

# LAB 03



**Session: 2022-2026**

**Submitted by:**

Afeera Fatima 2022-CS-151

**Supervised by:**

Nazeef ul Haq

**Course:**

CS-262L Database Systems

**Department of Computer Science**

**University Of Engineering And Technology,**

**Lahore, Pakistan**

## Contents

<b>1</b>	<b>Question 1</b> .....	4
	1.1 Question Statement .....	4
	1.2 Query: .....	4
<b>2</b>	<b>Question 2</b> .....	4
	2.1 Question Statement .....	4
	2.2 Query: .....	4
<b>3</b>	<b>Question 3</b> .....	5
	3.1 Question Statement .....	5
	3.2 Query: .....	5
<b>4</b>	<b>Question 4</b> .....	5
	4.1 Question Statement .....	5
	4.2 Query: .....	6
<b>5</b>	<b>Question 5</b> .....	6
	5.1 Question Statement .....	6
	5.2 Query: .....	6
<b>6</b>	<b>Question 6</b> .....	7
	6.1 Question Statement .....	7
	6.2 Query: .....	7
<b>7</b>	<b>Question 7</b> .....	8
	7.1 Question Statement .....	8
	7.2 Query: .....	8
<b>8</b>	<b>Question 8</b> .....	8
	8.1 Question Statement .....	8
	8.2 Query: .....	8
<b>9</b>	<b>Question 9</b> .....	9
	9.1 Question Statement .....	9
	9.2 Query: .....	9

## List of Figures

1	Result of the query 1 . . . . .	4
2	Result of the query 2 . . . . .	5
3	Result of the query 3 . . . . .	5
4	Result of the query 4 . . . . .	6
5	Result of the query 5 . . . . .	7
6	Result of the query 6 . . . . .	7
7	Result of the query 7 . . . . .	8
8	Result of the query 8 . . . . .	9
9	Result of the query 9 . . . . .	9

# 1 Question 1

## 1.1 Question Statement

List name of all the products whose price is above average. (Product Name)

## 1.2 Query:

```
SELECT ProductName
FROM [Northwind].[dbo].[Products]
WHERE UnitPrice > (SELECT AVG(UnitPrice) FROM [Northwind].[dbo].[Products])
```

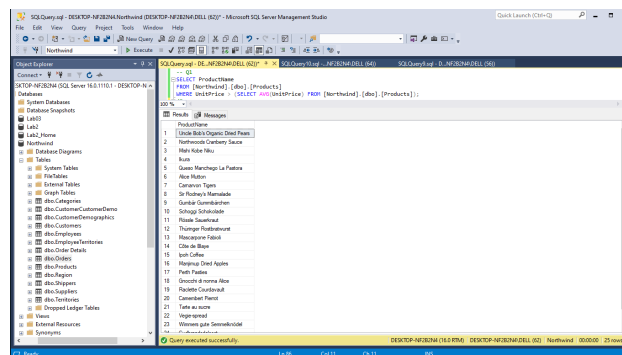


Figure 1: Result of the query 1

# 2 Question 2

## 2.1 Question Statement

Write a query to generate report showing date wise orders shipped.

## 2.2 Query:

```
SELECT ShippedDate , COUNT(OrderID) AS NumberOfOrders
FROM Orders
WHERE ShippedDate IS NOT NULL
GROUP BY ShippedDate
ORDER BY ShippedDate;
```

The screenshot shows a SQL query result in Microsoft SQL Server Enterprise Manager. The query is:   
`SELECT ShippedDate, COUNT(*) AS NumberOfOrders FROM Orders WHERE ShippedDate <= GETDATE() -- Exclude orders that haven't been shipped`  
 The result set has two columns: 'ShippedDate' and 'Number of Orders'. It lists 15 rows of data, showing dates from 1996-07-01 to 1996-07-15 and the corresponding number of orders (ranging from 1 to 4).

ShippedDate	Number of Orders
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	2
1996-07-01 00:00:00	2
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	1
1996-07-01 00:00:00	2

Figure 2: Result of the query 2

### 3 Question 3

#### 3.1 Question Statement

List name of all countries from where two or more suppliers belong to.

#### 3.2 Query:

```
SELECT Country
FROM [Northwind].[dbo].[Suppliers]
GROUP BY Country
HAVING COUNT(*) >= 2;
```

The screenshot shows a SQL query result in Microsoft SQL Server Enterprise Manager. The query is:   
`SELECT Country FROM [Northwind].[dbo].[Suppliers] GROUP BY Country HAVING COUNT(*) >= 2`  
 The result set has one column: 'Country'. It lists 9 countries: Austria, Canada, France, Germany, Italy, Japan, Sweden, UK, and USA.

Country
Austria
Canada
France
Germany
Italy
Japan
Sweden
UK
USA

Figure 3: Result of the query 3

### 4 Question 4

#### 4.1 Question Statement

Write a query to generate report showing month wise orders delayed shipped.

## 4.2 Query:

```
SELECT MONTH(ShippedDate) AS MonthNumber,
       COUNT(*) AS OrdersDelayed
FROM [Northwind].[dbo].[Orders]
WHERE ShippedDate > RequiredDate
GROUP BY MONTH(ShippedDate)
ORDER BY MonthNumber;
```

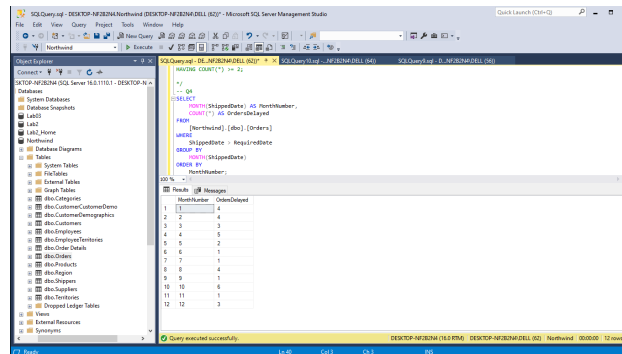


Figure 4: Result of the query 4

## 5 Question 5

### 5.1 Question Statement

Report all the orders which have been discounted. Your result should show the total discount against each order.

### 5.2 Query:

```
SELECT [OrderID],[Discount]
FROM [Northwind].[dbo].[Order Details]
WHERE Discount > 0;
```

OrderID	ProductID	UnitPrice	Quantity	Discount
1	10	1.5	1	0.1
2	10	1.5	1	0.1
3	10	1.5	1	0.1
4	10	1.5	1	0.1
5	10	1.5	1	0.1
6	10	1.5	1	0.1
7	10	1.5	1	0.1
8	10	1.5	1	0.1
9	10	1.5	1	0.1
10	10	1.5	1	0.1
11	10	1.5	1	0.1
12	10	1.5	1	0.1
13	10	1.5	1	0.1
14	10	1.5	1	0.1
15	10	1.5	1	0.1
16	10	1.5	1	0.1
17	10	1.5	1	0.1
18	10	1.5	1	0.1
19	10	1.5	1	0.1
20	10	1.5	1	0.1
21	10	1.5	1	0.1

Figure 5: Result of the query 5

## 6 Question 6

### 6.1 Question Statement

Write a query to list the number of orders which were shipped in the cities of USA in 1997.

### 6.2 Query:

```
SELECT ShipCity ,COUNT(*) AS NumberOfOrders
FROM Orders
WHERE ShipCountry = 'USA'
      AND YEAR(ShippedDate) = 1997
GROUP BY ShipCity
ORDER BY NumberOfOrders DESC;
```

ShipCity	NumberOfOrders
London	10
Seattle	7
Spokane	5
Albuquerque	4
Anchorage	3
Portland	3
San Francisco	2
Yakima	2
Lawson	2
Bake	2
Yuba	1

Figure 6: Result of the query 6

## 7 Question 7

### 7.1 Question Statement

Write a query to generate report showing country wise orders delayed shipped.

### 7.2 Query:

```
SELECT ShipCountry AS Country ,
        COUNT(*) AS OrdersDelayed
FROM [Northwind].[dbo].[Orders]
WHERE ShippedDate > RequiredDate
GROUP BY ShipCountry
ORDER BY OrdersDelayed DESC;
```

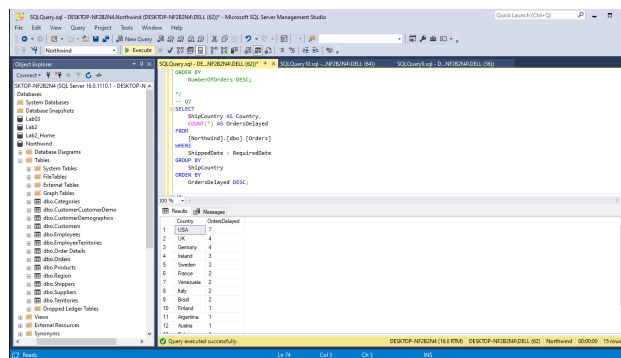


Figure 7: Result of the query 7

## 8 Question 8

### 8.1 Question Statement

Report all the orders which have been discounted with total price of order. Your result should show the total discount against each order.

### 8.2 Query:

```
SELECT [OrderID],
        [Discount],
        [UnitPrice]*[Quantity] AS [Total Price]
FROM [Northwind].[dbo].[Order Details]
WHERE Discount > 0;
```



ShipRegion	ShipCity	NumberOfOrders
North	London	15
North	Manchester	13
North	Paris	11
North	New York	10
North	San Francisco	8
North	Seattle	7
North	Washington	7
North	Portland	7
North	San Jose	7

Figure 8: Result of the query 8

## 9 Question 9

### 9.1 Question Statement

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.

### 9.2 Query:

```
SELECT ShipRegion ,
       ShipCity ,
       COUNT(*) AS NumberOfOrders
FROM [Northwind].[dbo].[Orders]
WHERE YEAR(ShippedDate) = 1997
GROUP BY ShipRegion , ShipCity
ORDER BY ShipRegion , NumberOfOrders DESC;
```

ShipRegion	ShipCity	NumberOfOrders
North	London	15
North	Manchester	13
North	Paris	11
North	New York	10
North	San Francisco	8
North	Seattle	7
North	Washington	7
North	Portland	7
North	San Jose	7

Figure 9: Result of the query 9