LAB MANUAL 4
Home Tasks

Session: 2022 – 2026

Submitted to:

Mr. Nazeef Ul Haq

Submitted by:

Name: Muhammad Mudassir

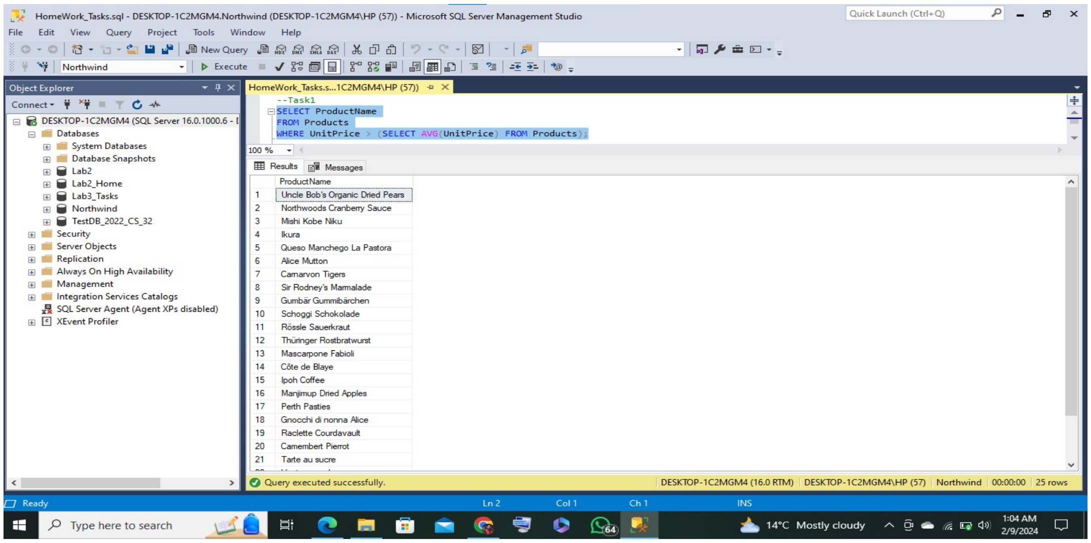
Registration No: 2022-CS-32

Department of Computer Science

University of Engineering and Technology

Lahore Pakistan

Q1: List name of all the products whose price is above average. (Product Name)
SQL Query: SELECT ProductName FROM Products WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Products)

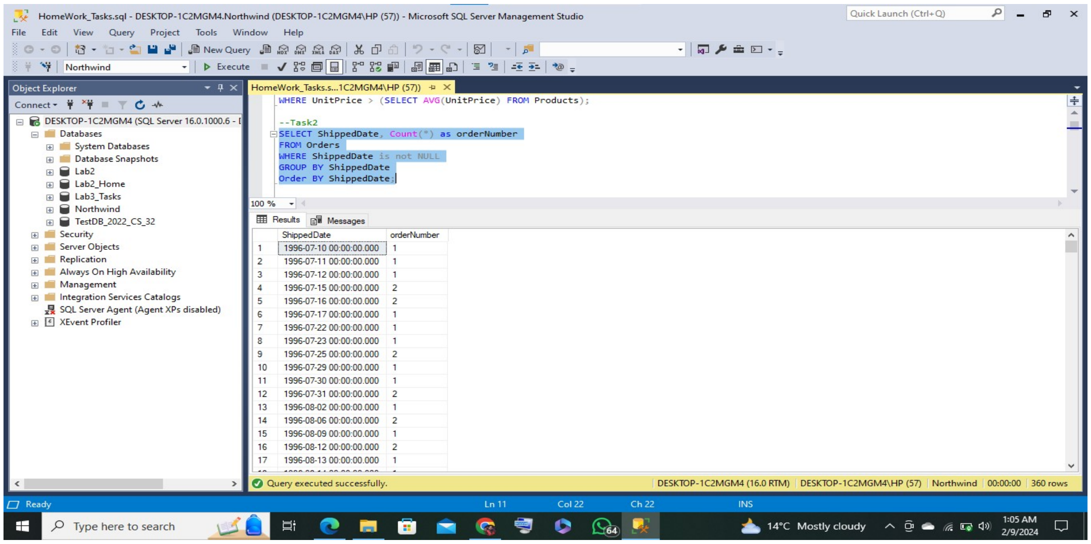


```
--Task1
SELECT ProductName
FROM Products
WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Products);
```

	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
18	Gnocchi di nonna Alice
19	Raclette Courdavault
20	Camembert Pierrot
21	Tarte au sucre

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) DESKTOP-1C2MGM4\HP (57) Northwind 00:00:00 25 rows

Q2: Write a query to generate report showing date wise orders shipped. (ShippedDate, numberoforders)
SQL Query: SELECT ShippedDate, Count(*) as orderNumber FROM Orders WHERE ShippedDate is not NULL GROUP BY ShippedDate Order BY ShippedDate



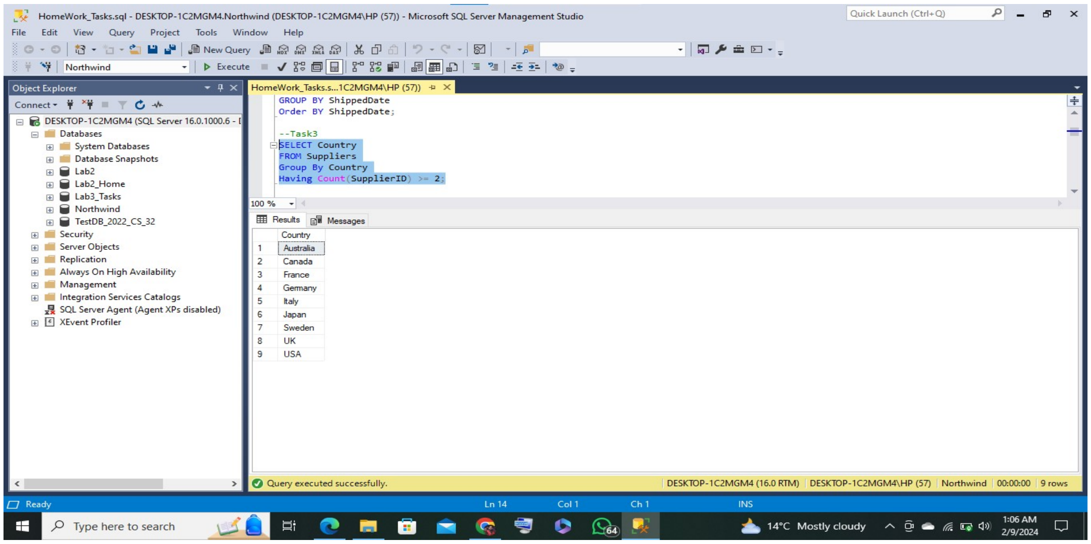
```
WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM Products);

--Task2
SELECT ShippedDate, Count(*) as orderNumber
FROM Orders
WHERE ShippedDate is not NULL
GROUP BY ShippedDate
Order BY ShippedDate;
```

	ShippedDate	orderNumber
1	1996-07-10 00:00:00.000	1
2	1996-07-11 00:00:00.000	1
3	1996-07-12 00:00:00.000	1
4	1996-07-15 00:00:00.000	2
5	1996-07-16 00:00:00.000	2
6	1996-07-17 00:00:00.000	1
7	1996-07-22 00:00:00.000	1
8	1996-07-23 00:00:00.000	1
9	1996-07-25 00:00:00.000	2
10	1996-07-29 00:00:00.000	1
11	1996-07-30 00:00:00.000	1
12	1996-07-31 00:00:00.000	2
13	1996-08-02 00:00:00.000	1
14	1996-08-06 00:00:00.000	2
15	1996-08-09 00:00:00.000	1
16	1996-08-12 00:00:00.000	2
17	1996-08-13 00:00:00.000	1

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) DESKTOP-1C2MGM4\HP (57) Northwind 00:00:00 360 rows

Q3: List name of all countries from where two or more suppliers belong to. (Country)
SQL Query: SELECT Country FROM Suppliers Group By Country Having Count(SupplierID) >= 2


HomeWork_Tasks.sql - DESKTOP-1C2MGM4.Northwind (DESKTOP-1C2MGM4\HP (57)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Northwind
Execute
Object Explorer
Connect
DESKTOP-1C2MGM4 (SQL Server 16.0.1000.6 -
Databases
System Databases
Database Snapshots
Lab2
Lab2_Home
Lab3_Tasks
Northwind
TestDB_2022_CS_32
Security
Server Objects
Replication
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
HomeWork_Tasks.s...1C2MGM4\HP (57))
100 %
Results
Messages
Ready
Ln 14
Col 1
Ch 1
INS
Type here to search
14°C Mostly cloudy
1:06 AM
2/9/2024

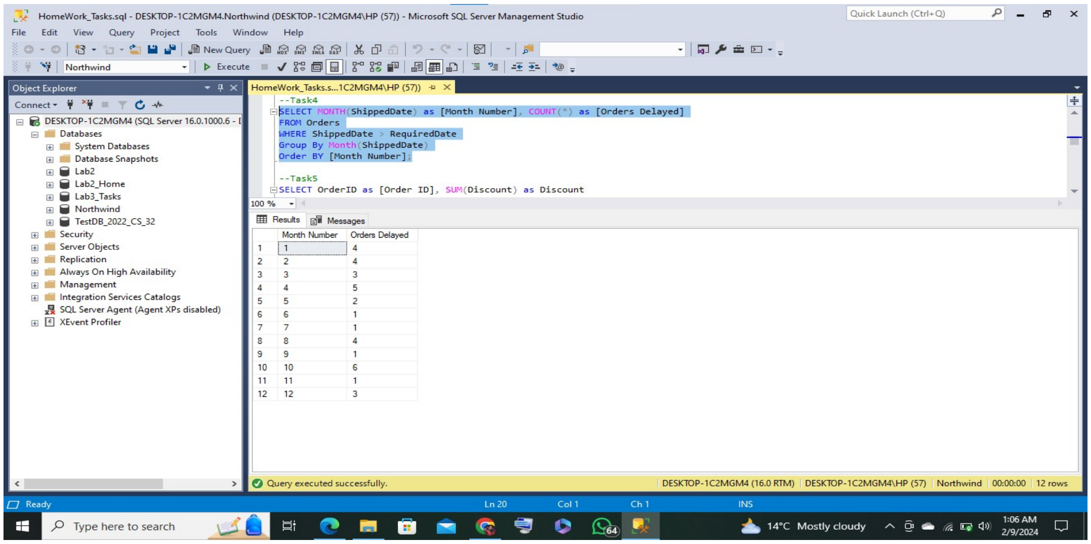
```
GROUP BY ShippedDate
Order BY ShippedDate;

--Task3
SELECT Country
FROM Suppliers
Group By Country
Having Count(SupplierID) >= 2;
```

	Country
1	Australia
2	Canada
3	France
4	Germany
5	Italy
6	Japan
7	Sweden
8	UK
9	USA

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) DESKTOP-1C2MGM4\HP (57) Northwind 00:00:00 9 rows

Q4: Write a query to generate report showing month wise orders delayed shipped. Your output should look like this (Month Number, Orders Delayed)
SQL Query: SELECT MONTH(ShippedDate) as [Month Number], COUNT(*) as [Orders Delayed] FROM Orders WHERE ShippedDate > RequiredDate Group By Month(ShippedDate) Order BY [Month Number]


HomeWork_Tasks.sql - DESKTOP-1C2MGM4.Northwind (DESKTOP-1C2MGM4\HP (57)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Northwind
Execute
Object Explorer
Connect
DESKTOP-1C2MGM4 (SQL Server 16.0.1000.6 -
Databases
System Databases
Database Snapshots
Lab2
Lab2_Home
Lab3_Tasks
Northwind
TestDB_2022_CS_32
Security
Server Objects
Replication
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
HomeWork_Tasks.s...1C2MGM4\HP (57))
100 %
Results
Messages
Ready
Ln 20
Col 1
Ch 1
INS
Type here to search
14°C Mostly cloudy
1:06 AM
2/9/2024

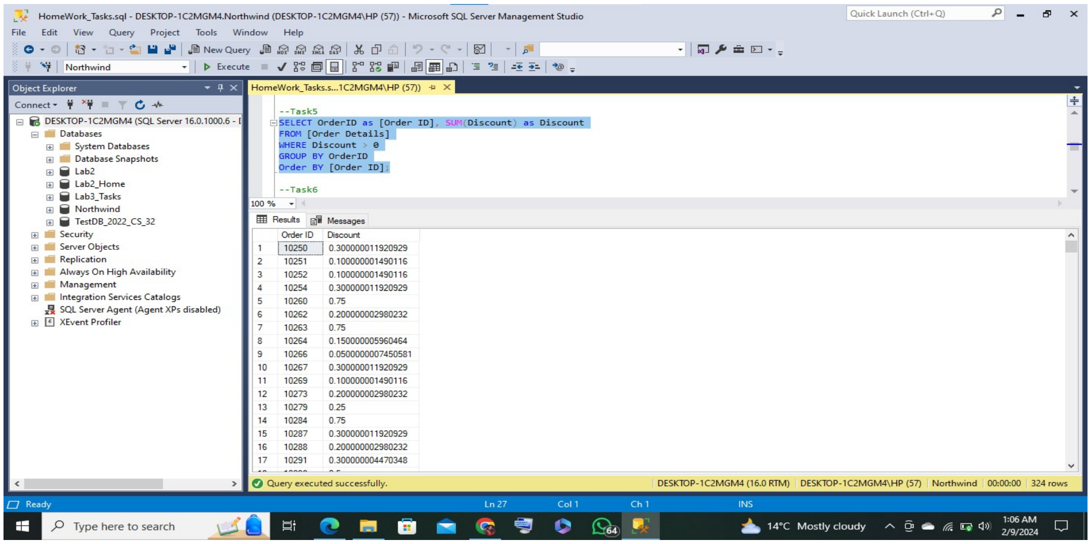
```
--Task4
SELECT MONTH(ShippedDate) as [Month Number], COUNT(*) as [Orders Delayed]
FROM Orders
WHERE ShippedDate > RequiredDate
Group By Month(ShippedDate)
Order BY [Month Number];

--Task5
SELECT OrderID as [Order ID], SUM(Discount) as Discount
```

	Month Number	Orders Delayed
1	1	4
2	2	4
3	3	3
4	4	5
5	5	2
6	6	1
7	7	1
8	8	4
9	9	1
10	10	6
11	11	1
12	12	3

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) DESKTOP-1C2MGM4\HP (57) Northwind 00:00:00 12 rows

Q5: Report all the orders which have been discounted. Your result should show the total discount against each order. Output should look like this (Order ID, Discount)
SQL Query: SELECT OrderID as [Order ID], SUM(Discount) as Discount FROM [Order Details] WHERE Discount > 0 GROUP BY OrderID Order BY [Order ID]


HomeWork_Tasks.sql - DESKTOP-1C2MGM4.Northwind (DESKTOP-1C2MGM4\HP (57)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Execute
Northwind
Object Explorer
DESKTOP-1C2MGM4 (SQL Server 16.0.1000.6 -
Databases
System Databases
Database Snapshots
Lab2
Lab2_Home
Lab3_Tasks
Northwind
TestDB_2022_CS_32
Security
Server Objects
Replication
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
HomeWork_Tasks.s...1C2MGM4\HP (57))
100 %
Results
Messages
DESKTOP-1C2MGM4 (16.0 RTM) | DESKTOP-1C2MGM4\HP (57) | Northwind | 00:00:00 | 324 rows
Ready
Ln 27 Col 1 Ch 1 INS
Type here to search
14°C Mostly cloudy
1:06 AM
2/9/2024

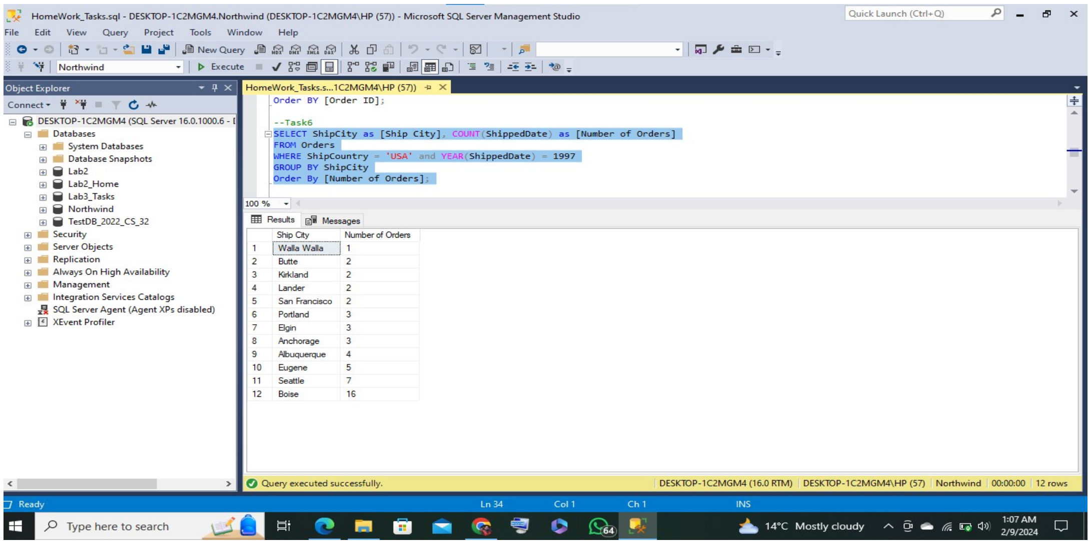
```
--Task5
SELECT OrderID as [Order ID], SUM(Discount) as Discount
FROM [Order Details]
WHERE Discount > 0
GROUP BY OrderID
Order BY [Order ID];

--Task6
```

	Order ID	Discount
1	10250	0.300000011920929
2	10251	0.100000001490116
3	10252	0.100000001490116
4	10254	0.300000011920929
5	10260	0.75
6	10262	0.200000002980232
7	10263	0.75
8	10264	0.150000005960464
9	10266	0.0500000007450581
10	10267	0.300000011920929
11	10269	0.100000001490116
12	10273	0.200000002980232
13	10279	0.25
14	10284	0.75
15	10287	0.300000011920929
16	10288	0.200000002980232
17	10291	0.300000004470348

Query executed successfully.

Q6: Write a query to list the number of orders which were shipped in the cities of USA in 1997. Show the number of order against each city. (Ship City, Number of orders)
SQL Query: SELECT ShipCity as [Ship City], COUNT(ShippedDate) as [Number of Orders] FROM Orders WHERE ShipCountry = ’USA’ and YEAR(ShippedDate) = 1997 GROUP BY ShipCity Order By [Number of Orders]


HomeWork_Tasks.sql - DESKTOP-1C2MGM4.Northwind (DESKTOP-1C2MGM4\HP (57)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Execute
Northwind
Object Explorer
DESKTOP-1C2MGM4 (SQL Server 16.0.1000.6 -
Databases
System Databases
Database Snapshots
Lab2
Lab2_Home
Lab3_Tasks
Northwind
TestDB_2022_CS_32
Security
Server Objects
Replication
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
HomeWork_Tasks.s...1C2MGM4\HP (57))
100 %
Results
Messages
DESKTOP-1C2MGM4 (16.0 RTM) | DESKTOP-1C2MGM4\HP (57) | Northwind | 00:00:00 | 12 rows
Ready
Ln 34 Col 1 Ch 1 INS
Type here to search
14°C Mostly cloudy
1:07 AM
2/9/2024

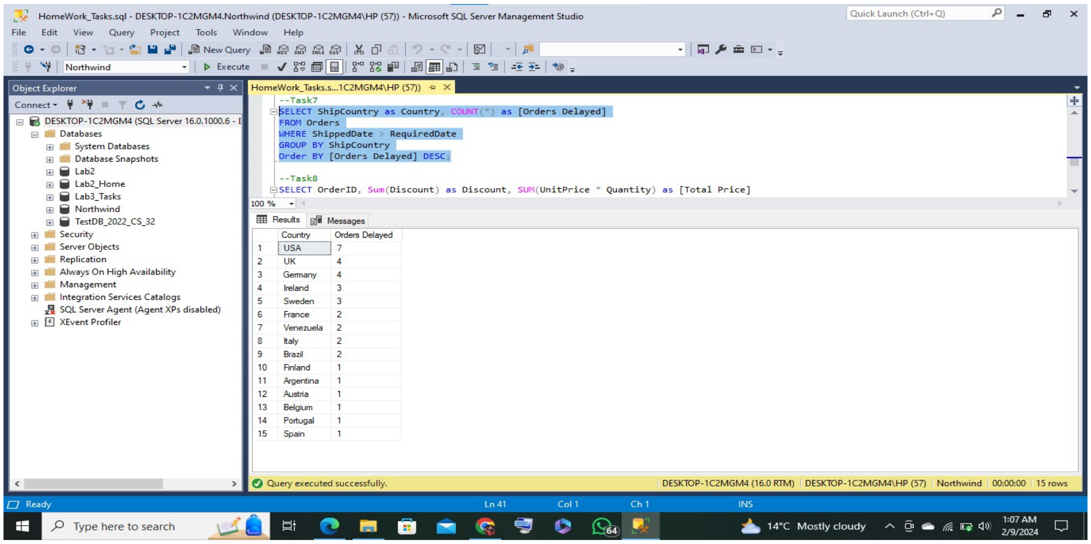
```
Order BY [Order ID];

--Task6
SELECT ShipCity as [Ship City], COUNT(ShippedDate) as [Number of Orders]
FROM Orders
WHERE ShipCountry = 'USA' and YEAR(ShippedDate) = 1997
GROUP BY ShipCity
Order By [Number of Orders];
```

	Ship City	Number of Orders
1	Walla Walla	1
2	Butte	2
3	Kirkland	2
4	Lander	2
5	San Francisco	2
6	Portland	3
7	Elgin	3
8	Anchorage	3
9	Albuquerque	4
10	Eugene	5
11	Seattle	7
12	Boise	16

Query executed successfully.

Q7: Write a query to generate report showing country wise orders delayed shipped. Your output should look like this: (Country, Orders Delayes)
SQL Query: SELECT ShipCountry as Country, COUNT(*) as [Orders Delayed] FROM Orders WHERE ShippedDate > RequiredDate GROUP BY ShipCountry Order BY [Orders Delayed] DESC



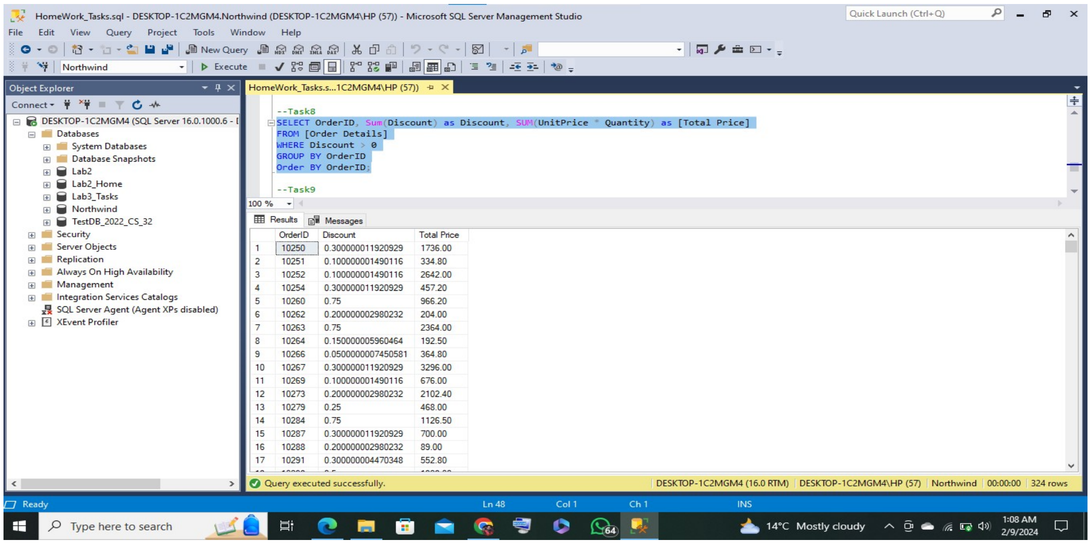
```
--Task7
SELECT ShipCountry as Country, COUNT(*) as [Orders Delayed]
FROM Orders
WHERE ShippedDate > RequiredDate
GROUP BY ShipCountry
Order BY [Orders Delayed] DESC;

--Task8
SELECT OrderID, Sum(Discount) as Discount, SUM(UnitPrice * Quantity) as [Total Price]
```

	Country	Orders Delayed
1	USA	7
2	UK	4
3	Germany	4
4	Ireland	3
5	Sweden	3
6	France	2
7	Venezuela	2
8	Italy	2
9	Brazil	2
10	Finland	1
11	Argentina	1
12	Austria	1
13	Belgium	1
14	Portugal	1
15	Spain	1

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) | DESKTOP-1C2MGM4\HP (57) | Northwind | 00:00:00 | 15 rows

Q8: Report all the orders which have been discounted with total price of order. Your result should show the total discount against each order. Output should look like this: (Order ID, Discount, Total Price)
SQL Query: SELECT OrderID, Sum(Discount) as Discount, SUM(UnitPrice * Quantity) as [Total Price] FROM [Order Details] WHERE Discount > 0 GROUP BY OrderID Order BY OrderID



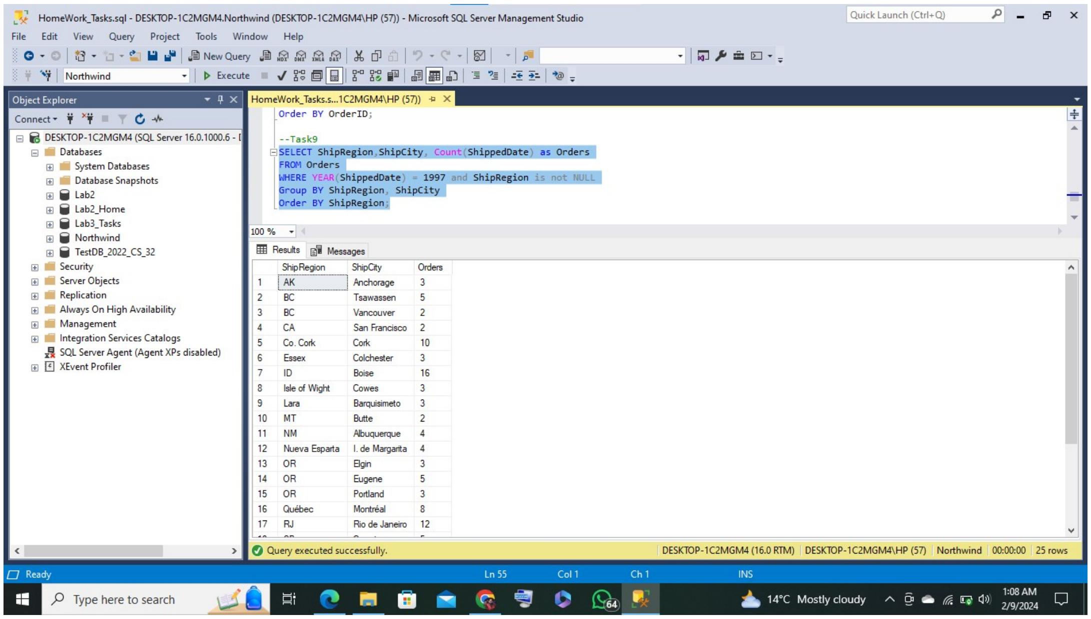
```
--Task8
SELECT OrderID, Sum(Discount) as Discount, SUM(UnitPrice * Quantity) as [Total Price]
FROM [Order Details]
WHERE Discount > 0
GROUP BY OrderID
Order BY OrderID;

--Task9
```

	OrderID	Discount	Total Price
1	10250	0.300000011920929	1736.00
2	10251	0.100000001490116	334.80
3	10252	0.100000001490116	2642.00
4	10254	0.300000011920929	457.20
5	10260	0.75	966.20
6	10262	0.200000002980232	204.00
7	10263	0.75	2364.00
8	10264	0.150000005960464	192.50
9	10266	0.0500000007450581	364.80
10	10267	0.300000011920929	3296.00
11	10269	0.100000001490116	676.00
12	10273	0.200000002980232	2102.40
13	10279	0.25	468.00
14	10284	0.75	1126.50
15	10287	0.300000011920929	700.00
16	10288	0.200000002980232	89.00
17	10291	0.300000004470348	552.80

Query executed successfully. DESKTOP-1C2MGM4 (16.0 RTM) | DESKTOP-1C2MGM4\HP (57) | Northwind | 00:00:00 | 324 rows

Q9: Write a query to list the number of orders which were shipped in the cities of each region in 1997. Show the number of order against each city. Your results should look like this: (ShipRegion, ShipCity, Numberoforders)
SQL Query: SELECT ShipRegion,ShipCity, Count(ShippedDate) as Orders FROM Orders WHERE YEAR(ShippedDate) = 1997 and ShipRegion is not NULL Group BY ShipRegion, ShipCity Order BY ShipRegion



HomeWork_Tasks.sql - DESKTOP-1C2MGM4.Northwind (DESKTOP-1C2MGM4\HP (57)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Northwind
Execute
Object Explorer
Connect
DESKTOP-1C2MGM4 (SQL Server 16.0.1000.6 -
Databases
System Databases
Database Snapshots
Lab2
Lab2_Home
Lab3_Tasks
Northwind
TestDB_2022_CS_32
Security
Server Objects
Replication
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
HomeWork_Tasks.s...1C2MGM4\HP (57))
100 %
Results
Messages

```
Order BY OrderID;

--Task9
SELECT ShipRegion,ShipCity, Count(ShippedDate) as Orders
FROM Orders
WHERE YEAR(ShippedDate) = 1997 and ShipRegion is not NULL
Group BY ShipRegion, ShipCity
Order BY ShipRegion;
```

	ShipRegion	ShipCity	Orders
1	AK	Anchorage	3
2	BC	Tsawassen	5
3	BC	Vancouver	2
4	CA	San Francisco	2
5	Co. Cork	Cork	10
6	Essex	Colchester	3
7	ID	Boise	16
8	Isle of Wight	Cowes	3
9	Lara	Barquisimeto	3
10	MT	Butte	2
11	NM	Albuquerque	4
12	Nueva Esparta	I. de Margarita	4
13	OR	Elgin	3
14	OR	Eugene	5
15	OR	Portland	3
16	Québec	Montréal	8
17	RJ	Rio de Janeiro	12

Query executed successfully.

DESKTOP-1C2MGM4 (16.0 RTM) | DESKTOP-1C2MGM4\HP (57) | Northwind | 00:00:00 | 25 rows
Ready
Ln 55
Col 1
Ch 1
INS
Type here to search
14°C Mostly cloudy
1:08 AM
2/9/2024