

# **LAB MANUAL 5**

## **Advance Tasks**



Session: 2022 – 2026

**Submitted to:**

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**Submitted by:**

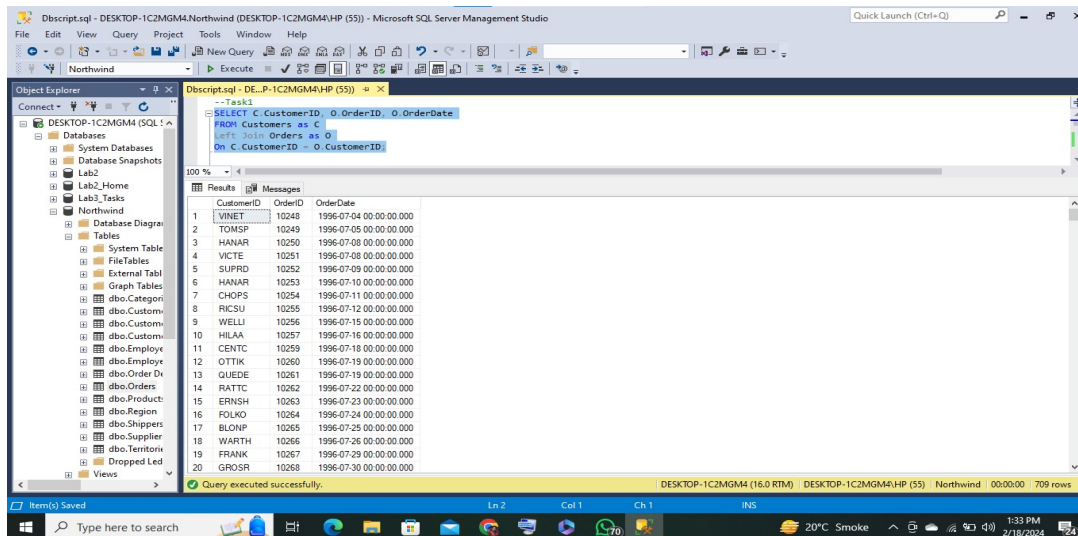
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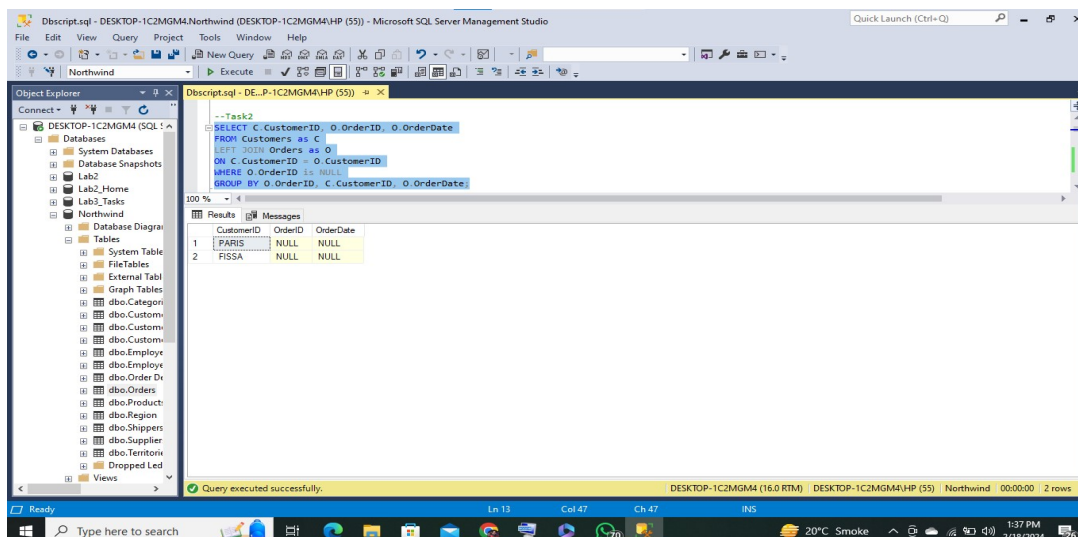
Q1: Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate)

SQL Query: SELECT C.CustomerID, O.OrderID, O.OrderDate FROM Customers as C Left Join Orders as O On C.CustomerID = O.CustomerID;



Q2: Report only those customer IDs who never placed any order. (CustomerID, OrderID, OrderDate)

SQL Query: SELECT C.CustomerID, O.OrderID, O.OrderDate FROM Customers as C LEFT JOIN Orders as O ON C.CustomerID = O.CustomerID WHERE O.OrderID is NULL GROUP BY O.OrderID, C.CustomerID, O.OrderDate;



Q3: Report those customers who placed orders on July,1997. (CustomerID, OrderID, OrderDate)  
 SQL Query: `SELECT C.CustomerID, O.OrderID, O.OrderDate FROM Customers as C LEFT JOIN Orders as O ON C.CustomerID = O.CustomerID WHERE Year(O.OrderDate) = 1997 and MONTH(O.OrderDate) = 7 GROUP BY C.CustomerID, O.OrderID, O.OrderDate;`

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The query window displays the following SQL query:

```
--Task3 SELECT C.CustomerID, O.OrderID, O.OrderDate FROM Customers as C LEFT JOIN Orders as O ON C.CustomerID = O.CustomerID WHERE Year(O.OrderDate) = 1997 and MONTH(O.OrderDate) = 7 GROUP BY C.CustomerID, O.OrderID, O.OrderDate;
```

The Results pane shows the following data:

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

Q4: Report the total orders of each customer. (customerID, totalorders)  
 SQL Query: `SELECT C.CustomerID, COUNT(O.OrderID) as totalorder FROM Customers as C Left Join Orders as O On C.CustomerID = O.CustomerID Group By C.CustomerID`

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The query window displays the following SQL query:

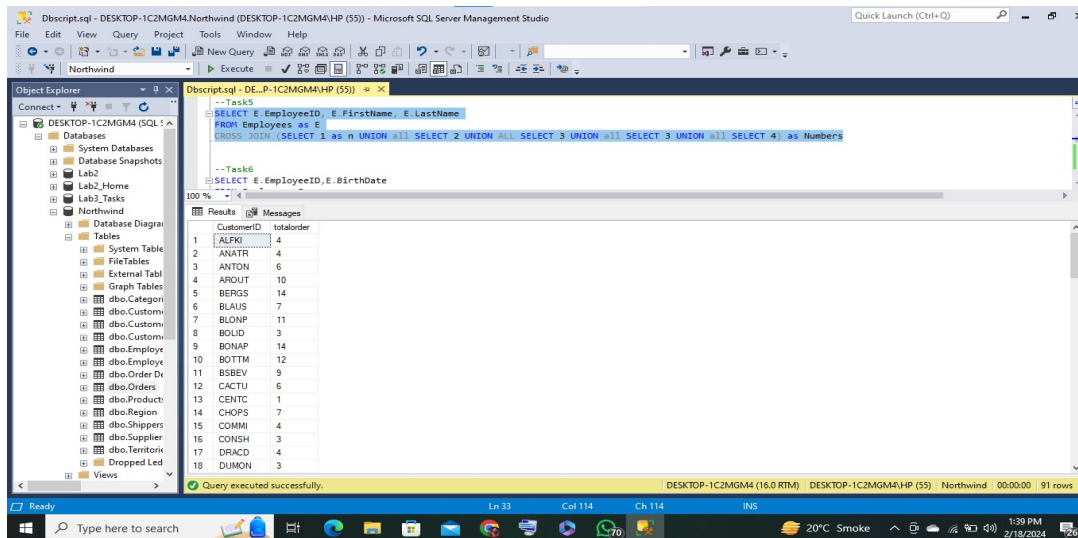
```
--Task4 SELECT C.CustomerID, COUNT(O.OrderID) as totalorder FROM Customers as C Left Join Orders as O On C.CustomerID = O.CustomerID Group By C.CustomerID
```

The Results pane shows the following data:

CustomerID	totalorder	
1	ALFKI	4
2	ANATR	4
3	ANTON	6
4	AROUT	10
5	BERGS	14
6	BLAUS	7
7	BOLNP	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

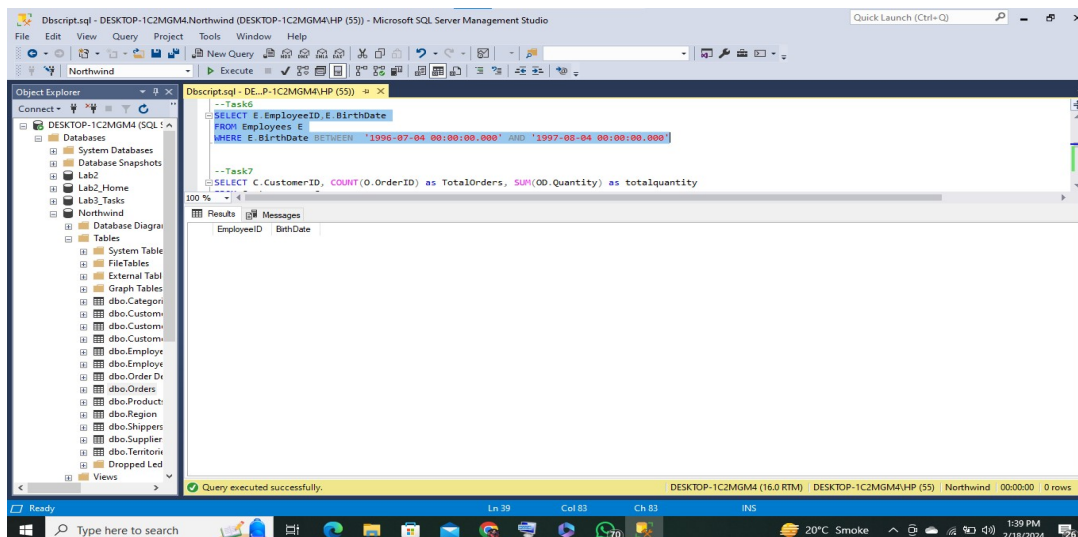
Q5: Write a query to generate a five copies of each employee. (EmployeeID, FirstName, LastName)

SQL Query: `SELECT E.EmployeeID, E.FirstName, E.LastName FROM Employees as E CROSS JOIN (SELECT 1 as n UNION all SELECT 2 UNION ALL SELECT 3 UNION all SELECT 3 UNION all SELECT 4) as Numbers`



Q6: 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 Query: `SELECT E.EmployeeID,E.BirthDate FROM Employees E WHERE E.BirthDate BETWEEN '1996-07-04 00:00:00.000' AND '1997-08-04 00:00:00.000'`



Q7: Return US customers, and for each customer return the total number of orders and total quantities. (CustomerID, Totalorders, totalquantity)

SQL Query: SELECT C.CustomerID, COUNT(O.OrderID) as TotalOrders, SUM(OD.Quantity) as totalquantity FROM Customers as C Join [Orders] as O ON C.CustomerID = O.CustomerID Join [Order Details] as OD ON OD.OrderID = O.OrderID WHERE C.Country = 'USA' Group By C.CustomerID;

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL query:

```
SELECT C.CustomerID, COUNT(O.OrderID) as TotalOrders, SUM(OD.Quantity) as totalquantity
FROM Customers as C
JOIN [Orders] as O ON C.CustomerID = O.CustomerID
JOIN [Order Details] as OD ON OD.OrderID = O.OrderID
WHERE C.Country = 'USA'
Group By C.CustomerID
```

The Results pane displays the following data:

CustomerID	TotalOrders	totalquantity
1 GREAL	18	296
2 HUNGC	7	102
3 LAZYK	1	10
4 LETSS	8	150
5 LONEP	11	103
6 OLDWO	21	493
7 RATTG	35	909
8 SAVA	91	3851
9 SPLIR	15	263
10 THEBI	6	44
11 THECR	8	59
12 TRAIH	9	89
13 WHITC	37	986

Q8: 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 Query: SELECT C.CustomerID, C.CompanyName, O.OrderID, O.OrderDate FROM Customers as C Join Orders as O ON C.CustomerID = O.CustomerID WHERE Day(O.OrderDate) = 4 and MONTH(O.OrderDate) = 7 and YEAR(O.OrderDate) = 1997 Group By C.CustomerID, C.CompanyName, O.OrderID, O.OrderDate Order BY C.CustomerID;

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL query:

```
--Task8
SELECT C.CustomerID, C.CompanyName, O.OrderID, O.OrderDate
FROM Customers as C
JOIN Orders as O ON C.CustomerID = O.CustomerID
WHERE Day(O.OrderDate) = 4 and MONTH(O.OrderDate) = 7 and YEAR(O.OrderDate) = 1997
Group By C.CustomerID, C.CompanyName, O.OrderID, O.OrderDate
Order BY C.CustomerID
```

The Results pane displays the following data:

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

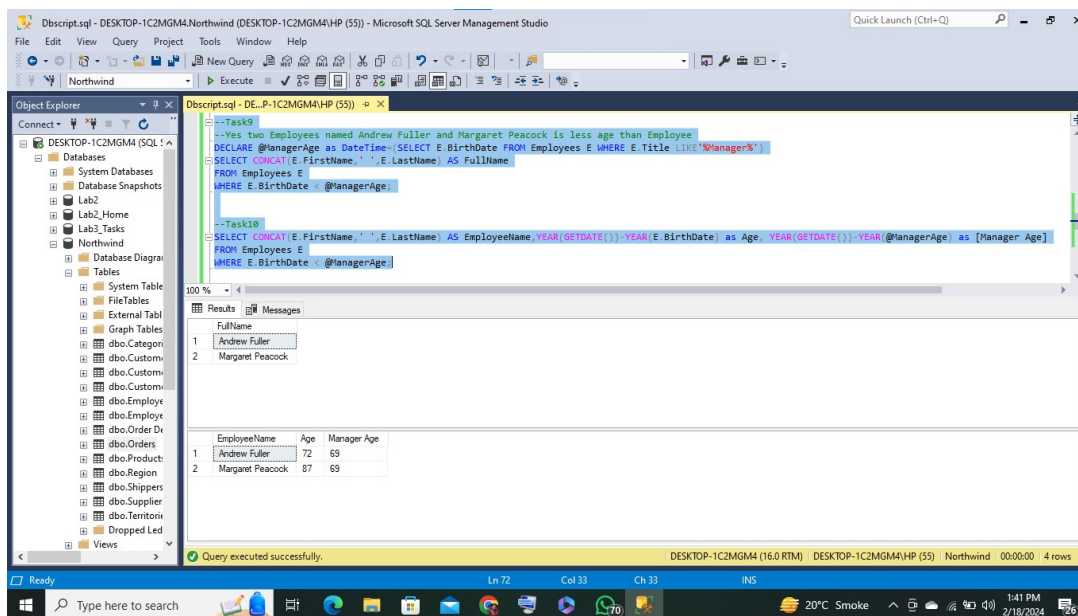


Q9: Are there any employees who are older than their managers?

SQL Query: –Yes two Employees named Andrew Fuller and Margaret Peacock is less age than Employee DECLARE @ManagerAge as DateTime=(SELECT E.BirthDate FROM Employees E WHERE E.Title LIKE 'Manager%')

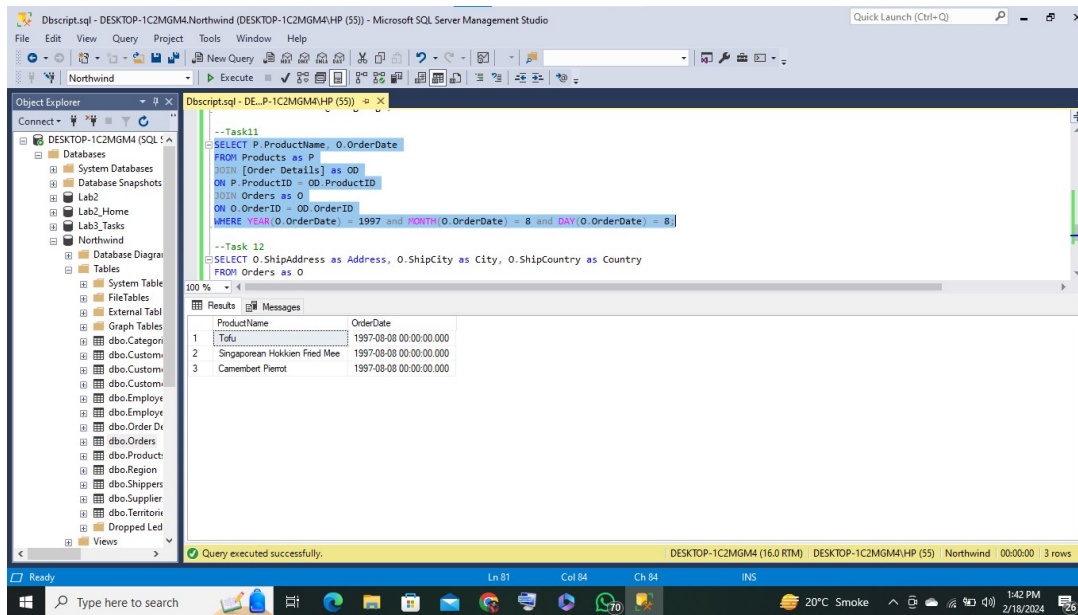
Q10: List that names of those employees and their ages. (EmployeeName, Age, Manager Age)

SQL Query: SELECT CONCAT(E.FirstName,' ',E.LastName) AS EmployeeName, YEAR(GETDATE())- YEAR(E.BirthDate) as Age, YEAR(GETDATE())- YEAR(@ManagerAge) as [Manager Age] FROM Employees E WHERE E.BirthDate < @ManagerAge;

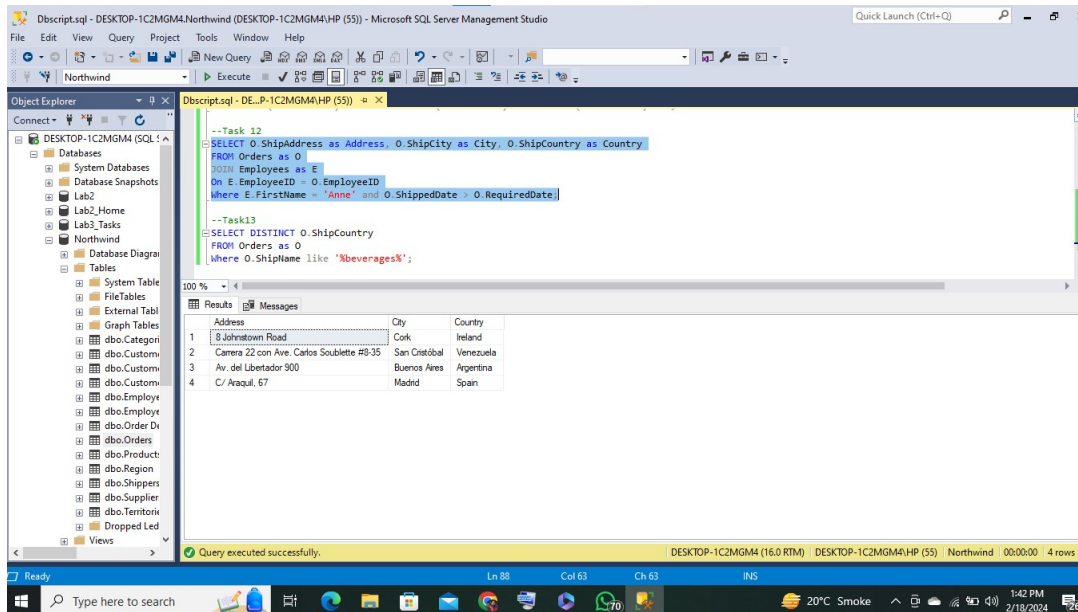


Q11: List the names of products which were ordered on 8th August 1997. (ProductName, Order-Date)

SQL Query: SELECT P.ProductName, O.OrderDate FROM Products as P JOIN [Order Details] as OD ON P.ProductID = OD.ProductID JOIN Orders as O ON O.OrderID = OD.OrderID WHERE YEAR(O.OrderDate) = 1997 and MONTH(O.OrderDate) = 8 and DAY(O.OrderDate) = 8;



Q12: List the addresses, cities, countries of all orders which were serviced by Anne and were shipped late. (Address, City, Country) SQL Query: `SELECT O.ShipAddress as Address, O.ShipCity as City, O.ShipCountry as Country FROM Orders as O JOIN Employees as E On E.EmployeeID = O.EmployeeID Where E.FirstName = 'Anne' and O.ShippedDate > O.RequiredDate;`



Q13: List all countries to which beverages have been shipped. (Country)

SQL Query: SELECT DISTINCT O.ShipCountry FROM Orders as O Where O.ShipName like 'Beverages%'

