

LAB MANUAL 6

Advance Tasks



Session: 2022 – 2026

Submitted to:

Mr. Nazeef Ul Haq

Submitted by:

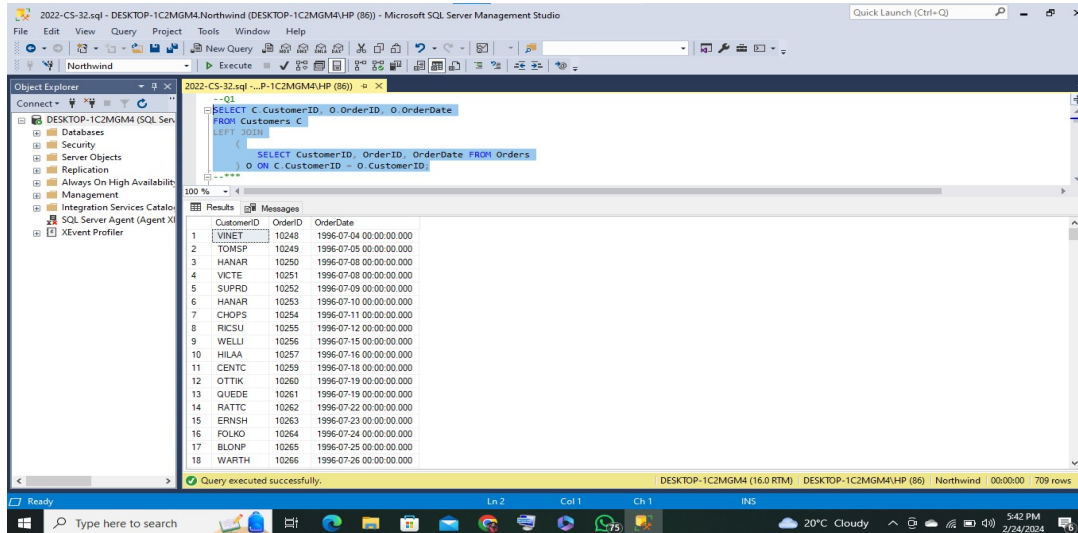
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Q1: Return customers and their orders, including customers who placed no orders (CustomerID, OrderID, OrderDate)

SQL Query: `SELECT C.CustomerID, O.OrderID, O.OrderDate FROM Customers C LEFT JOIN (SELECT CustomerID, OrderID, OrderDate FROM Orders) O ON C.CustomerID = O.CustomerID;`

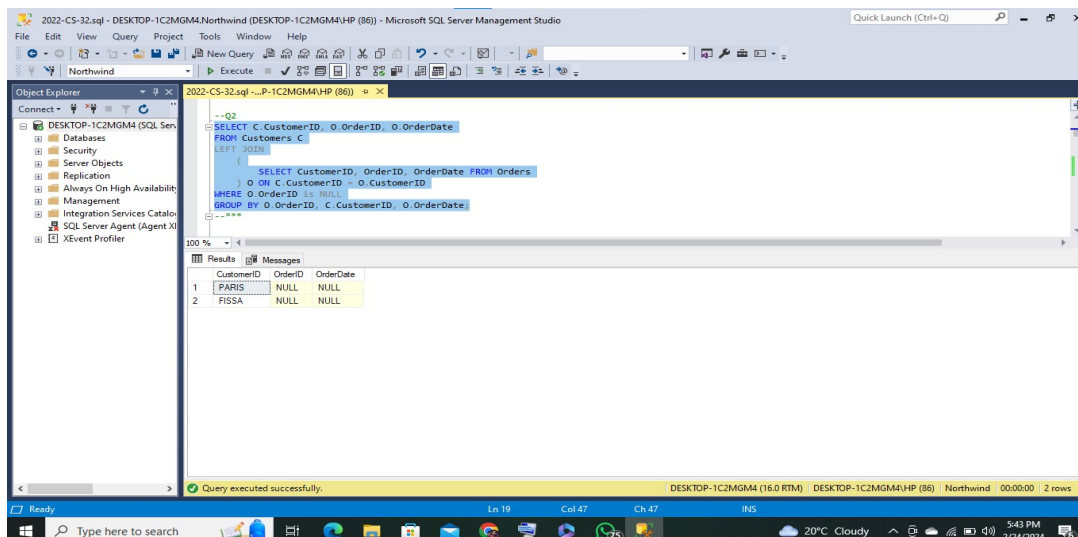


Query executed successfully.

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

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 C LEFT JOIN (SELECT CustomerID, OrderID, OrderDate FROM Orders) O ON C.CustomerID = O.CustomerID WHERE O.OrderID is NULL GROUP BY O.OrderID, C.CustomerID, O.OrderDate;`



Query executed successfully.

CustomerID	OrderID	OrderDate
PARIS	NULL	NULL
FISSA	NULL	NULL

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

Query executed successfully.

CustomerID	OrderID	OrderDate
1	WELLI	10585
2	REGGC	10586
3	QUICK	10588
4	GREAL	10589
5	MEREP	10590
6	LEHMS	10592
7	LEHMS	10593
8	OLDWO	10594
9	ERNSH	10595
10	WHITC	10596
11	PICCO	10597
12	BSBEV	10599
13	HUNGC	10600
14	HILAA	10601
15	VAFFE	10602

Q4: Report the total orders of each customer. (customerID, totalorders)
 SQL Query: `SELECT C.CustomerId, COUNT(O.OrderDate) as TotalOrder from Customers C LEFT JOIN (SELECT CustomerID, OrderDate FROM Orders) O ON O.CustomerID = C.CustomerID GROUP BY C.CustomerID;`

Query executed successfully.

Customerid	TotalOrder
1	JALRO
2	ANATR
3	ANTON
4	AROUT
5	BERGS
6	BLAUS
7	BLOPP
8	BOLID
9	BONAP
10	BOTTM
11	BSBEV
12	CACTU
13	CENTC
14	CHOPS
15	COMM

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 dbo.Products AS N WHERE N.ProductID <= 5 ORDER BY EmployeeID asc;`

Query executed successfully.

EmployeeID	firstname	lastname
2	Andrew	Fuller
2	Andrew	Fuller
2	Andrew	Fuller
2	Andrew	Fuller
2	Andrew	Fuller
3	Janet	Leverling
3	Janet	Leverling
3	Janet	Leverling
3	Janet	Leverling
3	Janet	Leverling
4	Margaret	Peacock
4	Margaret	Peacock
4	Margaret	Peacock
4	Margaret	Peacock
4	Margaret	Peacock

Q6: List all the products whose price is more than average price.

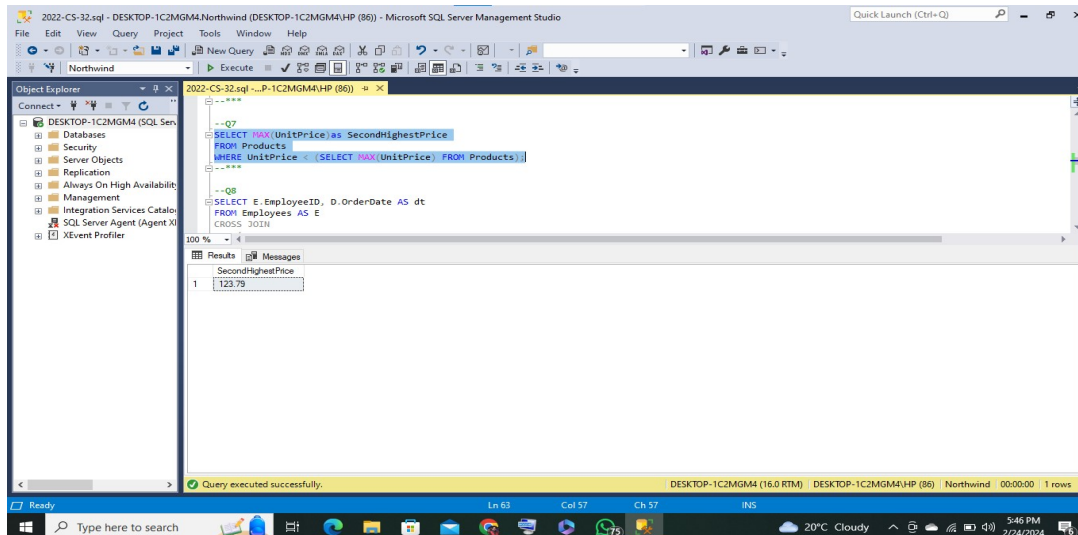
SQL Query: `SELECT * FROM Products Where UnitPrice > (SELECT AVG(UnitPrice) FROM Products);`

Query executed successfully.

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

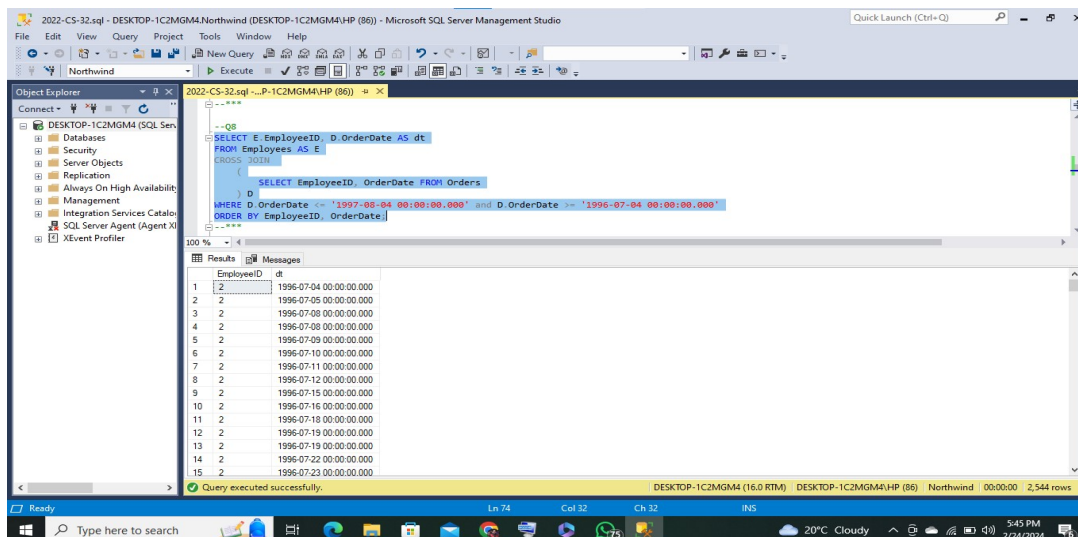
Q7: Find the second highest price of product.

SQL Query: `SELECT MAX(UnitPrice) as SecondHighestPrice FROM Products WHERE UnitPrice < (SELECT MAX(UnitPrice) FROM Products);`



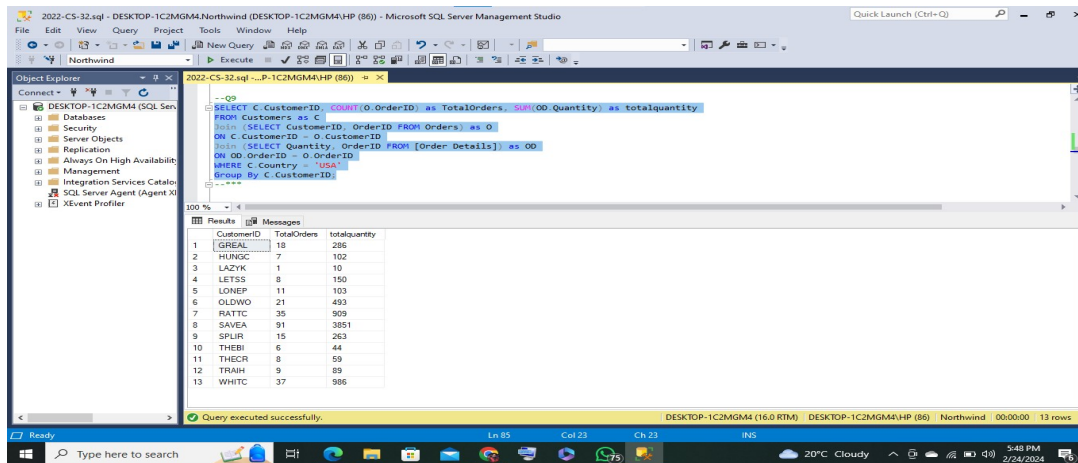
Q8: Write a query that returns a row for each employee and day in the range 04-07-1996 through 04-08- 1997. (EmployeeID, Date)

SQL Query: `SELECT E.EmployeeID, D.OrderDate AS dt FROM Employees AS E CROSS JOIN (SELECT EmployeeID, OrderDate FROM Orders) D WHERE D.OrderDate <= '1997-08-04 00:00:00.000' and D.OrderDate >= '1996-07-04 00:00:00.000' ORDER BY EmployeeID, OrderDate;`



Q9: 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 (SELECT CustomerID, OrderID FROM Orders) as O ON C.CustomerID = O.CustomerID Join (SELECT Quantity, OrderID FROM [Order Details]) as OD ON OD.OrderID = O.OrderID WHERE C.Country = 'USA' Group By C.CustomerID;

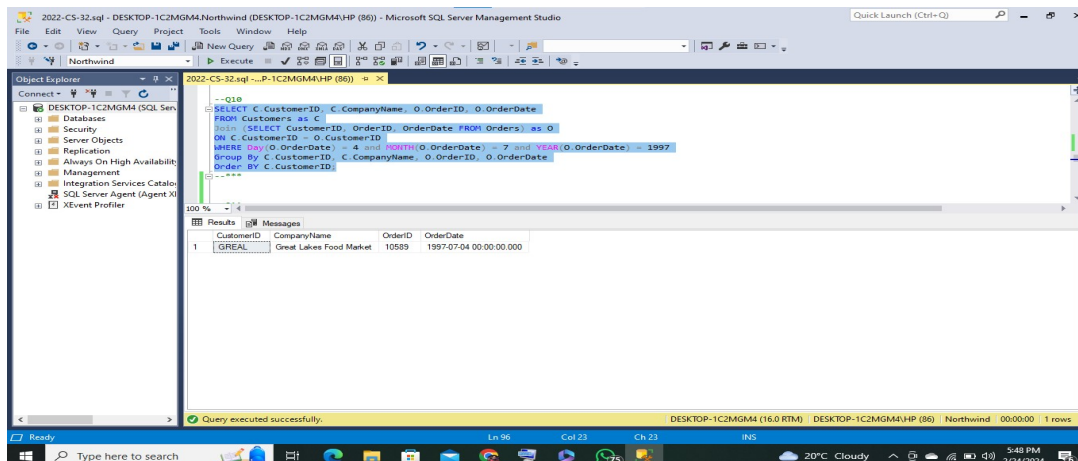


Query executed successfully.

CustomerID	TotalOrders	totalquantity
1 GREAL	18	295
2 HUNGC	7	102
3 LAZYK	1	10
4 LETSS	8	150
5 LONEP	11	103
6 OLDWO	21	493
7 RATTC	35	909
8 SAVEA	91	3851
9 SPLIR	15	263
10 THEBI	6	44
11 THECR	8	59
12 TRAIH	9	89
13 WHITC	37	986

Q10: 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 (SELECT CustomerID, OrderID, OrderDate FROM 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;



Query executed successfully.

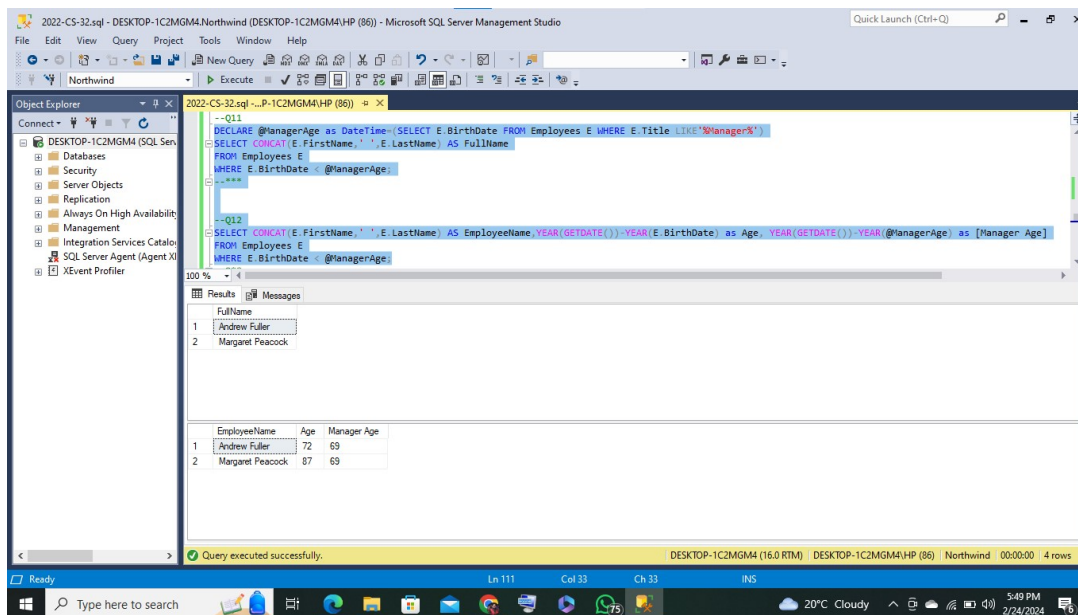
CustomerID	CompanyName	OrderID	OrderDate
1 GREAL	Great Lakes Food Market	10589	1997-07-04 00:00:00.000

Q11: 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 'SELECT CONCAT(E.FirstName,' ',E.LastName) AS FullName FROM Employees E WHERE E.BirthDate < @ManagerAge;

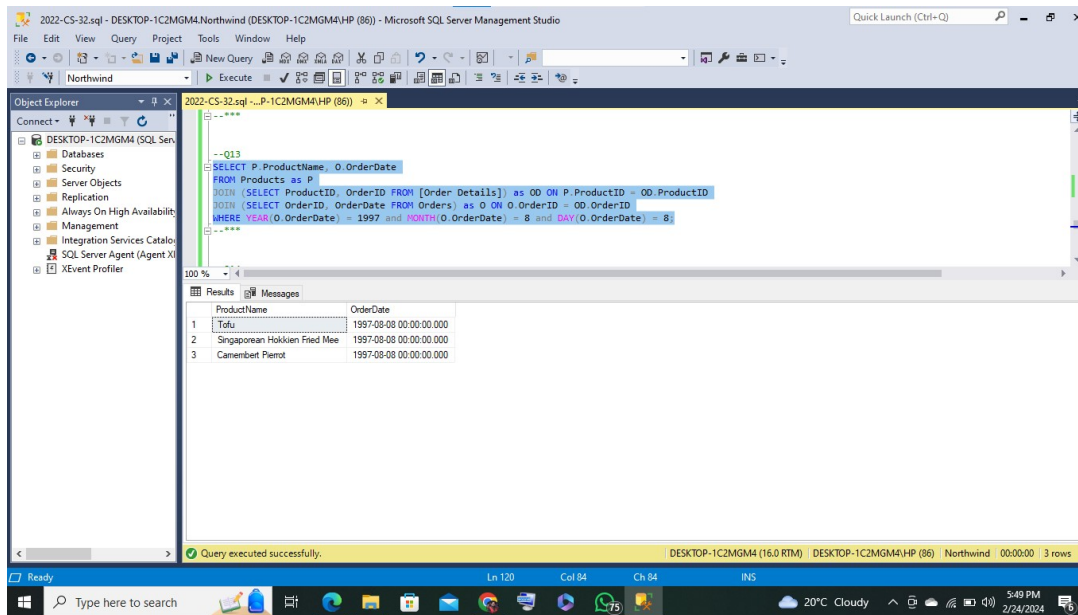
Q12: List that names of those employees and their ages. (EmployeeName, Age, Manager Age)

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;

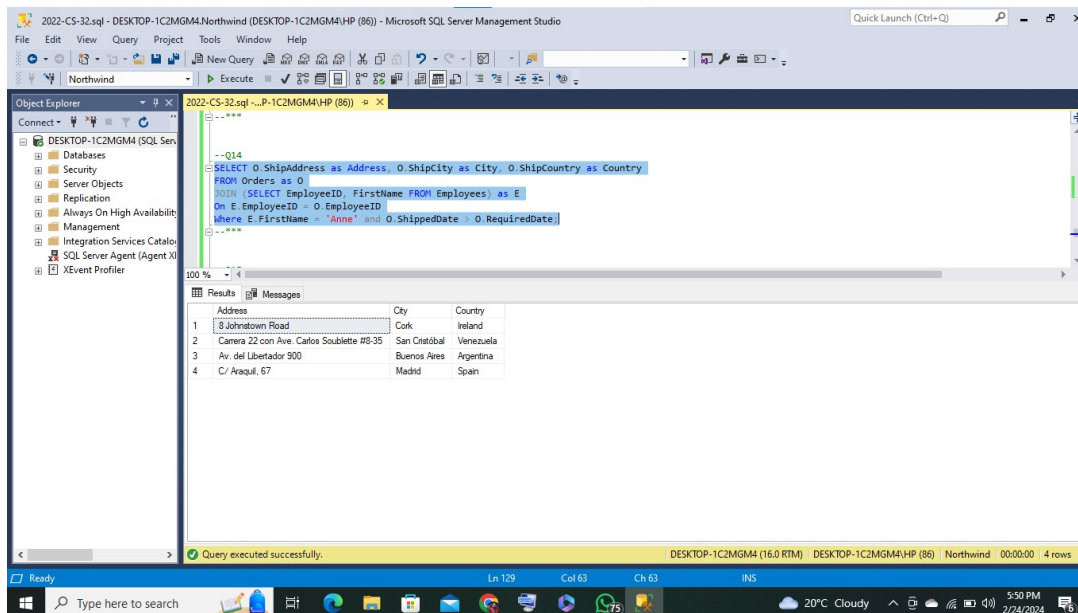


Q13: List the names of products which were ordered on 8th August 1997. (ProductName, OrderDate)

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



Q14: 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 (SELECT EmployeeID, FirstName FROM Employees) as E On E.EmployeeID = O.EmployeeID Where E.FirstName = 'Anne' and O.ShippedDate > O.RequiredDate;



Q15: List all countries to which beverages have been shipped. (Country)

SQL Query: select distinct(o.ShipCountry) from [Order Details] od join (SELECT OrderID, ShipCountry FROM Orders) o on o.OrderID=od.OrderID join (SELECT ProductID, CategoryID FROM Products) p on p.ProductID=od.ProductID join (SELECT CategoryID FROM Categories) c on c.CategoryID=p.CategoryID where c.CategoryID=1;

