SUPERVISED BY:

Prof. Nazeef Ul Haq

SUBMITTED BY:

Waleed Ahmed 2022-CS-41

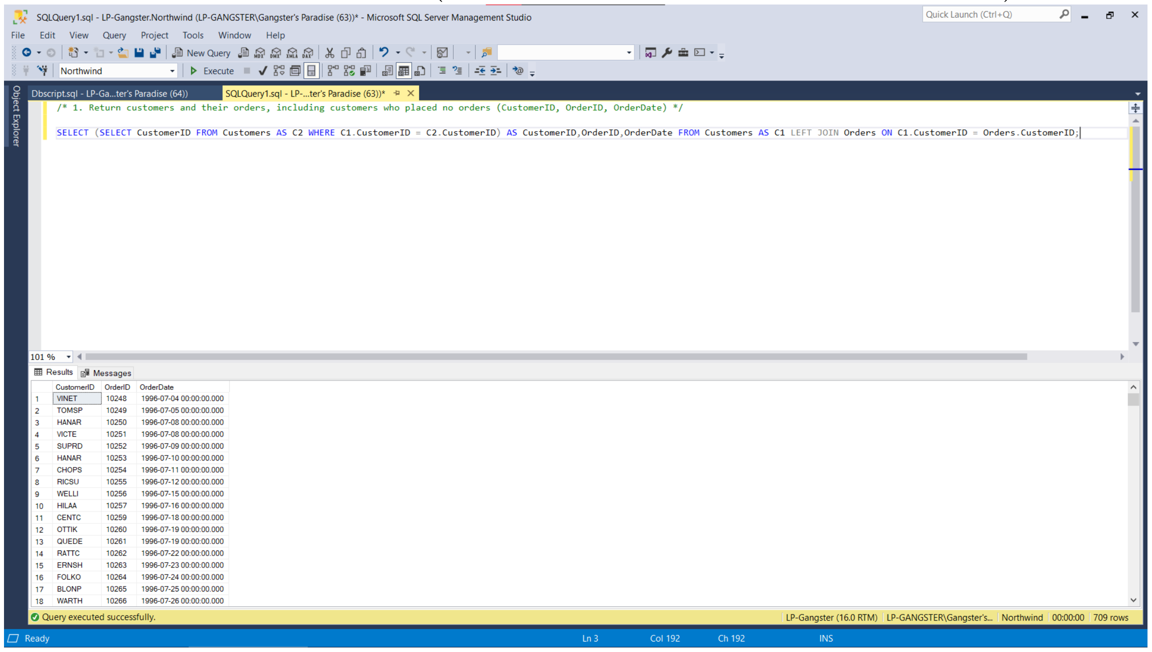
SUBJECT:

Lab 06 Hometask

SECTION:

A

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



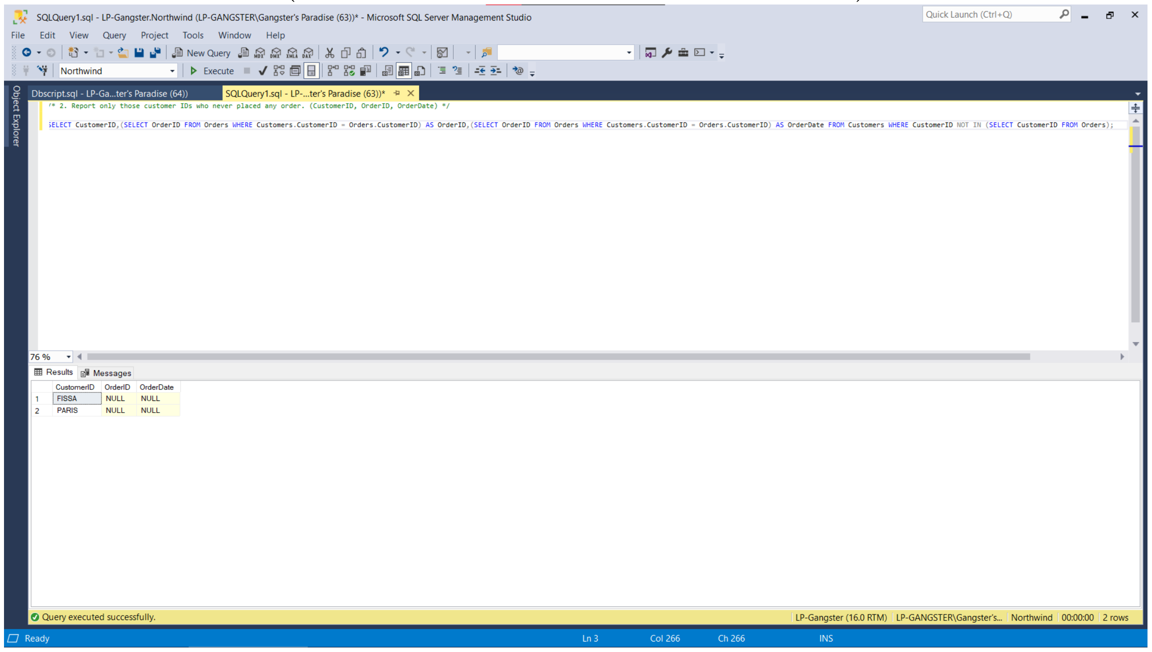
```sql
/* 1. Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate) */

SELECT (SELECT CustomerID FROM Customers AS C2 WHERE C1.CustomerID = C2.CustomerID) AS CustomerID,OrderID,OrderDate FROM Customers AS C1 LEFT JOIN Orders ON C1.CustomerID = Orders.CustomerID;
```

	CustomerID	OrderID	OrderDate
1	VINET	10248	1996-07-04 00:00:00.000
2	TOMSP	10249	1996-07-05 00:00:00.000
3	HANAR	10250	1996-07-08 00:00:00.000
4	VICTE	10251	1996-07-08 00:00:00.000
5	SUPRD	10252	1996-07-09 00:00:00.000
6	HANAR	10253	1996-07-10 00:00:00.000
7	CHOPS	10254	1996-07-11 00:00:00.000
8	RICSU	10255	1996-07-12 00:00:00.000
9	WELLI	10256	1996-07-15 00:00:00.000
10	HILAA	10257	1996-07-16 00:00:00.000
11	CENTC	10259	1996-07-18 00:00:00.000
12	OTTIK	10260	1996-07-19 00:00:00.000
13	QUEDE	10261	1996-07-19 00:00:00.000
14	RATTC	10262	1996-07-22 00:00:00.000
15	ERNSH	10263	1996-07-23 00:00:00.000
16	FOLKO	10264	1996-07-24 00:00:00.000
17	BLONP	10265	1996-07-25 00:00:00.000
18	WARTH	10266	1996-07-26 00:00:00.000

```
Query executed successfully.    LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 709 rows
```

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



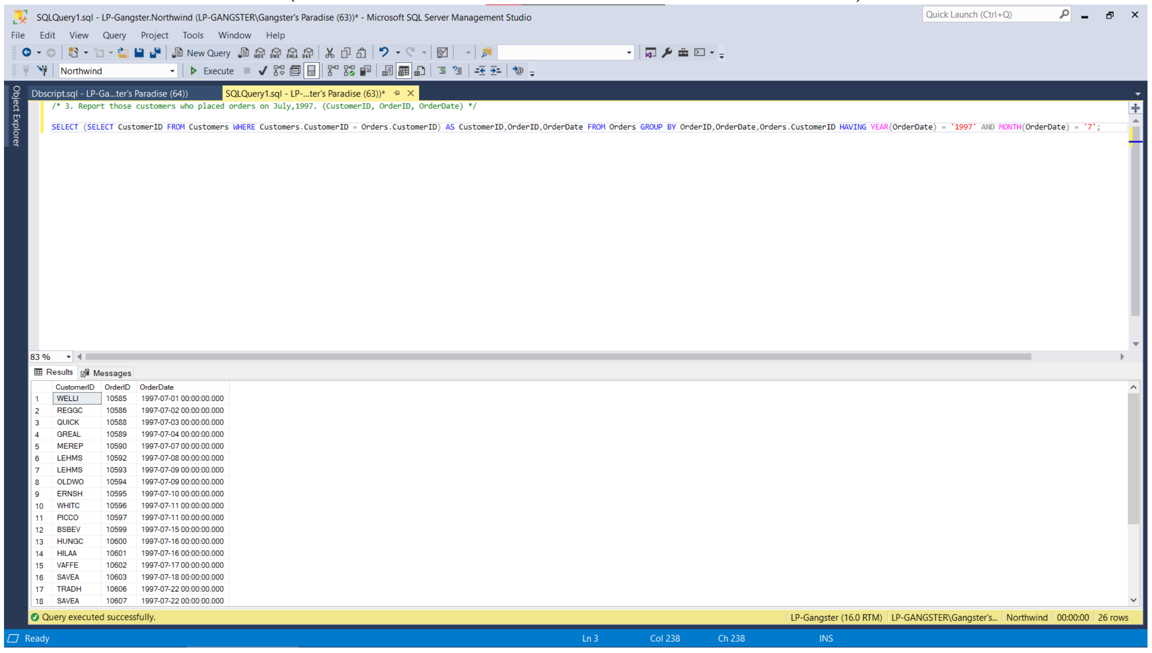
```
/* 2. Report only those customer IDs who never placed any order. (CustomerID, OrderID, OrderDate) */

SELECT CustomerID,(SELECT OrderID FROM Orders WHERE Customers.CustomerID = Orders.CustomerID) AS OrderID,(SELECT OrderID FROM Orders WHERE Customers.CustomerID = Orders.CustomerID) AS OrderDate FROM Customers WHERE CustomerID NOT IN (SELECT CustomerID FROM Orders);
```

	CustomerID	OrderID	OrderDate
1	FISSA	NULL	NULL
2	PARIS	NULL	NULL

Query executed successfully.

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



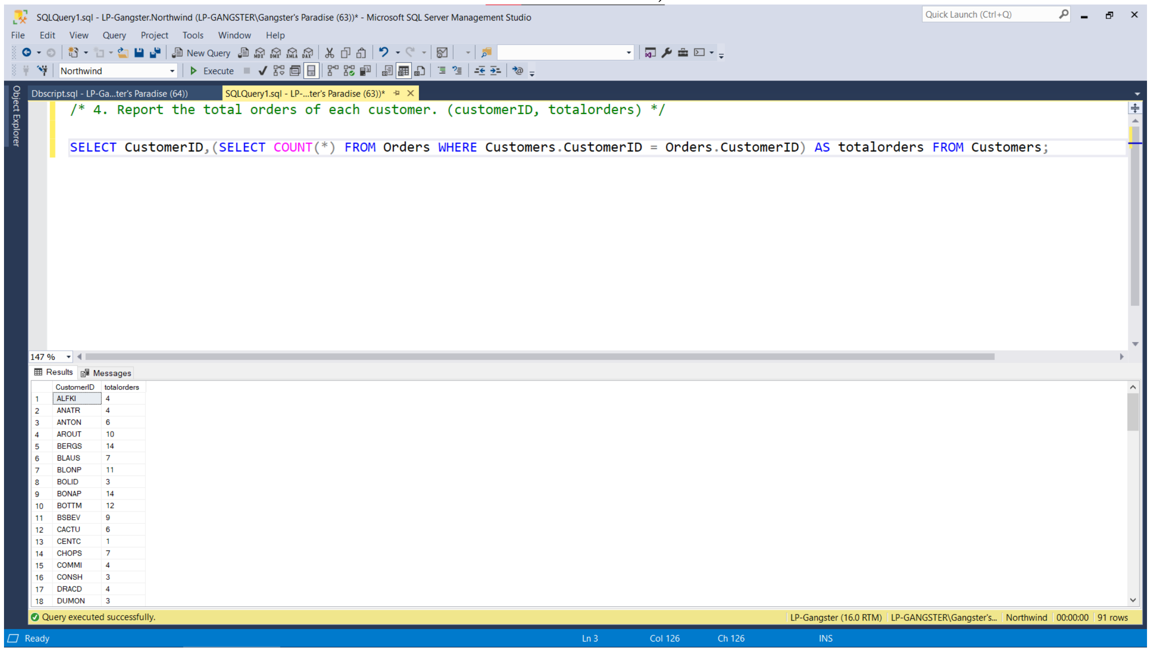
```sql
/* 3. Report those customers who placed orders on July,1997. (CustomerID, OrderID, OrderDate) */

SELECT (SELECT CustomerID FROM Customers WHERE Customers.CustomerID = Orders.CustomerID) AS CustomerID,OrderID,OrderDate FROM Orders GROUP BY OrderID,OrderDate,Orders.CustomerID HAVING YEAR(OrderDate) = '1997' AND MONTH(OrderDate) = '7';
```

	CustomerID	OrderID	OrderDate
1	WELLI	10585	1997-07-01 00:00:00.000
2	REGGC	10586	1997-07-02 00:00:00.000
3	QUICK	10588	1997-07-03 00:00:00.000
4	GREAL	10589	1997-07-04 00:00:00.000
5	MEREP	10590	1997-07-07 00:00:00.000
6	LEHMS	10592	1997-07-08 00:00:00.000
7	LEHMS	10593	1997-07-09 00:00:00.000
8	OLDWO	10594	1997-07-09 00:00:00.000
9	ERNSH	10595	1997-07-10 00:00:00.000
10	WHITC	10596	1997-07-11 00:00:00.000
11	PICCO	10597	1997-07-11 00:00:00.000
12	BSBEV	10599	1997-07-15 00:00:00.000
13	HUNGC	10600	1997-07-16 00:00:00.000
14	HILAA	10601	1997-07-16 00:00:00.000
15	VAFFE	10602	1997-07-17 00:00:00.000
16	SAVEA	10603	1997-07-18 00:00:00.000
17	TRADH	10606	1997-07-22 00:00:00.000
18	SAVEA	10607	1997-07-22 00:00:00.000

```
Query executed successfully.    LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 26 rows
```

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



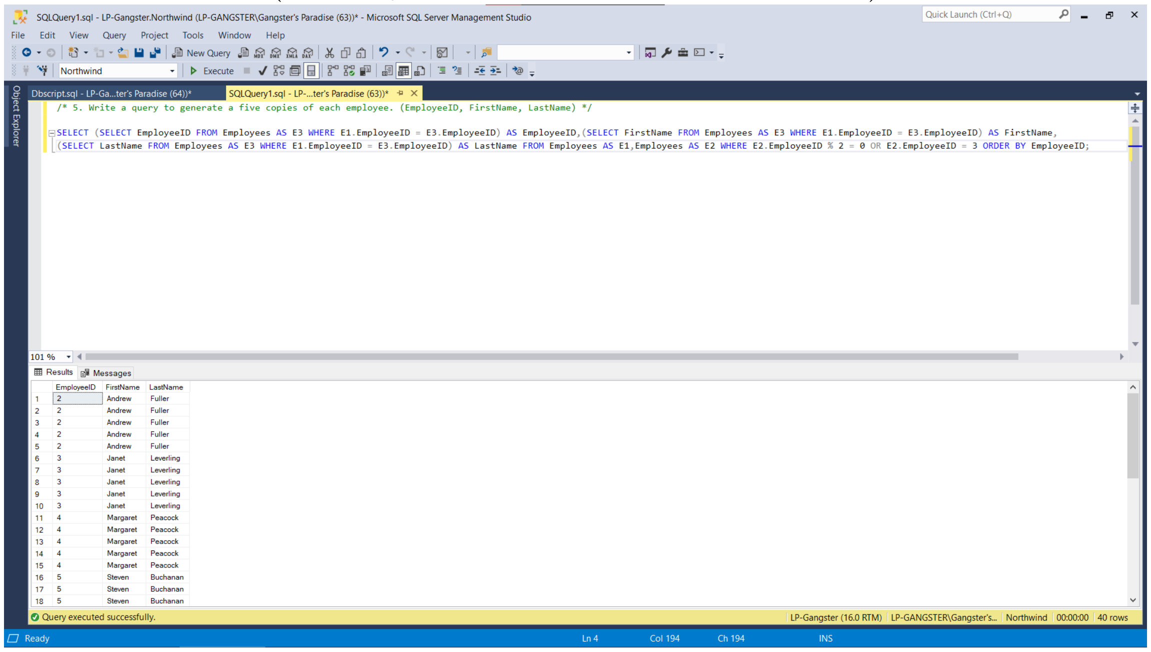
```sql
/* 4. Report the total orders of each customer. (customerID, totalorders) */

SELECT CustomerID,(SELECT COUNT(*) FROM Orders WHERE Customers.CustomerID = Orders.CustomerID) AS totalorders FROM Customers;
```

	CustomerID	totalorders
1	ALFKI	4
2	ANATR	4
3	ANTON	6
4	AROUT	10
5	BERGS	14
6	BLAUS	7
7	BLONP	11
8	BOLID	3
9	BONAP	14
10	BOTTM	12
11	BSBEV	9
12	CACTU	6
13	CENTC	1
14	CHOPS	7
15	COMMI	4
16	CONSH	3
17	DRACD	4
18	DUMON	3

```
Query executed successfully.    LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 91 rows
```

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



SQLQuery1.sql - LP-Gangster.Northwind (LP-GANGSTER\Gangster's Paradise (63))* - Microsoft SQL Server Management Studio

```sql
/* 5. Write a query to generate a five copies of each employee. (EmployeeID, FirstName, LastName) */

SELECT (SELECT EmployeeID FROM Employees AS E3 WHERE E1.EmployeeID = E3.EmployeeID) AS EmployeeID,(SELECT FirstName FROM Employees AS E3 WHERE E1.EmployeeID = E3.EmployeeID) AS FirstName,
(SELECT LastName FROM Employees AS E3 WHERE E1.EmployeeID = E3.EmployeeID) AS LastName FROM Employees AS E1,Employees AS E2 WHERE E2.EmployeeID % 2 = 0 OR E2.EmployeeID = 3 ORDER BY EmployeeID;
```

	EmployeeID	FirstName	LastName
1	2	Andrew	Fuller
2	2	Andrew	Fuller
3	2	Andrew	Fuller
4	2	Andrew	Fuller
5	2	Andrew	Fuller
6	3	Janet	Leverling
7	3	Janet	Leverling
8	3	Janet	Leverling
9	3	Janet	Leverling
10	3	Janet	Leverling
11	4	Margaret	Peacock
12	4	Margaret	Peacock
13	4	Margaret	Peacock
14	4	Margaret	Peacock
15	4	Margaret	Peacock
16	5	Steven	Buchanan
17	5	Steven	Buchanan
18	5	Steven	Buchanan

Query executed successfully. LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 40 rows

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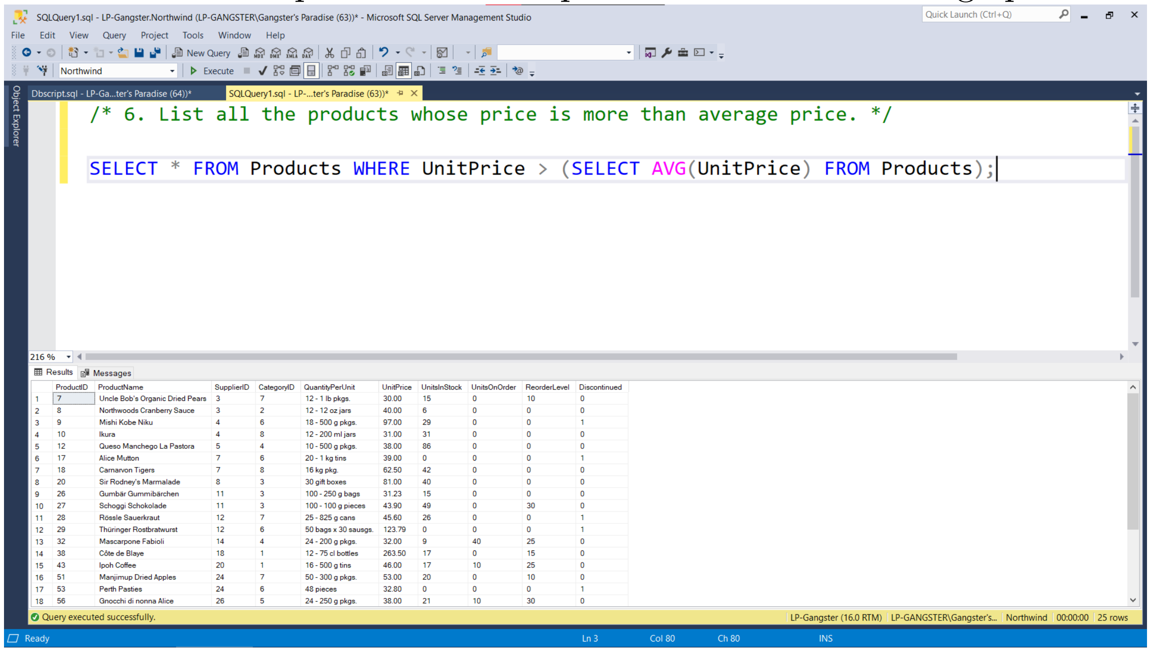
6. List all the products whose price is more than average price.



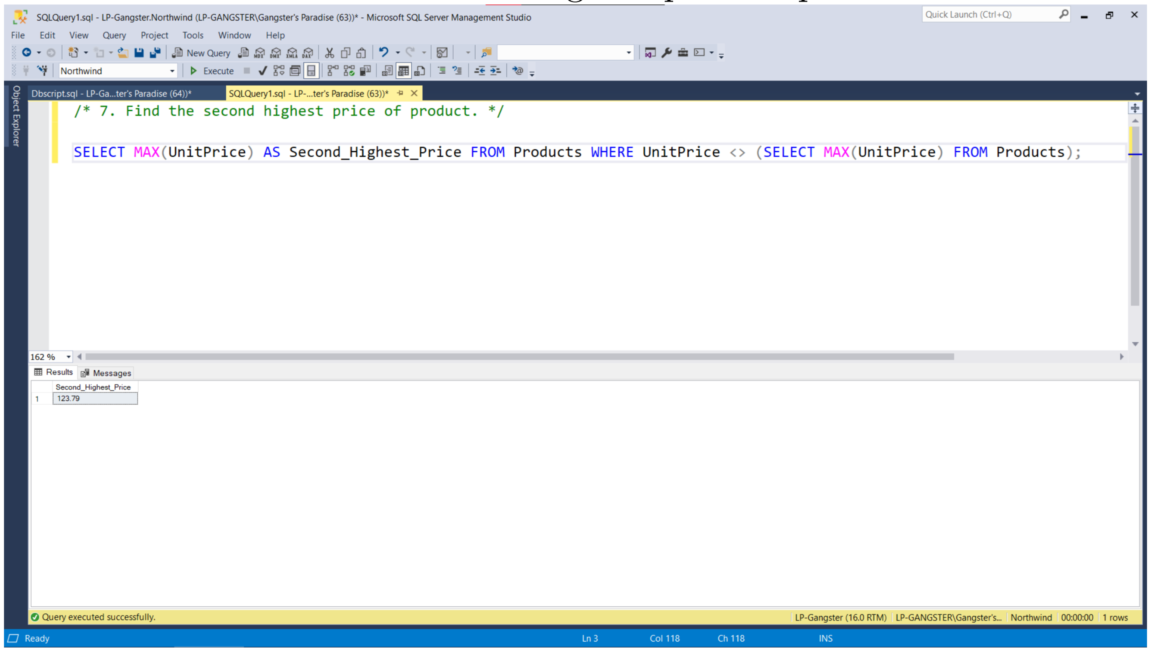
```sql
/* 6. List all the products whose price is more than average price. */

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

	ProductID	ProductName	SupplierID	CategoryID	QuantityPerUnit	UnitPrice	UnitsInStock	UnitsOnOrder	ReorderLevel	Discontinued
1	7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30.00	15	0	10	0
2	8	Northwoods Cranberry Sauce	3	2	12 - 12 oz jars	40.00	6	0	0	0
3	9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.00	29	0	0	1
4	10	Ikura	4	8	12 - 200 ml jars	31.00	31	0	0	0
5	12	Queso Manchego La Pastora	5	4	10 - 500 g pkgs.	38.00	86	0	0	0
6	17	Alice Mutton	7	6	20 - 1 kg tins	39.00	0	0	0	1
7	18	Carnarvon Tigers	7	8	16 kg pkg.	62.50	42	0	0	0
8	20	Sir Rodney's Marmalade	8	3	30 gift boxes	81.00	40	0	0	0
9	26	Gumbär Gummibärchen	11	3	100 - 250 g bags	31.23	15	0	0	0
10	27	Schoggi Schokolade	11	3	100 - 100 g pieces	43.90	49	0	30	0
11	28	Rössle Sauerkraut	12	7	25 - 825 g cans	45.60	26	0	0	1
12	29	Thüringer Rostbratwurst	12	6	50 bags x 30 sausgs.	123.79	0	0	0	1
13	32	Mascarpone Fabioli	14	4	24 - 200 g pkgs.	32.00	9	40	25	0
14	38	Côte de Blaye	18	1	12 - 75 cl bottles	263.50	17	0	15	0
15	43	Ipoh Coffee	20	1	16 - 500 g tins	46.00	17	10	25	0
16	51	Manjimup Dried Apples	24	7	50 - 300 g pkgs.	53.00	20	0	10	0
17	53	Perth Pasties	24	6	48 pieces	32.80	0	0	0	1
18	56	Gnocchi di nonna Alice	26	5	24 - 250 g pkgs.	38.00	21	10	30	0

Query executed successfully.

7. Find the second highest price of product.



SQLQuery1.sql - LP-Gangster.Northwind (LP-GANGSTER\Gangster's Paradise (63))* - Microsoft SQL Server Management Studio

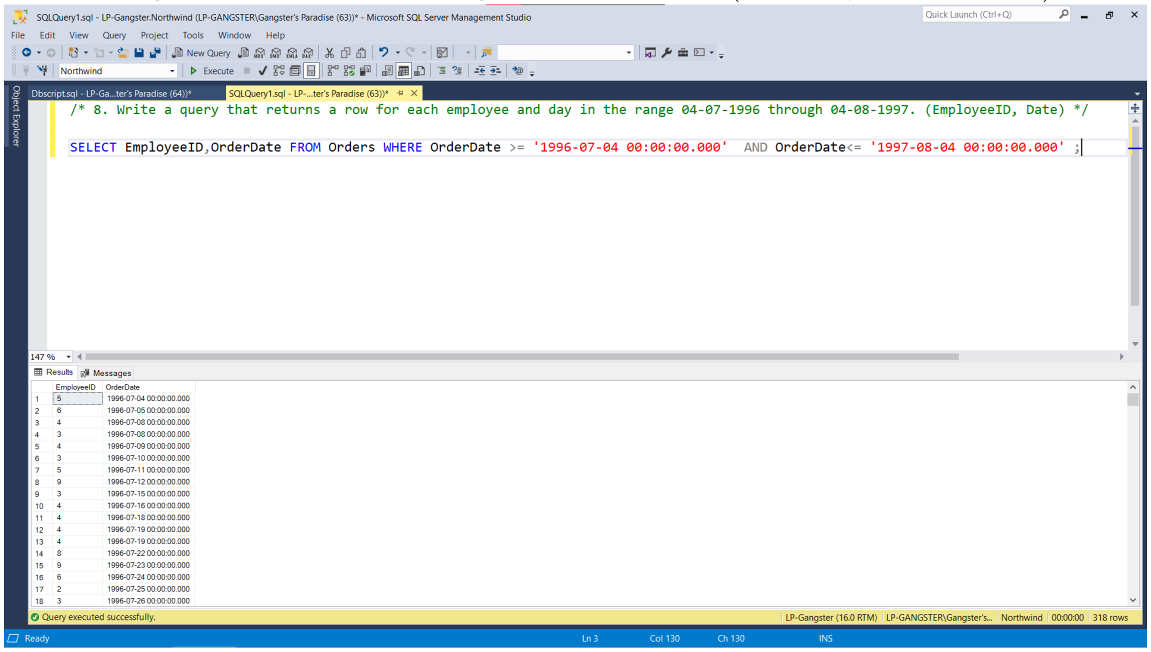
```
/* 7. Find the second highest price of product. */

SELECT MAX(UnitPrice) AS Second_Highest_Price FROM Products WHERE UnitPrice <> (SELECT MAX(UnitPrice) FROM Products);
```

	Second_Highest_Price
1	123.79

Query executed successfully. LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 1 rows

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



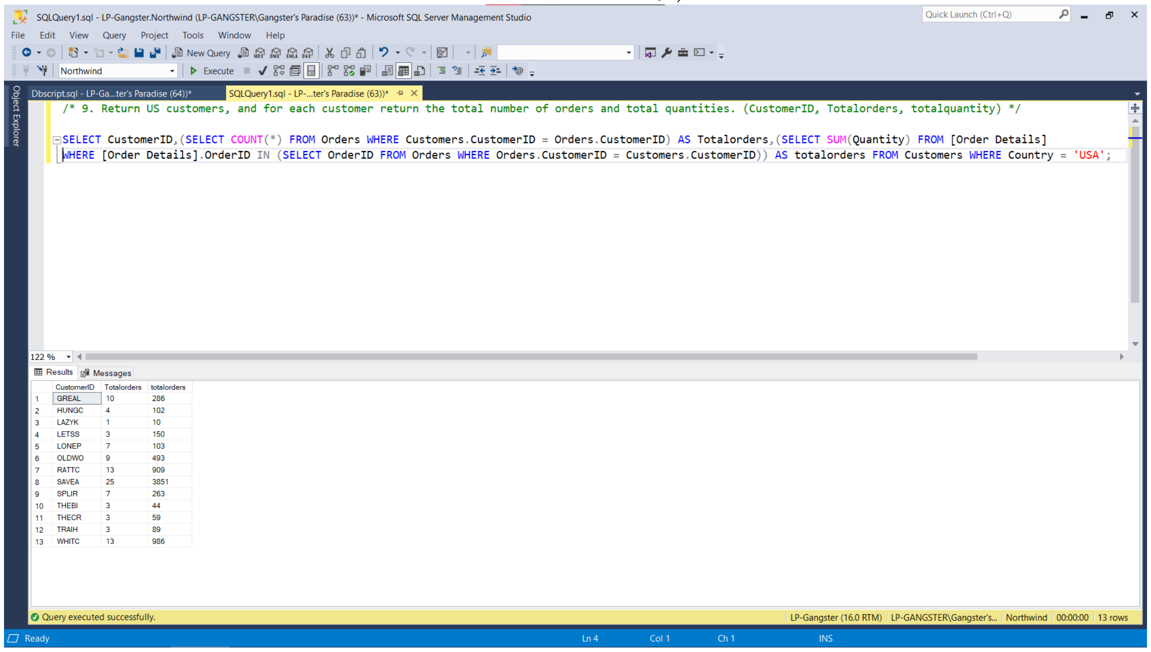
```sql
/* 8. Write a query that returns a row for each employee and day in the range 04-07-1996 through 04-08-1997. (EmployeeID, Date) */

SELECT EmployeeID,OrderDate FROM Orders WHERE OrderDate >= '1996-07-04 00:00:00.000'  AND OrderDate<= '1997-08-04 00:00:00.000' ;
```

	EmployeeID	OrderDate
1	5	1996-07-04 00:00:00.000
2	6	1996-07-05 00:00:00.000
3	4	1996-07-08 00:00:00.000
4	3	1996-07-08 00:00:00.000
5	4	1996-07-09 00:00:00.000
6	3	1996-07-10 00:00:00.000
7	5	1996-07-11 00:00:00.000
8	9	1996-07-12 00:00:00.000
9	3	1996-07-15 00:00:00.000
10	4	1996-07-16 00:00:00.000
11	4	1996-07-18 00:00:00.000
12	4	1996-07-19 00:00:00.000
13	4	1996-07-19 00:00:00.000
14	8	1996-07-22 00:00:00.000
15	9	1996-07-23 00:00:00.000
16	6	1996-07-24 00:00:00.000
17	2	1996-07-25 00:00:00.000
18	3	1996-07-26 00:00:00.000

```
Query executed successfully.    LP-Gangster (16.0 RTM)  LP-GANGSTER\Gangster's...  Northwind  00:00:00  318 rows
```

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



```sql
/* 9. Return US customers, and for each customer return the total number of orders and total quantities. (CustomerID, Totalorders, totalquantity) */

SELECT CustomerID,(SELECT COUNT(*) FROM Orders WHERE Customers.CustomerID = Orders.CustomerID) AS Totalorders,(SELECT SUM(Quantity) FROM [Order Details]
WHERE [Order Details].OrderID IN (SELECT OrderID FROM Orders WHERE Orders.CustomerID = Customers.CustomerID)) AS totalorders FROM Customers WHERE Country = 'USA';
```

	CustomerID	Totalorders	totalorders
1	GREAL	10	286
2	HUNGC	4	102
3	LAZYK	1	10
4	LETSS	3	150
5	LONEP	7	103
6	OLDWO	9	493
7	RATTC	13	909
8	SAVEA	25	3851
9	SPLIR	7	263
10	THEBI	3	44
11	THECR	3	59
12	TRAIH	3	89
13	WHITC	13	986

```
Query executed successfully.    LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 13 rows
```

SQLQuery1.sql - LP-Gangster.Northwind (LP-GANGSTER\Gangster's Paradise (63))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Northwind
Execute
Dbscript.sql - LP-Ga...ter's Paradise (64))*
SQLQuery1.sql - LP-...ter's Paradise (63))*
Object Explorer
122 %
Results
Messages
Ready
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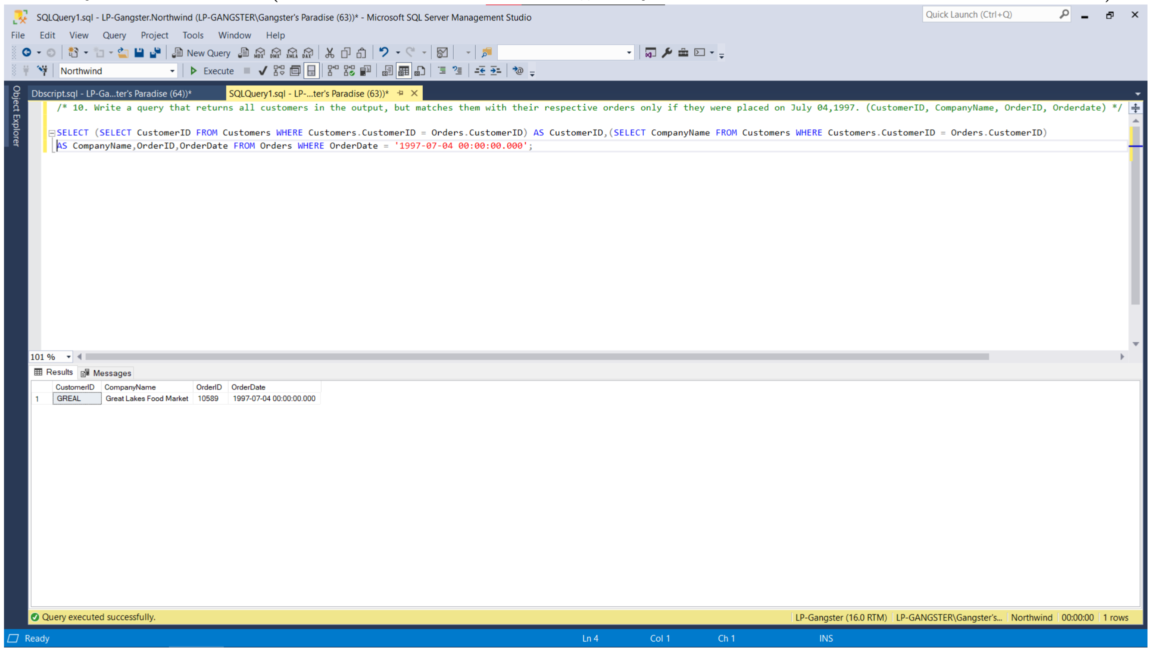
10. Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate)



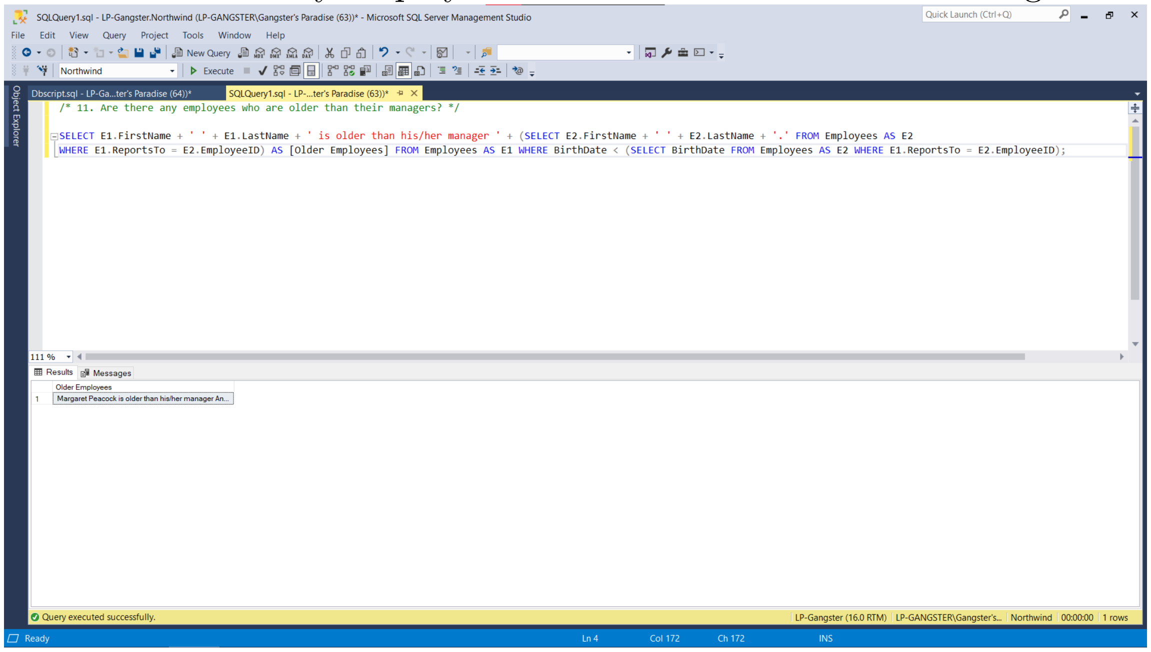
```sql
/* 10. Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate) */

SELECT (SELECT CustomerID FROM Customers WHERE Customers.CustomerID = Orders.CustomerID) AS CustomerID,(SELECT CompanyName FROM Customers WHERE Customers.CustomerID = Orders.CustomerID)
AS CompanyName,OrderID,OrderDate FROM Orders WHERE OrderDate = '1997-07-04 00:00:00.000';
```

	CustomerID	CompanyName	OrderID	OrderDate
1	GREAL	Great Lakes Food Market	10589	1997-07-04 00:00:00.000

Query executed successfully.

11. Are there any employees who are older than their managers?



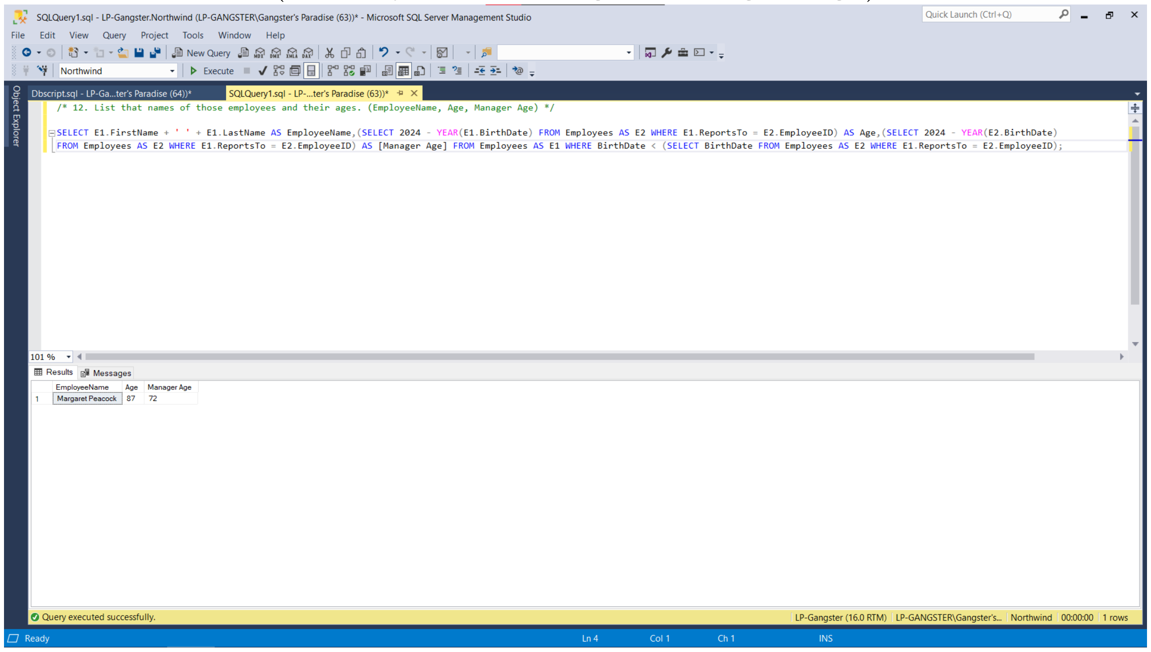
```
/* 11. Are there any employees who are older than their managers? */

SELECT E1.FirstName + ' ' + E1.LastName + ' is older than his/her manager ' + (SELECT E2.FirstName + ' ' + E2.LastName + '.' FROM Employees AS E2
WHERE E1.ReportsTo = E2.EmployeeID) AS [Older Employees] FROM Employees AS E1 WHERE BirthDate < (SELECT BirthDate FROM Employees AS E2 WHERE E1.ReportsTo = E2.EmployeeID);
```

```
  Older Employees
1 Margaret Peacock is older than his/her manager An...
```

Query executed successfully.

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



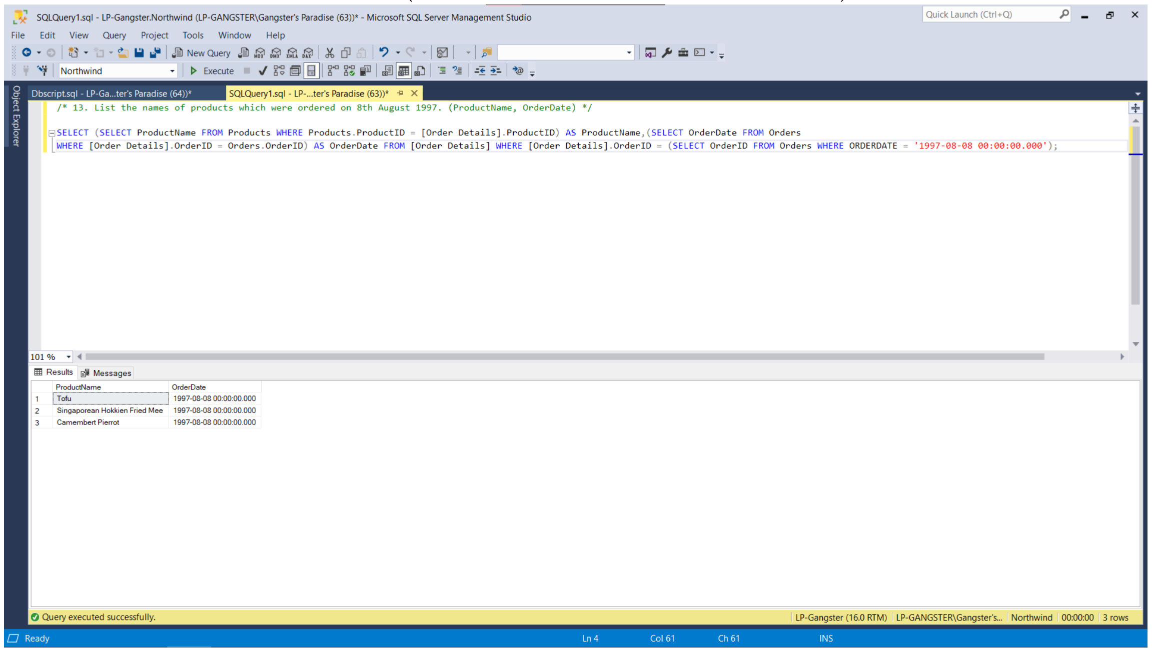
```
/* 12. List that names of those employees and their ages. (EmployeeName, Age, Manager Age) */

SELECT E1.FirstName + ' ' + E1.LastName AS EmployeeName,(SELECT 2024 - YEAR(E1.BirthDate) FROM Employees AS E2 WHERE E1.ReportsTo = E2.EmployeeID) AS Age,(SELECT 2024 - YEAR(E2.BirthDate)
FROM Employees AS E2 WHERE E1.ReportsTo = E2.EmployeeID) AS [Manager Age] FROM Employees AS E1 WHERE BirthDate < (SELECT BirthDate FROM Employees AS E2 WHERE E1.ReportsTo = E2.EmployeeID);
```

	EmployeeName	Age	Manager Age
1	Margaret Peacock	87	72

Query executed successfully.

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



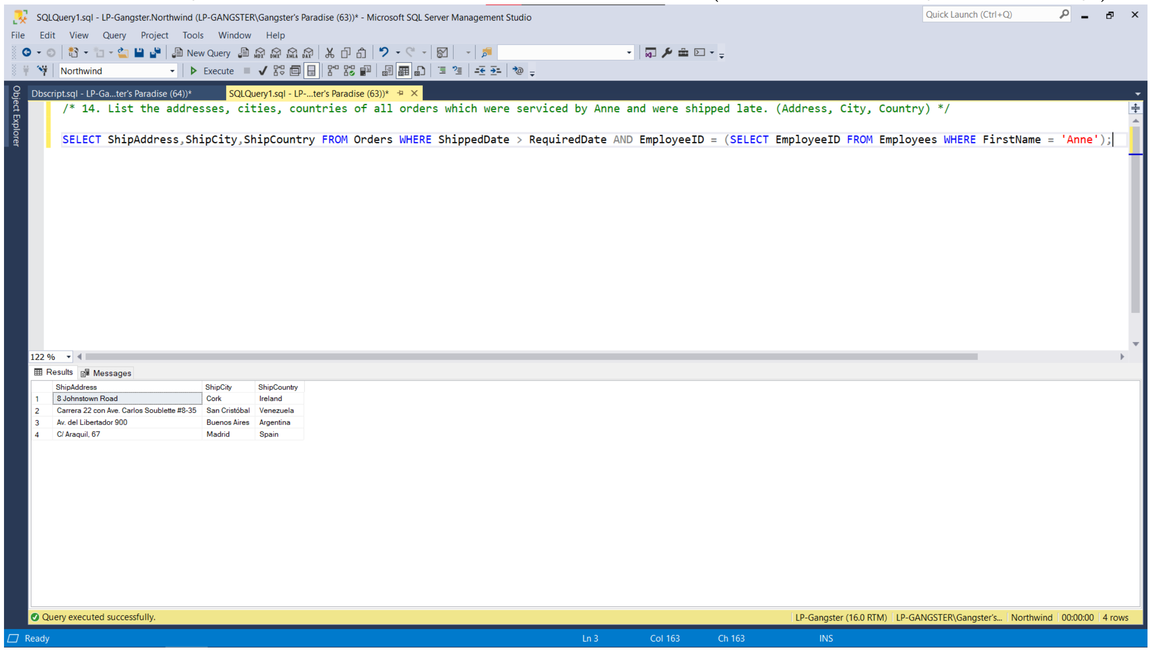
```sql
/* 13. List the names of products which were ordered on 8th August 1997. (ProductName, OrderDate) */

SELECT (SELECT ProductName FROM Products WHERE Products.ProductID = [Order Details].ProductID) AS ProductName,(SELECT OrderDate FROM Orders
WHERE [Order Details].OrderID = Orders.OrderID) AS OrderDate FROM [Order Details] WHERE [Order Details].OrderID = (SELECT OrderID FROM Orders WHERE ORDERDATE = '1997-08-08 00:00:00.000');
```

	ProductName	OrderDate
1	Tofu	1997-08-08 00:00:00.000
2	Singaporean Hokkien Fried Mee	1997-08-08 00:00:00.000
3	Camembert Pierrot	1997-08-08 00:00:00.000

```
Query executed successfully.
```

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



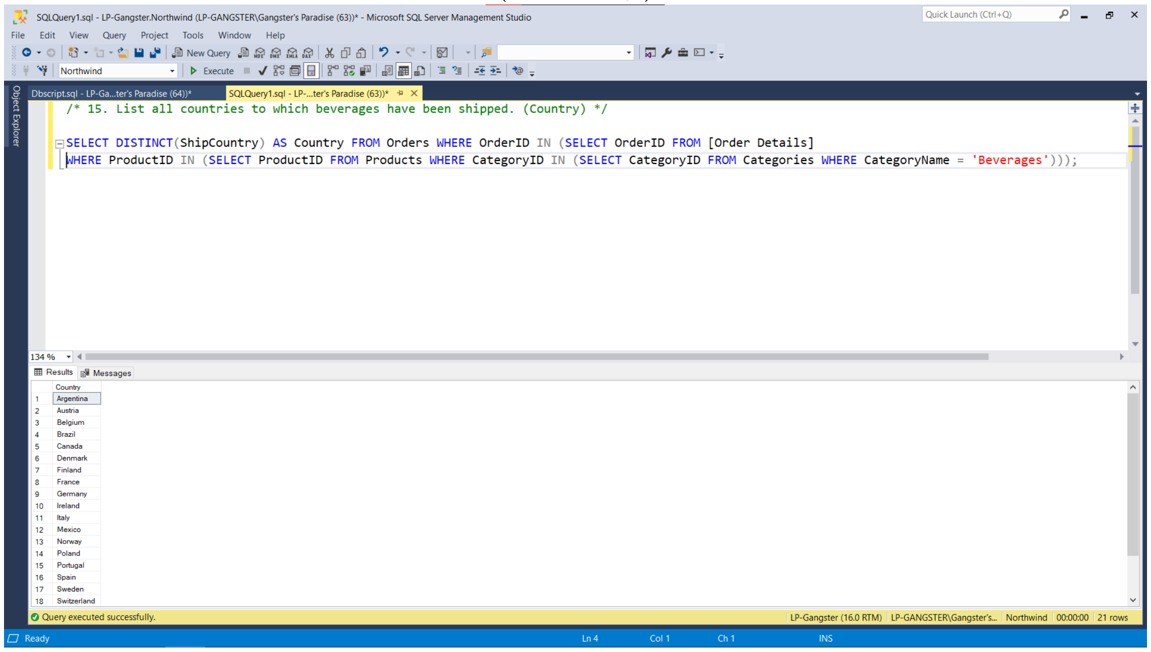
```
/* 14. List the addresses, cities, countries of all orders which were serviced by Anne and were shipped late. (Address, City, Country) */

SELECT ShipAddress,ShipCity,ShipCountry FROM Orders WHERE ShippedDate > RequiredDate AND EmployeeID = (SELECT EmployeeID FROM Employees WHERE FirstName = 'Anne');
```

	ShipAddress	ShipCity	ShipCountry
1	8 Johnstown Road	Cork	Ireland
2	Carrera 22 con Ave. Carlos Soublette #8-35	San Cristóbal	Venezuela
3	Av. del Libertador 900	Buenos Aires	Argentina
4	C/ Araquil, 67	Madrid	Spain

Query executed successfully.

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



SQLQuery1.sql - LP-Gangster.Northwind (LP-GANGSTER\Gangster's Paradise (63))* - Microsoft SQL Server Management Studio

```sql
/* 15. List all countries to which beverages have been shipped. (Country) */

SELECT DISTINCT(ShipCountry) AS Country FROM Orders WHERE OrderID IN (SELECT OrderID FROM [Order Details]
WHERE ProductID IN (SELECT ProductID FROM Products WHERE CategoryID IN (SELECT CategoryID FROM Categories WHERE CategoryName = 'Beverages')));
```

	Country
1	Argentina
2	Austria
3	Belgium
4	Brazil
5	Canada
6	Denmark
7	Finland
8	France
9	Germany
10	Ireland
11	Italy
12	Mexico
13	Norway
14	Poland
15	Portugal
16	Spain
17	Sweden
18	Switzerland

```
Query executed successfully.    LP-Gangster (16.0 RTM) | LP-GANGSTER\Gangster's... | Northwind | 00:00:00 | 21 rows
```