

LAB 05



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Course:

CS-262L Database Systems

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Contents

1	Question 1	5
	1.1 Question Statement	5
	1.2 Query:	5
2	Question 2	5
	2.1 Question Statement	5
	2.2 Query:	5
3	Question 3	6
	3.1 Question Statement	6
	3.2 Query:	6
4	Question 4	6
	4.1 Question Statement	6
	4.2 Query:	7
5	Question 5	7
	5.1 Question Statement	7
	5.2 Answer	7
6	Question 6	7
	6.1 Question Statement	7
	6.2 Query:	7
7	Question 7	8
	7.1 Question Statement	8
	7.2 Query:	8
8	Question 8	9
	8.1 Question Statement	9
	8.2 Query:	9
9	Question 9	9
	9.1 Question Statement	9
	9.2 Answer	9
10	Question 10	9
	10.1 Question Statement	9
	10.2 Query:	10
11	Question 11	10
	11.1 Question Statement	10

11.2 Query:	10
12 Question 12	11
12.1 Question Statement	11
12.2 Query:	11
13 Question 13	12
13.1 Question Statement	12
13.2 Query:	12

List of Figures

1	Result of the query 1	5
2	Result of the query 2	6
3	Result of the query 3	6
4	Result of the query 4	7
5	Result of the query 6	8
6	Result of the query 7	8
7	Result of the query 8	9
8	Result of the query 10	10
9	Result of the query 11	11
10	Result of the query 12	11
11	Result of the query 13	12

1 Question 1

1.1 Question Statement

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

1.2 Query:

```
SELECT c.CustomerID , o.OrderID , o.OrderDate
FROM Customers c
LEFT JOIN Orders o ON c.CustomerID = o.CustomerID;
```

CustomerID	OrderID	OrderDate
1	10248	1996-07-04 00:00:00.000
2	10249	1996-07-05 00:00:00.000
3	10250	1996-07-06 00:00:00.000
4	10251	1996-07-07 00:00:00.000
5	10252	1996-07-08 00:00:00.000
6	10253	1996-07-09 00:00:00.000
7	10254	1996-07-10 00:00:00.000
8	10255	1996-07-11 00:00:00.000
9	10256	1996-07-12 00:00:00.000
10	10257	1996-07-13 00:00:00.000
11	10258	1996-07-14 00:00:00.000
12	10259	1996-07-15 00:00:00.000
13	10260	1996-07-16 00:00:00.000
14	10261	1996-07-17 00:00:00.000
15	10262	1996-07-18 00:00:00.000
16	10263	1996-07-19 00:00:00.000
17	10264	1996-07-20 00:00:00.000
18	10265	1996-07-21 00:00:00.000
19	10266	1996-07-22 00:00:00.000
20	10267	1996-07-23 00:00:00.000
21	10268	1996-07-24 00:00:00.000
22	10269	1996-07-25 00:00:00.000

Figure 1: Result of the query 1

2 Question 2

2.1 Question Statement

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

2.2 Query:

```
SELECT c.CustomerID , o.OrderID , o.OrderDate
FROM Customers c
LEFT JOIN Orders o ON c.CustomerID = o.CustomerID
WHERE o.OrderID IS NULL;
```

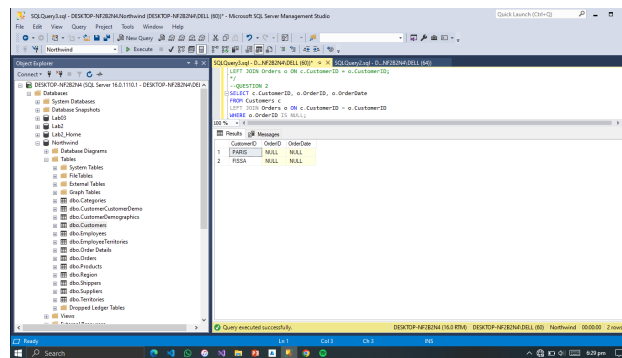


Figure 2: Result of the query 2

3 Question 3

3.1 Question Statement

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

3.2 Query:

```
SELECT c.CustomerID , o.OrderID , o.OrderDate
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
WHERE YEAR(o.OrderDate) = 1997 AND MONTH(o.OrderDate) = 7;
```

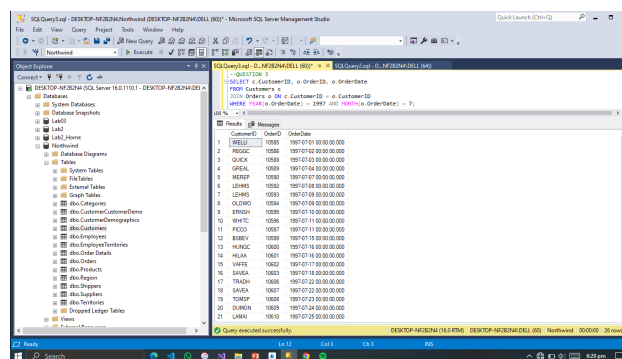


Figure 3: Result of the query 3

4 Question 4

4.1 Question Statement

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

4.2 Query:

```
SELECT CustomerID , COUNT(OrderID) AS totalorders
FROM Orders
GROUP BY CustomerID;
```

CustomerID	totalorders
1 ALFKI	4
2 ANTON	4
3 ANTON	6
4 ARDUR	10
5 BERGS	14
6 BLAUS	7
7 BOLSP	11
8 BOLSO	3
9 BONAP	12
10 BOTTM	12
11 CACTU	6
12 CENLC	5
13 CHOPS	7
14 COMMI	4
15 CONSO	3

Figure 4: Result of the query 4

5 Question 5

5.1 Question Statement

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

5.2 Answer

No Answer.

6 Question 6

6.1 Question Statement

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

6.2 Query:

```
SELECT E.EmployeeID , o.OrderDate AS Date
FROM Employees E
JOIN Orders o ON E.EmployeeID = o.EmployeeID
WHERE o.OrderDate > '1996-07-04' AND o.OrderDate < '1997-08-04'
```

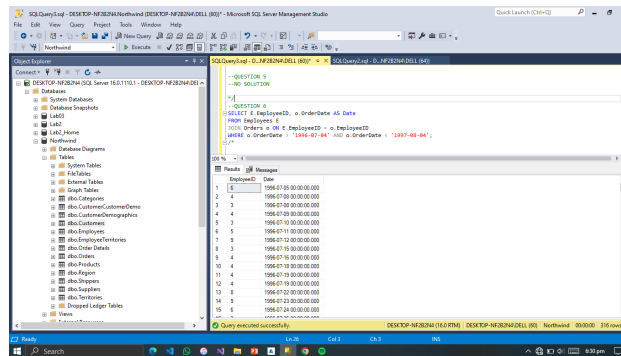


Figure 5: Result of the query 6

7 Question 7

7.1 Question Statement

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

7.2 Query:

```
SELECT c.CustomerID, COUNT(DISTINCT o.OrderID) AS TotalOrders, SUM(od.Quantity) AS TotalQuantity
FROM Customers c
JOIN Orders o ON c.CustomerID = o.CustomerID
JOIN [Order Details] od ON o.OrderID = od.OrderID
WHERE c.Country = 'USA'
GROUP BY c.CustomerID;
```

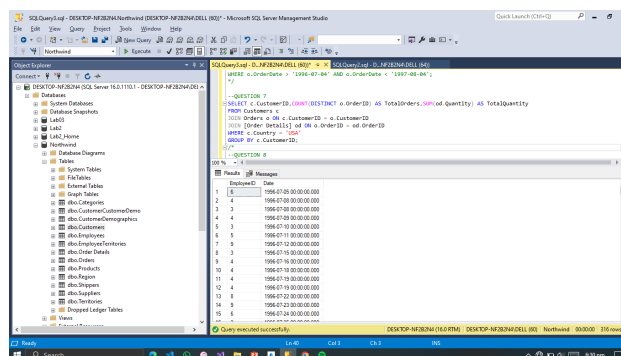


Figure 6: Result of the query 7

8 Question 8

8.1 Question Statement

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)

8.2 Query:

```
SELECT c.CustomerID , c.CompanyName , o.OrderID , o.OrderDate
FROM Customers c
LEFT JOIN Orders o ON c.CustomerID = o.CustomerID AND
o.OrderDate = '1997-07-04';
```

CustomerID	CompanyName	OrderID	OrderDate
1	ALFRED	Alfred Futterkiste	NULL
2	ANILEN	Ana Trapp Brewery	NULL
3	ANTONI	Antonio Moreno Tapaeria	NULL
4	AROUT	Arouton Inc.	NULL
5	BERGS	Bergsma's	NULL
6	BLAND	Blond's	NULL
7	BONAP	Bonaparte	NULL
8	BONAP	Bonaparte	NULL
9	BONAP	Bonaparte	NULL
10	BOTTIN	Bottin	NULL
11	BOTTIN	Bottin	NULL
12	CACTUS	Cactus	NULL
13	CHOPIN	Chopin	NULL
14	CHOPIN	Chopin	NULL
15	CHOPIN	Chopin	NULL

Figure 7: Result of the query 8

9 Question 9

9.1 Question Statement

Are there any employees who are older than their managers?

9.2 Answer

Yes.

10 Question 10

10.1 Question Statement

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

10.2 Query:

```

SELECT e.FirstName+' '+e.LastName AS EmployeeName ,
        e.Birthdate AS Age,
        m.Birthdate AS ManagerAge
FROM Employees e
JOIN Employees m ON e.ReportsTo = m.EmployeeID
WHERE e.Birthdate < m.Birthdate;

```

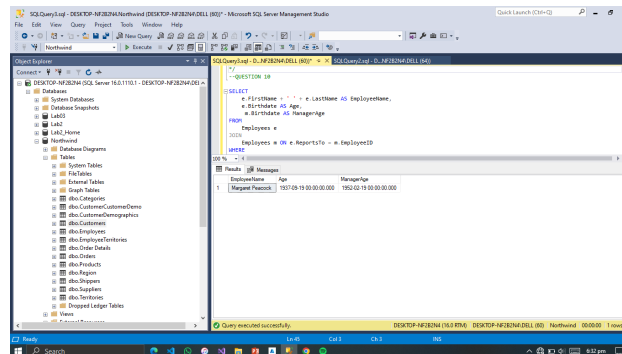


Figure 8: Result of the query 10

11 Question 11

11.1 Question Statement

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

11.2 Query:

```

SELECT p.ProductName , o.OrderDate
FROM Products p
JOIN [Order Details] od ON p.ProductID = od.ProductID
JOIN Orders o ON od.OrderID = o.OrderID
WHERE o.OrderDate = '1997-08-08';

```

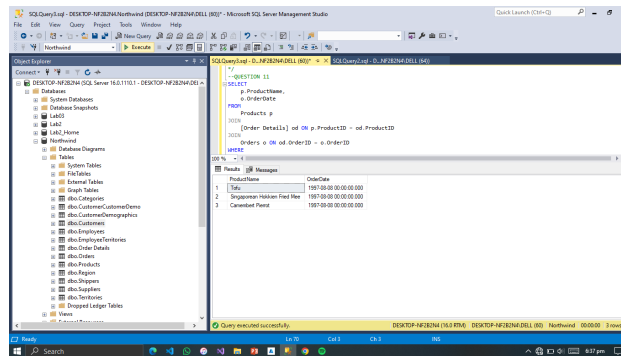


Figure 9: Result of the query 11

12 Question 12

12.1 Question Statement

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

12.2 Query:

```
SELECT o.ShipAddress AS Address ,
       o.ShipCity AS City ,
       o.ShipCountry AS Country
FROM Orders o
JOIN Employees e ON o.EmployeeID = e.EmployeeID
WHERE e.FirstName = 'Anne'
      AND o.ShippedDate > o.RequiredDate;
```

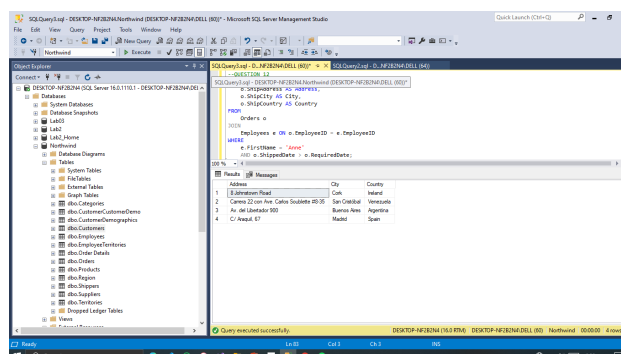


Figure 10: Result of the query 12

13 Question 13

13.1 Question Statement

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

13.2 Query:

```
SELECT DISTINCT c.Country
FROM Orders o
JOIN Customers c ON o.CustomerID = c.CustomerID
JOIN [Order Details] od ON o.OrderID = od.OrderID
JOIN Products p ON od.ProductID = p.ProductID
WHERE p.CategoryID = 1;
```

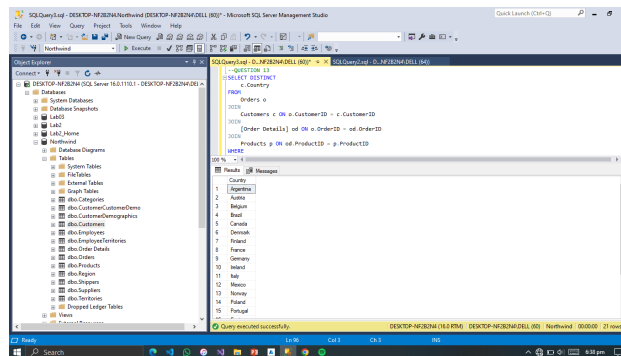


Figure 11: Result of the query 13