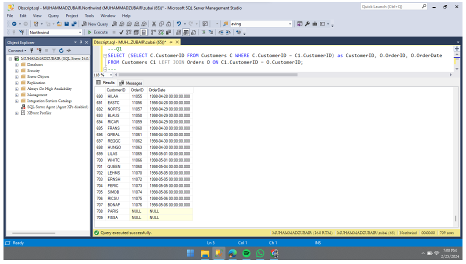
LAB 6 Queries

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

SELECT (SELECT C.CustomerID FROM Customers C WHERE C.CustomerID = C1.CustomerID) as CustomerID, O.OrderID, O.OrderDate FROM Customers C1 LEFT JOIN Orders O ON C1.CustomerID = O.CustomerID;



```
---Q1
SELECT (SELECT C.CustomerID FROM Customers C WHERE C.CustomerID = C1.CustomerID) as CustomerID, O.OrderID, O.OrderDate
FROM Customers C1 LEFT JOIN Orders O ON C1.CustomerID = O.CustomerID;
---
```

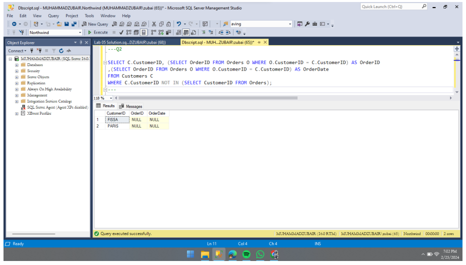
```
     CustomerID  OrderID  OrderDate
690  HILAA       11055    1998-04-28 00:00:00.000
691  EASTC       11056    1998-04-28 00:00:00.000
692  NORTS       11057    1998-04-29 00:00:00.000
693  BLAUS       11058    1998-04-29 00:00:00.000
694  RICAR       11059    1998-04-29 00:00:00.000
695  FRANS       11060    1998-04-30 00:00:00.000
696  GREAL       11061    1998-04-30 00:00:00.000
697  REGGC       11062    1998-04-30 00:00:00.000
698  HUNGO       11063    1998-04-30 00:00:00.000
699  LILAS       11065    1998-05-01 00:00:00.000
700  WHITC       11066    1998-05-01 00:00:00.000
701  QUEEN       11068    1998-05-04 00:00:00.000
702  LEHMS       11070    1998-05-05 00:00:00.000
703  ERNSH       11072    1998-05-05 00:00:00.000
704  PERIC       11073    1998-05-05 00:00:00.000
705  SIMOB       11074    1998-05-06 00:00:00.000
706  RICSU       11075    1998-05-06 00:00:00.000
707  BONAP       11076    1998-05-06 00:00:00.000
708  PARIS       NULL     NULL
709  FISSA       NULL     NULL
```

```
Query executed successfully.   MUHAMMADZUBAIR (16.0 RTM)   MUHAMMADZUBAIR\zubai (65)   Northwind   00:00:00   709 rows
```

Figure 1: MS-SQL Screenshot

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

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



```
---Q2

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

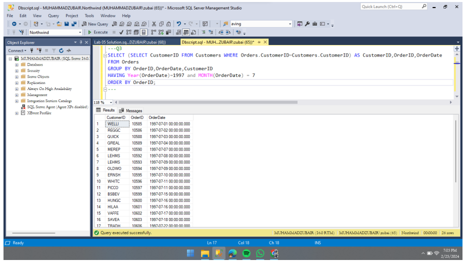
```
   CustomerID  OrderID  OrderDate
1  FISSA       NULL     NULL
2  PARIS       NULL     NULL
```

```
Query executed successfully.   MUHAMMADZUBAIR (16.0 RTM)   MUHAMMADZUBAIR\zubai (65)   Northwind   00:00:00   2 rows
```

Figure 2: MS-SQL Screenshot

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

SELECT (SELECT CustomerID FROM Customers WHERE Orders.CustomerID=Customers.CustomerID) AS CustomerID,OrderID,OrderDate FROM Orders GROUP BY OrderID,OrderDate,CustomerID HAVING Year(OrderDate)=1997 and MONTH(OrderDate) = 7 ORDER BY OrderID;



Dbscript.sql - MUHAMMADZUBAIR.Northwind (MUHAMMADZUBAIR\zubai (65))* - Microsoft SQL Server Management Studio
Lab 05 Solution.sq...DZUBAIR\zubai (68))
Dbscript.sql - MUH...ZUBAIR\zubai (65))*
Results
Messages

```
---Q3
SELECT (SELECT CustomerID FROM Customers WHERE Orders.CustomerID=Customers.CustomerID) AS CustomerID,OrderID,OrderDate
FROM Orders
GROUP BY OrderID,OrderDate,CustomerID
HAVING Year(OrderDate)=1997 and MONTH(OrderDate) = 7
ORDER BY OrderID;
---
```

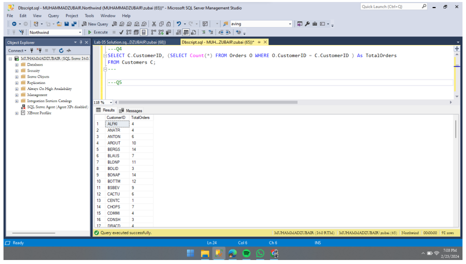
```
    CustomerID  OrderID  OrderDate
1   WELLI       10585    1997-07-01 00:00:00.000
2   REGGC       10586    1997-07-02 00:00:00.000
3   QUICK       10588    1997-07-03 00:00:00.000
4   GREAL       10589    1997-07-04 00:00:00.000
5   MEREP       10590    1997-07-07 00:00:00.000
6   LEHMS       10592    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
```

Query executed successfully. | MUHAMMADZUBAIR (16.0 RTM) | MUHAMMADZUBAIR\zubai (65) | Northwind | 00:00:00 | 26 rows

Figure 3: MS-SQL Screenshot

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

SELECT C.CustomerID, (SELECT Count(*) FROM Orders O WHERE O.CustomerID = C.CustomerID) As TotalOrders FROM Customers C;



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Lab 05 Solution.sq...DZUBAIR\zubai (68))
Dbscript.sql - MUH...ZUBAIR\zubai (65))*
Results
Messages

```
---Q4
SELECT C.CustomerID, (SELECT Count(*) FROM Orders O WHERE O.CustomerID = C.CustomerID ) As TotalOrders
FROM Customers C;
---

---Q5
```

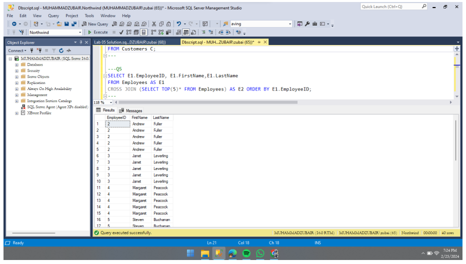
```
    CustomerID  TotalOrders
1   ALFKI       4
2   ANATR       4
3   ANTON       6
4   AROUT       10
5   BERGS       14
6   BLAUS       7
7   BLONP       11
8   BOLID       3
9   BONAP       14
10  BOTTM       12
11  BSBEV       9
12  CACTU       6
13  CENTC       1
14  CHOPS       7
15  COMMI  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

Query executed successfully. | MUHAMMADZUBAIR (16.0 RTM) | MUHAMMADZUBAIR\zubai (65) | Northwind | 00:00:00 | 91 rows

Figure 4: MS-SQL Screenshot

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

SELECT E1.EmployeeID, E1.FirstName,E1.LastName FROM Employees AS E1 CROSS JOIN (SELECT TOP(5)* FROM Employees) AS E2 ORDER BY E1.EmployeeID;



```
FROM Customers C;
---


---Q5
SELECT E1.EmployeeID, E1.FirstName,E1.LastName
FROM Employees AS E1
CROSS JOIN (SELECT TOP(5)* FROM Employees) AS E2 ORDER BY E1.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

Query executed successfully. MUHAMMADZUBAIR (16.0 RTM) MUHAMMADZUBAIR\zubai (65) Northwind 00:00:00 40 rows

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Results
Messages
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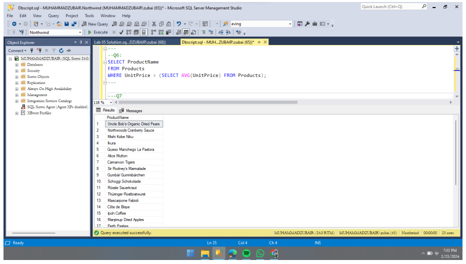
Figure 5: MS-SQL Screenshot

Query 6: List all the products whose price is more than average price

SELECT ProductName FROM Products WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Products);



```
---
--Q6:
SELECT ProductName
FROM Products
WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Products);
---


---Q7
```

	ProductName
1	Uncle Bob's Organic Dried Pears
2	Northwoods Cranberry Sauce
3	Mishi Kobe Niku
4	Ikura
5	Queso Manchego La Pastora
6	Alice Mutton
7	Carnarvon Tigers
8	Sir Rodney's Marmalade
9	Gumbär Gummibärchen
10	Schoggi Schokolade
11	Rössle Sauerkraut
12	Thüringer Rostbratwurst
13	Mascarpone Fabioli
14	Côte de Blaye
15	Ipoh Coffee
16	Manjimup Dried Apples
17	Perth Pasties

Query executed successfully. MUHAMMADZUBAIR (16.0 RTM) MUHAMMADZUBAIR\zubai (65) Northwind 00:00:00 25 rows

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Results
Messages
Ready
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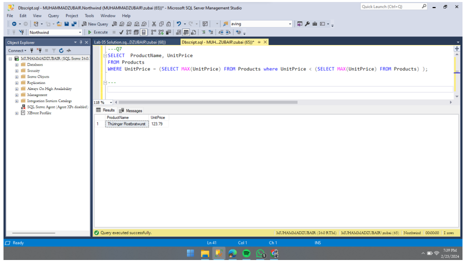
Figure 6: MS-SQL Screenshot

Query 7: Find the second highest price of product.

SELECT ProductName, UnitPrice FROM Products WHERE UnitPrice = (SELECT MAX(UnitPrice) FROM Products where UnitPrice < (SELECT MAX(UnitPrice) FROM Products));



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Results
Messages
Ready

```
---Q7
SELECT  ProductName, UnitPrice
FROM Products
WHERE UnitPrice = (SELECT MAX(UnitPrice) FROM Products where UnitPrice < (SELECT MAX(UnitPrice) FROM Products) );

---
```

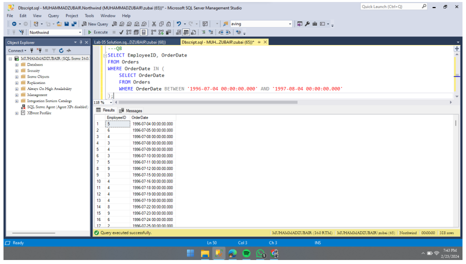
	ProductName	UnitPrice
1	Thüringer Rostbratwurst	123.79

Query executed successfully. MUHAMMADZUBAIR (16.0 RTM) MUHAMMADZUBAIR\zubai (65) Northwind 00:00:00 1 rows

Figure 7: MS-SQL Screenshot

Query8: 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 IN (SELECT OrderDate FROM Orders WHERE OrderDate BETWEEN '1996-07-04 00:00:00.000' AND '1997-08-04 00:00:00.000');



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Dbscript.sql - MUH...ZUBAIR\zubai (65))*
Results
Messages
Ready

```
---Q8
SELECT EmployeeID, OrderDate
FROM Orders
WHERE OrderDate IN (
    SELECT OrderDate
    FROM Orders
    WHERE OrderDate BETWEEN '1996-07-04 00:00:00.000' AND '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

Query executed successfully. MUHAMMADZUBAIR (16.0 RTM) MUHAMMADZUBAIR\zubai (65) Northwind 00:00:00 318 rows

Figure 8: MS-SQL Screenshot

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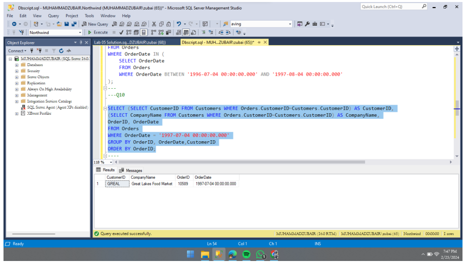
Query 10: Write a query that returns all customers in the output, but matches them with their respective orders only if they were placed on July 04,1997. (CustomerID, CompanyName, OrderID, Orderdate)

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



```
FROM Orders
WHERE OrderDate IN (
    SELECT OrderDate
    FROM Orders
    WHERE OrderDate BETWEEN '1996-07-04 00:00:00.000' AND '1997-08-04 00:00:00.000'
);
---
---Q10

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

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

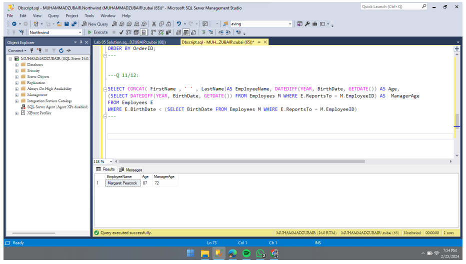
Query executed successfully.

Figure 9: MS-SQL Screenshot

Query 11/12: Are there any employees who are older than their managers? List that names of those employees and their ages. (EmployeeName, Age, Manager Age)

Yes,There is only one Employee whose is older than their managers

SELECT CONCAT(FirstName , ' ' , LastName)AS EmployeeName, DATEDIFF(YEAR, BirthDate, GETDATE()) AS Age, (SELECT DATEDIFF(YEAR, BirthDate, GETDATE()) FROM Employees M WHERE E.ReportsTo = M.EmployeeID) AS ManagerAge FROM Employees E WHERE E.BirthDate < (SELECT BirthDate FROM Employees M WHERE E.ReportsTo = M.EmployeeID)



```
ORDER BY OrderID;
---


---Q 11/12:

SELECT CONCAT( FirstName , ' ' , LastName)AS EmployeeName, DATEDIFF(YEAR, BirthDate, GETDATE()) AS Age,
(SELECT DATEDIFF(YEAR, BirthDate, GETDATE()) FROM Employees M WHERE E.ReportsTo = M.EmployeeID) AS  ManagerAge
FROM Employees E
WHERE E.BirthDate < (SELECT BirthDate FROM Employees M WHERE E.ReportsTo = M.EmployeeID)
---
```

	EmployeeName	Age	ManagerAge
1	Margaret Peacock	87	72

Query executed successfully.

Figure 10: MS-SQL Screenshot