

1. Distribution of customers based on age and gender:

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the file is 'SQLQuery1.sql - LAPTOP-011JTKI4\SQLEXPRESS.CustomerShoppingTrends (sa (58))'. The menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains icons for New Query, Open, Save, Execute, and other standard database operations.

The Object Explorer on the left shows the database structure for 'LAPTOP-011JTKI4\SQLEXPRESS (SQL Sen)'. It includes Databases, System Databases, Database Snapshots, CustomerShoppingTrends, Database Diagrams, Tables, System Tables, FileTables, External Tables, Graph Tables, and dbo.Customer Data. The Columns list for 'dbo.Customer Data' includes: Customer_ID (int, not null), Age (int, not null), Gender (varchar(50), not null), Item_Purchased (varchar(50), not null), Category (varchar(50), not null), Purchase_Amount_USD (float, not null), Location (varchar(50), not null), Size (int, not null), Color (varchar(50), not null), Season (varchar(50), not null), Review_Rating (float, not null), Subscription_Status (varchar(50), not null), Shipping_Type (varchar(50), not null), Discount_Applied (float, not null), Promo_Code_Used (varchar(50), not null), Previous_Purchases (int, not null), Payment_Method (varchar(50), not null), and Frequency_of_Purchases (int, not null).

The SQL Query Editor in the center contains the following query:

```
Select Age, Gender, Count(*) As CustomerCount
From [Customer Data]
Group By Age, Gender;
```

The Results pane at the bottom shows the output of the query, displaying 16 rows of data. The columns are Age, Gender, and CustomerCount.

	Age	Gender	CustomerCount
1	39	Female	26
2	34	Male	46
3	22	Female	28
4	51	Male	51
5	65	Female	22
6	20	Male	50
7	51	Female	21
8	53	Male	50
9	39	Male	42
10	27	Female	28
11	70	Female	22
12	65	Male	50
13	53	Female	20
14	25	Male	64
15	58	Male	54
16	44	Male	28
17	37	Female	33

The status bar at the bottom indicates 'Query executed successfully.' and 'LAPTOP-011JTKI4\SQLEXPRESS ... sa (58) CustomerShoppingTrends 00:00:00 106 rows'.

2. Most popular items and categories among customers

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the database structure for 'CustomerShoppingTrends'. The query window in the center contains the following SQL code:

```
--Most popular items
Select [Item_Purchased],COUNT(*) AS PurchaseCount
FROM [Customer Data]
Group by [Item_Purchased]
ORDER BY PurchaseCount DESC
```

The Results pane at the bottom displays the query output as a table with two columns: 'Item_Purchased' and 'PurchaseCount'. The data is sorted in descending order of purchase count.

Item_Purchased	PurchaseCount
Pants	171
Blouse	171
Jewelry	171
Shie	169
Dress	166
Sweater	164
Jacket	163
Coat	161
Belt	161
Sunglasses	161
Sandals	160
Socks	159
Skirt	158
Scarf	157
Shorts	157
Hat	154
Underwear	143

The status bar at the bottom indicates 'Query executed successfully.' and '25 rows'.

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the database structure for 'CustomerShoppingTrends'. The query window in the center contains the following SQL code:

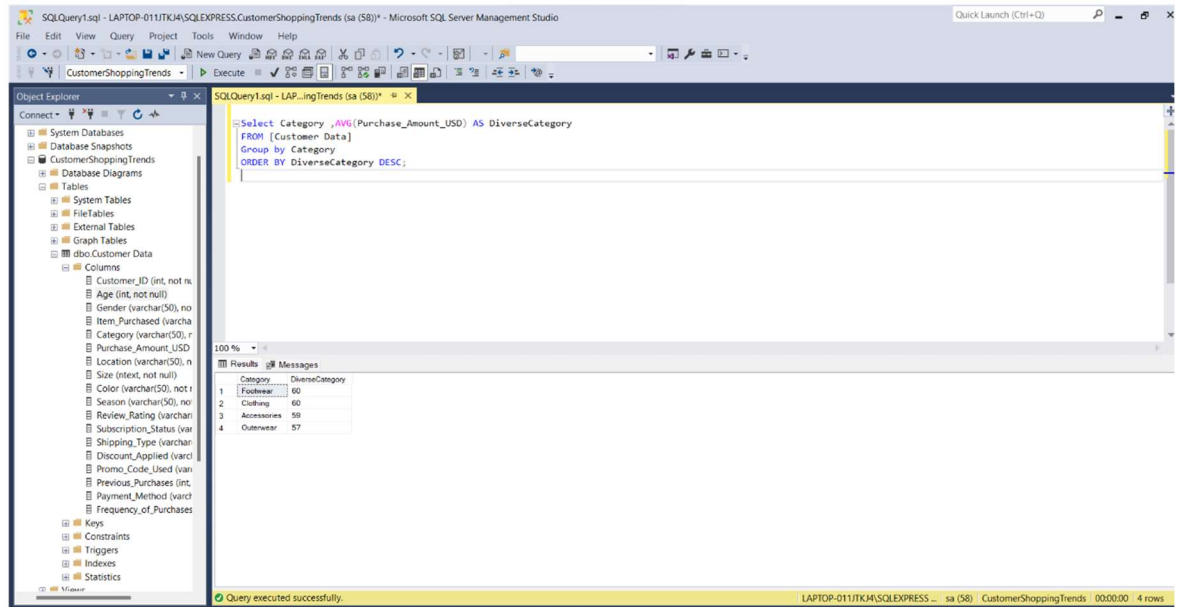
```
--Most popular categories
Select Category ,COUNT(*) AS CategoryCount
FROM [Customer Data]
Group by Category
ORDER BY CategoryCount DESC;
```

The Results pane at the bottom displays the query output as a table with two columns: 'Category' and 'CategoryCount'. The data is sorted in descending order of category count.

Category	CategoryCount
Clothing	1773
Accessories	1240
Footwear	599
Outerwear	324

The status bar at the bottom indicates 'Query executed successfully.' and '4 rows'.

3. Purchase amount variation across different categories:



The screenshot displays the Microsoft SQL Server Management Studio interface. The 'Object Explorer' on the left shows the database structure for 'CustomerShoppingTrends'. The 'Query Editor' in the center contains the following SQL query:

```
SELECT Category, AVG(Purchase_Amount_USD) AS DiverseCategory
FROM [Customer Data]
GROUP BY Category
ORDER BY DiverseCategory DESC;
```

The 'Results' pane at the bottom shows the output of the query, which is a table with two columns: 'Category' and 'DiverseCategory'. The results are as follows:

Category	DiverseCategory
Footwear	60
Clothing	60
Accessories	59
Outerwear	57

The status bar at the bottom indicates that the query was executed successfully, returning 4 rows in 00:00:00.

4. Correlation between review ratings and purchase amounts:

The screenshot displays the Microsoft SQL Server Management Studio interface. The 'Object Explorer' on the left shows the database structure for 'CustomerShoppingTrends'. The 'SQLQuery1.sql' window contains the following query:

```
Select Review_Rating, AVG(Purchase_Amount_USD) AS AvgPurchaseAmount_USD
FROM [Customer Data]
Group by Review_Rating
ORDER BY Review_Rating;
```

The 'Results' pane at the bottom shows the output of the query, which is a table with two columns: 'Review_Rating' and 'AvgPurchaseAmount_USD'. The data is sorted by 'Review_Rating' in descending order.

Review_Rating	AvgPurchaseAmount_USD
2.5	62
2.6	59
2.7	59
2.8	57
2.9	56
3	60
3.1	58
3.2	61
3.3	59
3.4	59
3.5	58
3.6	57
3.7	58
3.8	60
3.9	58
4	59
4.1	61

The status bar at the bottom indicates that the query was executed successfully, returning 26 rows.

5. Patterns in the frequency of purchases

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. The left pane shows the 'Object Explorer' with the 'CustomerShoppingTrends' database selected. The right pane shows a SQL query window with the following query:

```
Select Frequency_of_Purchases,COUNT(*) AS PurchaseCount
FROM [Customer Data]
Group by Frequency_of_Purchases
ORDER BY Frequency_of_Purchases DESC
```

The query results are displayed in a table with two columns: 'Frequency_of_Purchases' and 'PurchaseCount'. The results are ordered by frequency in descending order.

Frequency_of_Purchases	PurchaseCount
Weekly	539
Quarterly	563
Monthly	553
Fortnightly	542
Every 3 Months	584
Bi-Weekly	547
Annually	572

The status bar at the bottom indicates 'Query executed successfully.' and '7 rows'.

6. Influence of subscription status on customer behavior

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'LAPTOP-0111TKJ4\SQLEXPRESS.CustomerShoppingTrends (sa (58))'. The Object Explorer on the left shows the database structure, including tables, columns, keys, constraints, triggers, indexes, and statistics. The main query editor contains the following SQL code:

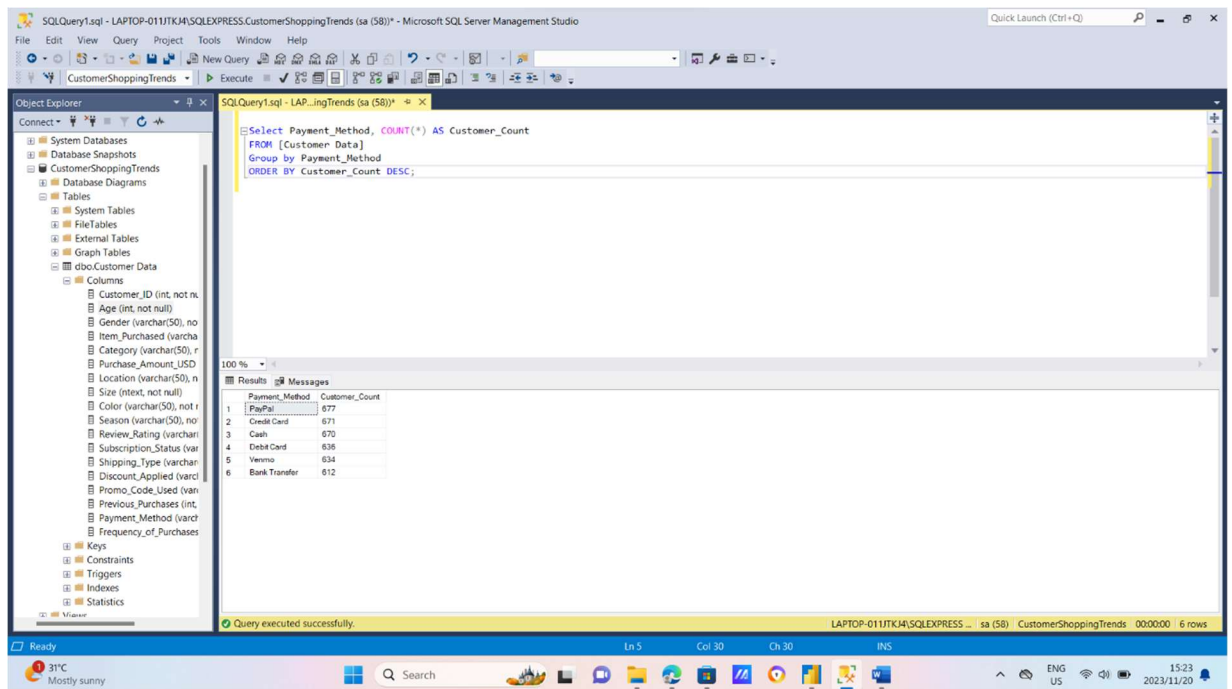
```
SELECT Subscription_Status, COUNT(*) AS AvgStatus
FROM [Customer Data]
GROUP BY Subscription_Status;
```

The Results pane at the bottom shows the output of the query, which consists of two rows:

	Subscription_Status	AvgStatus
1	Yes	1053
2	No	2847

A status bar at the bottom of the window indicates 'Query executed successfully.' and '2 rows'.

7. Preferred payment methods among customers:



The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'LAPTOP-011UTK4\SQLEXPRESS:CustomerShoppingTrends (sa (58))'. The Object Explorer on the left shows the database structure, including tables like 'Customer', 'Item', 'Purchase', 'Review', 'Subscription', 'Shipping', 'Discount', 'Promo', and 'Payment'. The central query editor contains the following SQL query:

```
Select Payment_Method, COUNT(*) AS Customer_Count  
FROM [Customer_Data]  
Group by Payment_Method  
ORDER BY Customer_Count DESC;
```

The Results pane at the bottom shows the output of the query, which is a table with two columns: 'Payment_Method' and 'Customer_Count'. The results are as follows:

Payment_Method	Customer_Count
PayPal	677
Credit Card	671
Cash	670
Debit Card	636
Venmo	634
Bank Transfer	612

The status bar at the bottom indicates 'Query executed successfully.' and '6 rows'.

8. Analysis of High-Value Customers

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'LAPTOP-011\JKJA\SQLEXPRESS.CustomerShoppingTrends (sa (58))'. The Object Explorer on the left shows the database structure, including tables like 'Customer Data' and 'dbo.Customer Data'. The query editor in the center contains the following SQL query:

```
SELECT Customer_ID, SUM(Purchase_Amount_USD) AS TotalPurchaseAmount
FROM [Customer Data]
GROUP BY Customer_ID
HAVING SUM(Purchase_Amount_USD) >= 80;
```

The Results pane at the bottom shows the output of the query, displaying a table with two columns: 'Customer_ID' and 'TotalPurchaseAmount'. The results are as follows:

Customer_ID	TotalPurchaseAmount
1921	84
2253	96
3581	83
1566	93
1898	97
2230	97
3226	98
879	89
1188	89
3750	95
1443	92
1712	93
3458	87
3627	98
1735	98
2399	81

The status bar at the bottom indicates 'Query executed successfully.' and shows the execution time as 00:00:00. The Windows taskbar at the very bottom shows the system clock as 15:29 on 2023/11/20.

9. Seasonal Purchase Analysis

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'LAPTOP-011JTKJ4\SQLEXPRESS.CustomerShoppingTrends (sa (78))'. The Object Explorer on the left shows the database structure, including tables like 'Customer', 'Item', 'Purchase', and 'Review'. The central query editor contains the following SQL query:

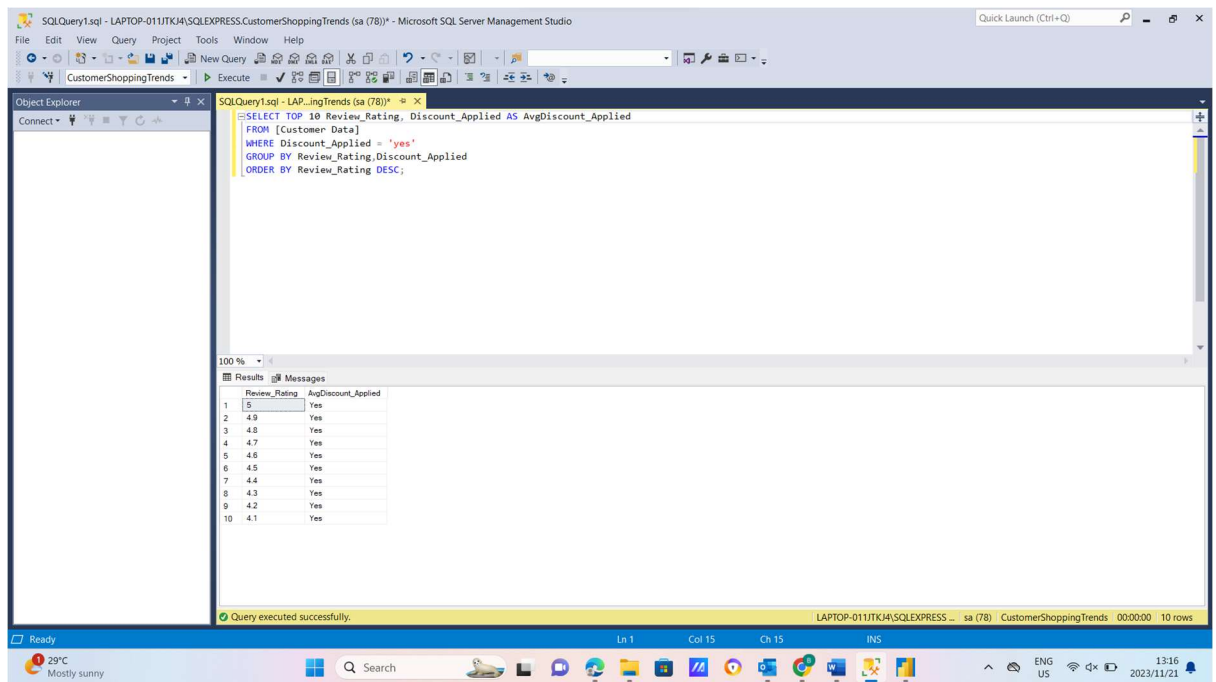
```
SELECT [Season], COUNT(*) AS PurchaseCount, AVG(Purchase_Amount_USD) AS AvgSeason
FROM [Customer_Data]
GROUP BY [Season];
```

The Results pane at the bottom shows the output of the query, which is a table with three columns: Season, PurchaseCount, and AvgSeason. The data is as follows:

Season	PurchaseCount	AvgSeason
Winter	971	60
Summer	955	58
Spring	999	58
Fall	975	61

The status bar at the bottom indicates 'Query executed successfully.' and shows the execution time as '00:00:00' for 4 rows.

10. Review Rating on influence Discount Usage



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

```
SELECT TOP 10 Review_Rating, Discount_Applied AS AvgDiscount_Applied
FROM [Customer Data]
WHERE Discount_Applied = 'yes'
GROUP BY Review_Rating, Discount_Applied
ORDER BY Review_Rating DESC;
```

The Results pane shows the output of the query, displaying 10 rows of data. The columns are Review_Rating and AvgDiscount_Applied.

	Review_Rating	AvgDiscount_Applied
1	5	Yes
2	4.9	Yes
3	4.8	Yes
4	4.7	Yes
5	4.6	Yes
6	4.5	Yes
7	4.4	Yes
8	4.3	Yes
9	4.2	Yes
10	4.1	Yes

The status bar at the bottom indicates that the query was executed successfully, returning 10 rows.