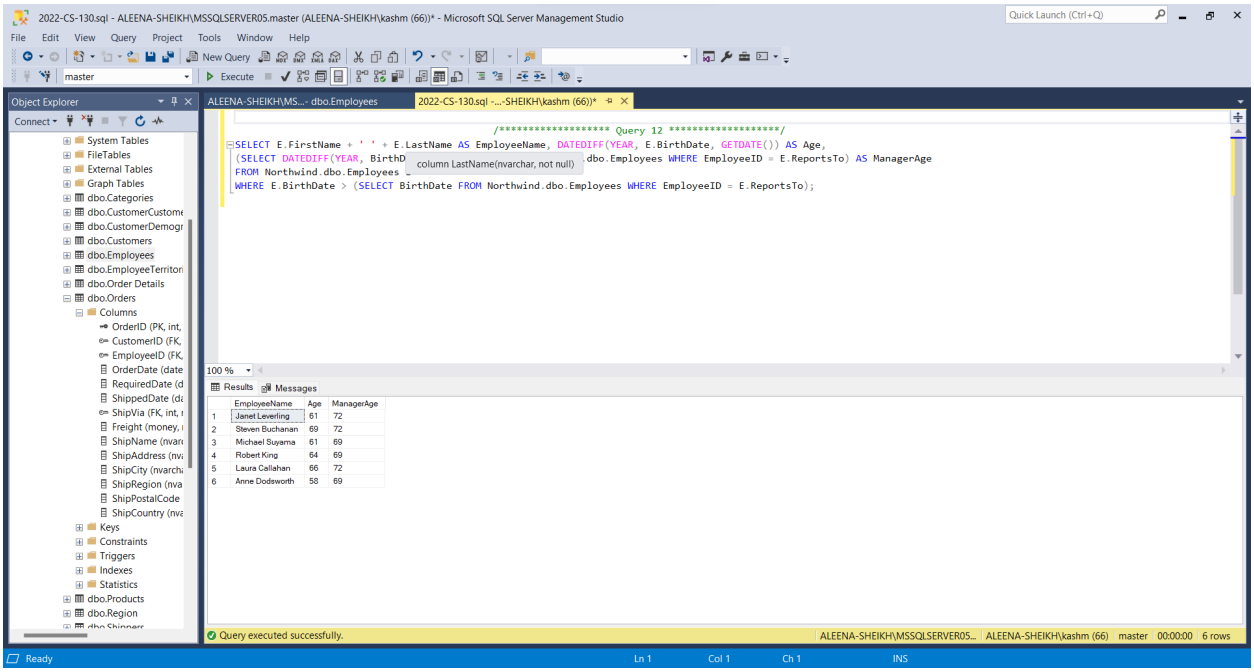

Figure 12: Query 12

Question 13

List the names of products which were ordered on 8th August 1997. (ProductName, OrderDate)

Query:

```
SELECT ProductName, OrderDate
FROM Northwind.dbo.Products, Northwind.dbo.Orders
WHERE ProductID IN (SELECT ProductID FROM Northwind.dbo.[Order Details] WHERE OrderID IN
(SELECT  OrderID FROM Northwind.dbo.Orders WHERE CONVERT(DATE, OrderDate) = '1997-08-08'));
```

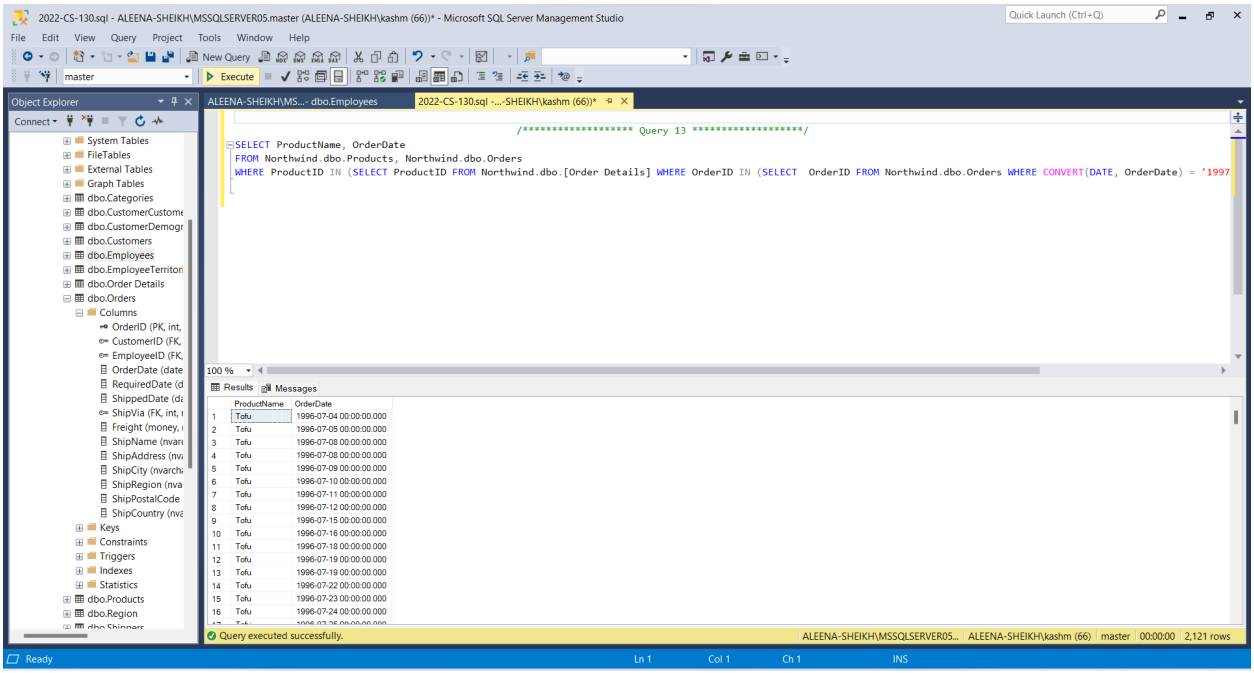

Figure 13: Query 13

Question 14

List the addresses, cities, countries of all orders which were serviced by Anne and were shipped late. (Address, City, Country)

Query:

```
SELECT ShipAddress AS Address,ShipCity AS City,ShipCountry AS Country
FROM Northwind.dbo.Orders
WHERE EmployeeID = (SELECT EmployeeID FROM Northwind.dbo.Employees WHERE FirstName = 'Anne')
AND ShippedDate > RequiredDate;
```

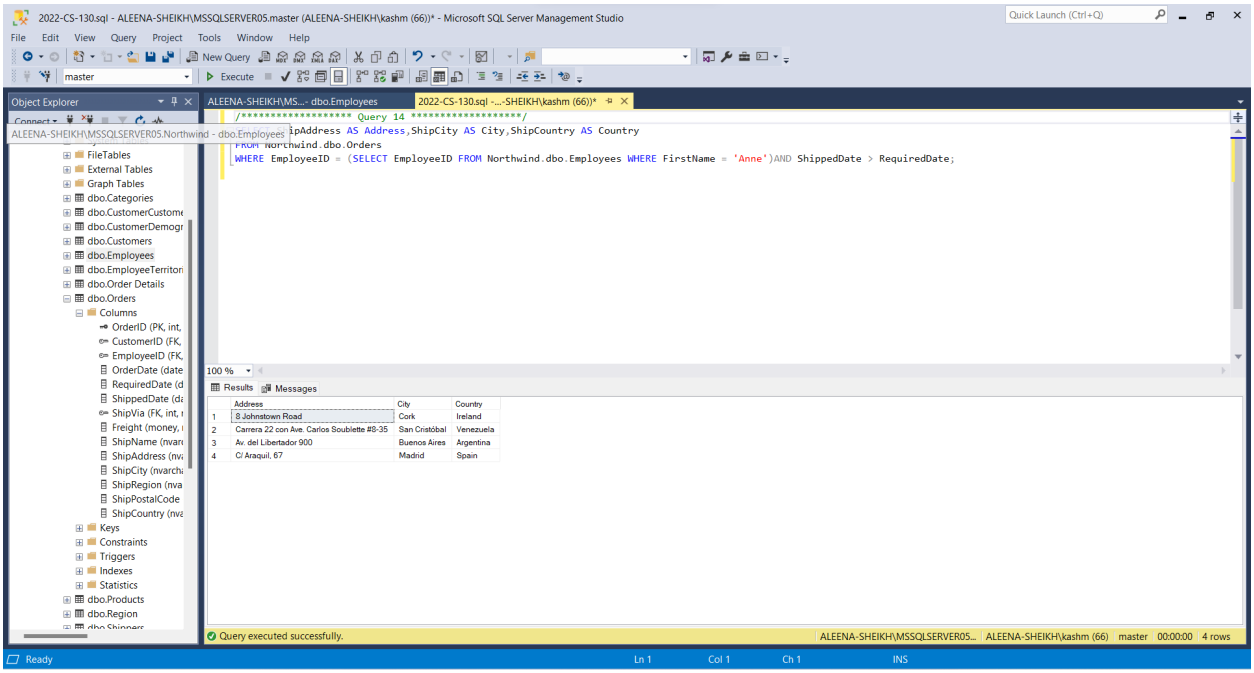

Figure 14: Query 14

Question 15

List all countries to which beverages have been shipped. (Country)

Query:

```
SELECT DISTINCT ShipCountry AS Country
FROM Northwind.dbo.Orders
WHERE OrderID IN (SELECT OrderID FROM Northwind.dbo.[Order Details] WHERE ProductID IN
(SELECT ProductID FROM Northwind.dbo.Products WHERE CategoryID = 1 ));
```

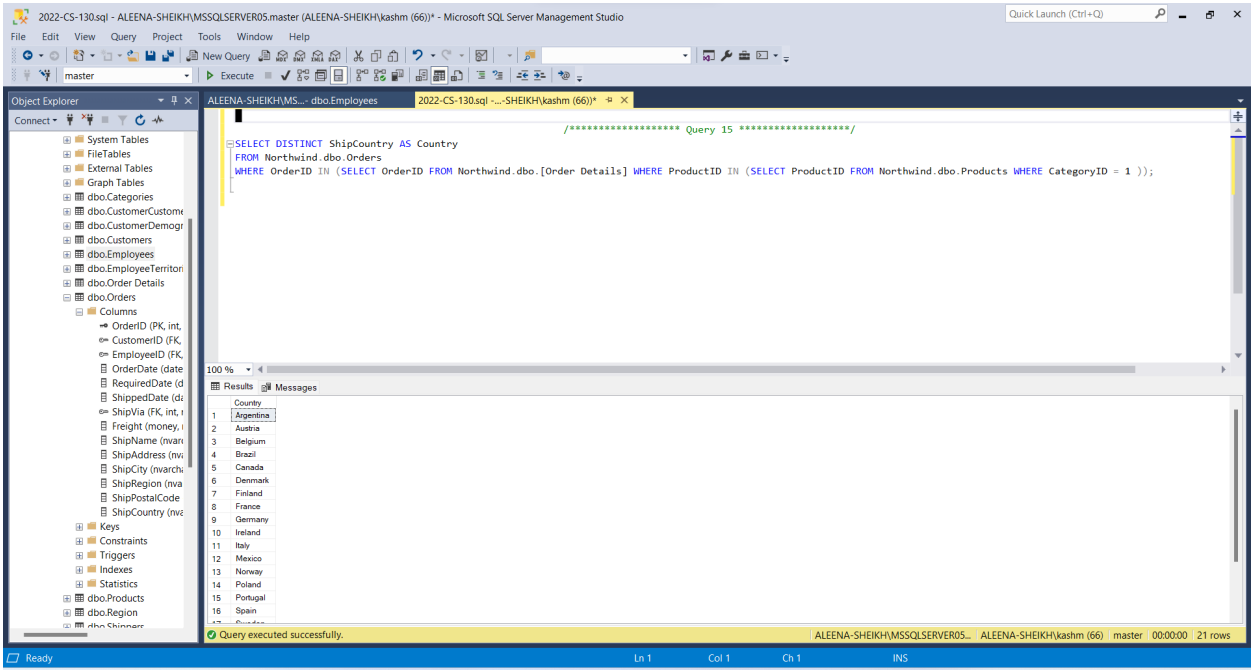

Figure 15: Query 15