ELEVATE LABS DATA ANALYST INTERN ON 15th APRIL 2025
MS SQL SERVER

📄 Introduction

The dataset, sales_data_sample.csv, represents a sample of transactional sales data typically used for business analysis and reporting. Each row corresponds to a line item in a sales order, capturing key metrics related to product sales, customers, and revenue generation.

The data includes information such as:

Order Details: Order number, date, quantity ordered, price, and total sales.
Product Details: Product code and product line.
Customer Details: Customer name and possibly contact or region (depending on the full schema).
Sales Metrics: Revenue (SALES), unit price (PRICEEACH), and quantity sold (QUANTITYORDERED).
This dataset is ideal for analyzing trends over time, product performance, customer value, and generating key business insights such as revenue growth, order volume, and product popularity.

📊 Summary Insights (Based on SQL Queries Run)

Here are some key insights you can derive from this dataset:

📆 Monthly Overview

You can calculate monthly total revenue and order volume using the ORDERDATE and SALES columns.
This reveals seasonality, peak months, and sales trends over time.

🛍️ Product Insights

Find top-selling products by total revenue and quantity.
Analyze product popularity over time and identify months with the highest demand for specific items.

👥 Customer Analysis

Identify top customers based on total spending.
Evaluate first-time vs. repeat customers.
Calculate Customer Lifetime Value (CLTV) by summing total sales per customer.

💰 Financial Performance

You can determine average sales per order, order size categories, and even estimate profit margins if unit cost data (BUYPRICE) is included.

📈 Trend Analysis

Calculate month-over-month growth rates for revenue.
Track orders by quarter or day of week to inform strategic planning.

SQL QUERIES USED WITH MS SQL SERVER

Query for Monthly Revenue

```sql
----------Query for Monthly Revenue--------
SELECT
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    SUM(SALES) AS TotalRevenue
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM')
ORDER BY
    Month;
```

15 %

Results | Messages

	Month	TotalRevenue
1	2003-01	129753.599731445
2	2003-02	140836.189941406
3	2003-03	174504.900085449
4	2003-04	201609.551086426
5	2003-05	192673.109985352
6	2003-06	168082.56072998
7	2003-07	187731.880493164
8	2003-08	197809.300048828
9	2003-09	263973.360961914
10	2003-10	568290.971557617
11	2003-11	1029837.66271973
12	2003-12	261876.459899902

Query executed successfully

Query for Monthly Order Volume

```
-------Query for Monthly Order Volume---------
SELECT
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    COUNT(DISTINCT ORDERNUMBER) AS TotalOrders
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM')
ORDER BY
    Month;
```

Results | Messages

Month	TotalOrders
2003-01	5
2003-02	3
2003-03	6
2003-04	7
2003-05	6
2003-06	6
2003-07	6
2003-08	5
2003-09	8
2003-10	17
2003-11	28
2003-12	7

Query executed successfully.

Combine Revenue and Orders (Optional)

```
-----Combine Revenue and Orders (Optional)---
SELECT
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    SUM(SALES) AS TotalRevenue,
    COUNT(DISTINCT ORDERNUMBER) AS TotalOrders
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM')
ORDER BY
    Month;
```

Invalid column name 'ORDERNUMBER'.

Results | Messages

Month	TotalRevenue	TotalOrders
2003-01	129753.599731445	5
2003-02	140836.189941406	3
2003-03	174504.900085449	6
2003-04	201609.551086426	7
2003-05	192673.109985352	6
2003-06	168082.56072998	6
2003-07	187731.880493164	6
2003-08	197809.300048828	5
2003-09	263973.360961914	8
2003-10	568290.971557617	17
2003-11	1029837.66271973	28
2003-12	261876.459899902	7

Top 5 Months with Highest Revenue

```sql
------ Top 5 Months with Highest Revenue-----
SELECT TOP 5
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    SUM(SALES) AS TotalRevenue
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM')
ORDER BY
    TotalRevenue DESC;
```

5 %

Results | Messages

Month	TotalRevenue
2004-11	1089048.00762939
2003-11	1029837.66271973
2003-10	568290.971557617
2004-10	552924.250793457
2004-08	461501.267944336

Top 5 Products by Total Sales

```sql
SELECT TOP 5
    PRODUCTCODE,
    SUM(SALES) AS TotalSales
FROM
    sales_data_sample
GROUP BY
    PRODUCTCODE
ORDER BY
    TotalSales DESC;
```

Results | Messages

	Month	TotalRevenue
1	2004-11	1089048.00762939
2	2003-11	1029837.66271973
3	2003-10	568290.971557617
4	2004-10	552924.250793457
5	2004-08	461501.267944336

	PRODUCTCODE	TotalSales
1	S18_3232	288245.420898438
2	S10_1949	191073.029052734
3	S10_4698	170401.070922852
4	S12_1108	168585.319091797
5	S18_2238	154623.950195313

Monthly Order Count by Product

```
SELECT
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    PRODUCTCODE,
    COUNT(DISTINCT ORDERNUMBER) AS OrderCount
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM'),
    PRODUCTCODE
ORDER BY
    Month, OrderCount DESC;
```

Results | Messages

	Month	PRODUCTCODE	OrderCount
1	2003-01	S10_1949	1
2	2003-01	S10_4962	1
3	2003-01	S12_1666	1
4	2003-01	S12_3148	1
5	2003-01	S12_4473	1
6	2003-01	S18_1097	1
7	2003-01	S18_1342	1
8	2003-01	S18_1367	1
9	2003-01	S18_1749	1
10	2003-01	S18_2238	1
11	2003-01	S18_2248	1
12	2003-01	S18_2319	1
13	2003-01	S18_2325	1

Query executed successfully.

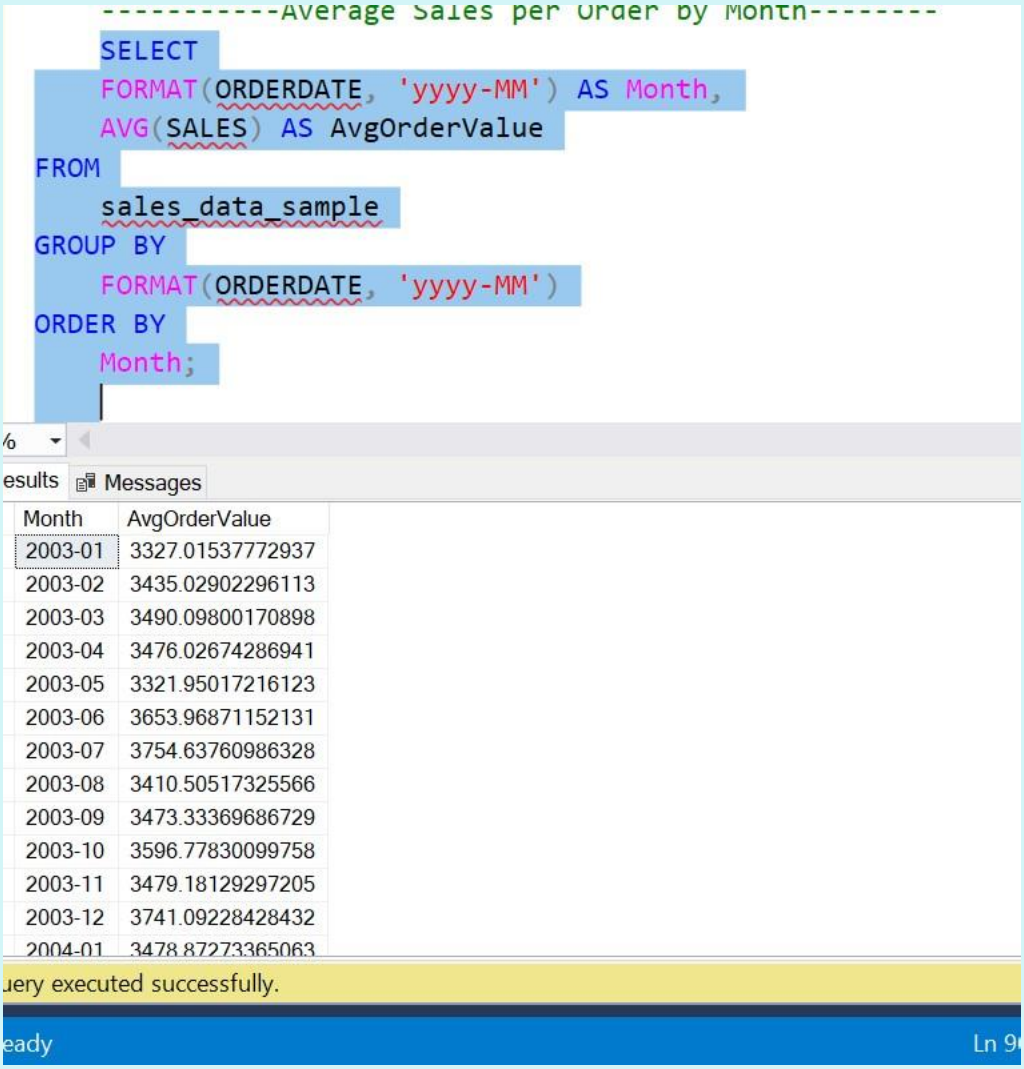
Top 5 Customers by Total Revenue

115 %

Results | Messages

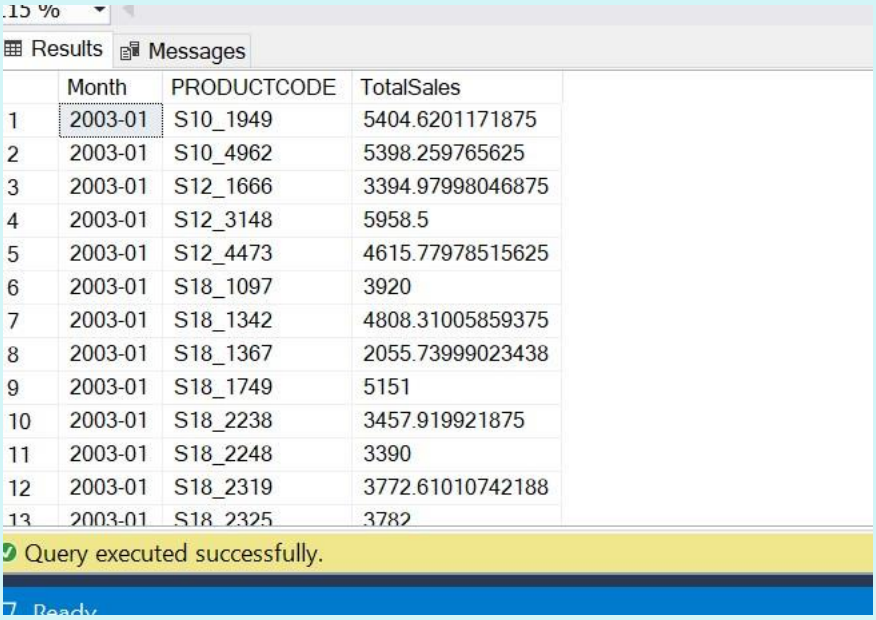
	CUSTOMERNAME	TotalRevenue
1	Euro Shopping Channel	912294.110473633
2	Mini Gifts Distributors Ltd.	654858.058105469
3	Australian Collectors, Co.	200995.41015625
4	Muscle Machine Inc	197736.940185547
5	La Rochelle Gifts	180124.899719238

Average Sales per Order by Month



Revenue Trend per Product Over Time

```
SELECT
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    PRODUCTCODE,
    SUM(SALES) AS TotalSales
FROM
    sales_data_sample
GROUP BY
    FORMAT(ORDERDATE, 'yyyy-MM'), PRODUCTCODE
ORDER BY
    Month, PRODUCTCODE;
```

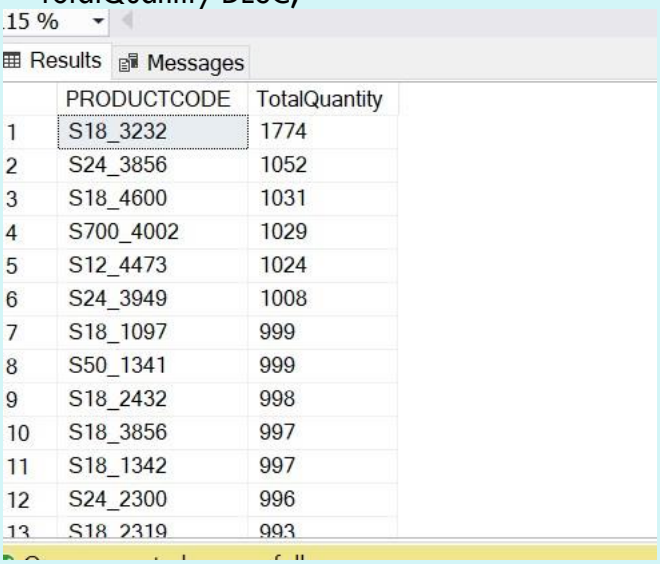


	Month	PRODUCTCODE	TotalSales
1	2003-01	S10_1949	5404.6201171875
2	2003-01	S10_4962	5398.259765625
3	2003-01	S12_1666	3394.97998046875
4	2003-01	S12_3148	5958.5
5	2003-01	S12_4473	4615.77978515625
6	2003-01	S18_1097	3920
7	2003-01	S18_1342	4808.31005859375
8	2003-01	S18_1367	2055.73999023438
9	2003-01	S18_1749	5151
10	2003-01	S18_2238	3457.919921875
11	2003-01	S18_2248	3390
12	2003-01	S18_2319	3772.61010742188
13	2003-01	S18_2325	3782

Query executed successfully.

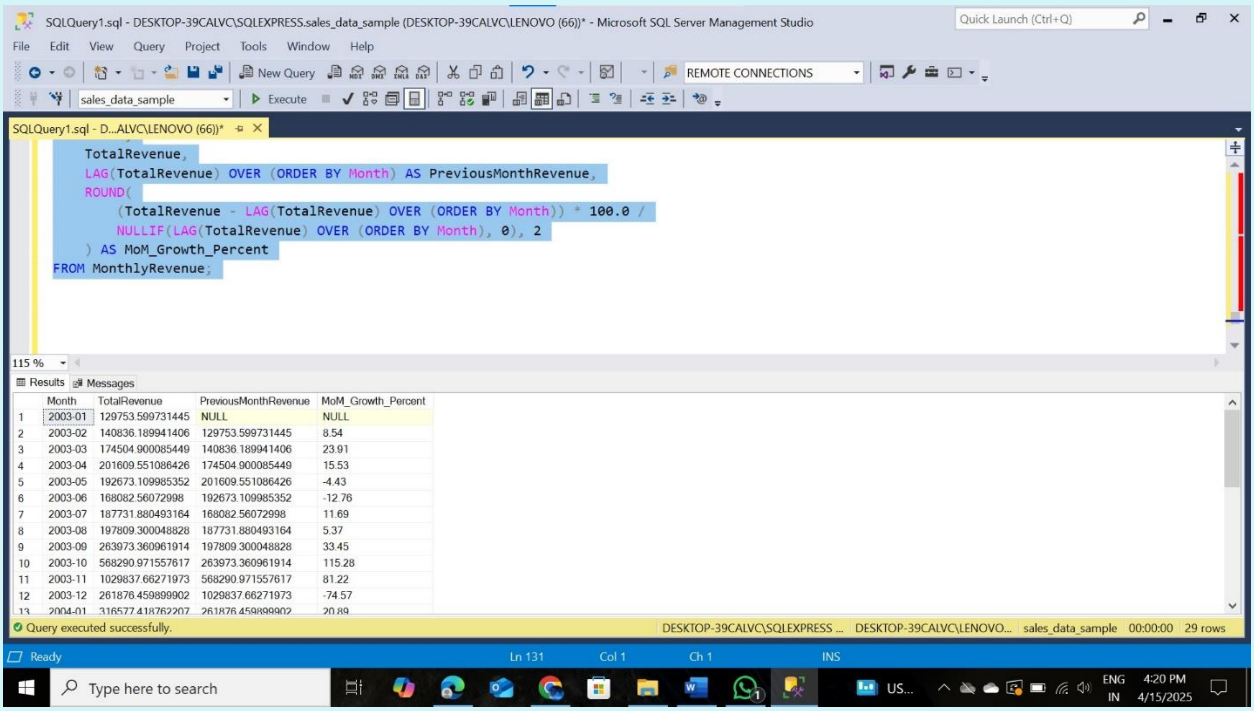
Total Quantity Ordered per Product (Sales Volume)

```
SELECT
    PRODUCTCODE,
    SUM(QUANTITYORDERED) AS TotalQuantity
FROM
    sales_data_sample
GROUP BY
    PRODUCTCODE
ORDER BY
    TotalQuantity DESC;
```



	PRODUCTCODE	TotalQuantity
1	S18_3232	1774
2	S24_3856	1052
3	S18_4600	1031
4	S700_4002	1029
5	S12_4473	1024
6	S24_3949	1008
7	S18_1097	999
8	S50_1341	999
9	S18_2432	998
10	S18_3856	997
11	S18_1342	997
12	S24_2300	996
13	S18_2319	993

Month-over-Month Revenue Growth



Customer Lifetime Value (CLTV) - Total Spent Per Customer

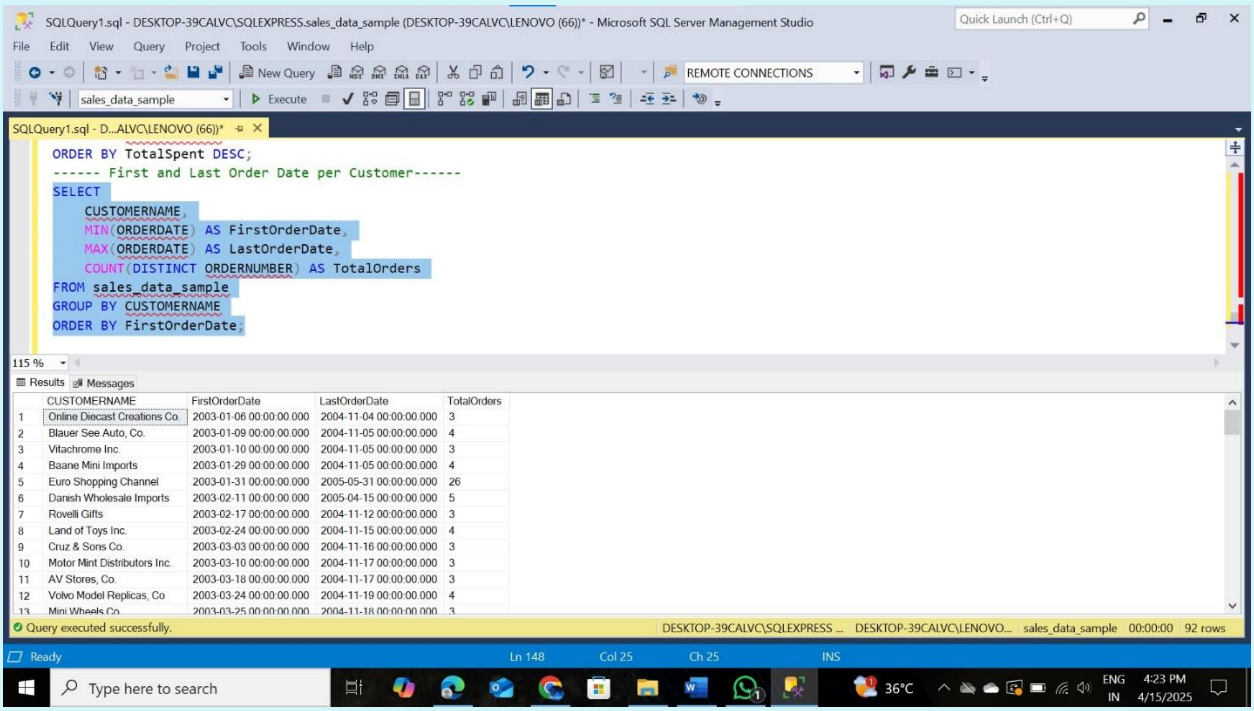
```
SELECT
    CUSTOMERNAME,
    COUNT(DISTINCT ORDERNUMBER) AS TotalOrders,
    SUM(SALES) AS TotalSpent,
    AVG(SALES) AS AvgSpentPerOrder
FROM sales_data_sample
GROUP BY CUSTOMERNAME
ORDER BY TotalSpent DESC;
```

Results | Messages

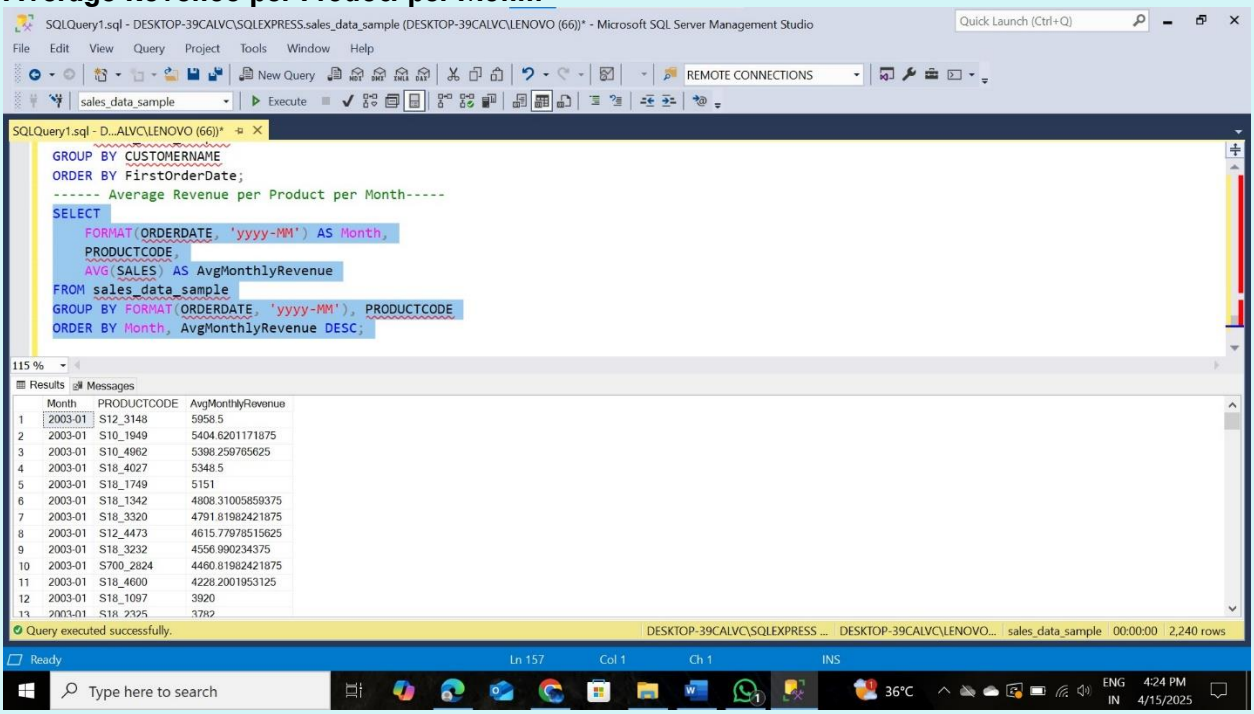
	CUSTOMERNAME	TotalOrders	TotalSpent	AvgSpentPerOrder
1	Euro Shopping Channel	26	912294.110473633	3522.37108290978
2	Mini Gifts Distributors Ltd.	17	654858.058105469	3638.10032280816
3	Australian Collectors, Co.	5	200995.41015625	3654.46200284091
4	Muscle Machine Inc	4	197736.940185547	4119.51958719889
5	La Rochelle Gifts	4	180124.899719238	3398.58301357053
6	Dragon Souveniers, Ltd.	5	172989.680541992	4023.01582655796
7	Land of Toys Inc.	4	164069.439331055	3348.3559047154
8	The Sharp Gifts Warehouse	4	160010.270263672	4000.2567565918
9	AV Stores, Co.	3	157807.809631348	3094.27077708525
10	Anna's Decorations, Ltd	4	153996.129150391	3347.74193805197
11	Souveniers And Things Co.	4	151570.979858398	3295.02130126953
12	Corporate Gift Ideas Co.	4	149882.500244141	3655.67073766197
13	Salzburg Collectables	4	149798.630187988	3744.96575469971

Query executed successfully.

First and Last Order Date per Customer



Average Revenue per Product per Month



Most Ordered Product per Month

```
WITH MonthlyProductSales AS (
    SELECT
        FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
        PRODUCTCODE,
        SUM(QUANTITYORDERED) AS TotalQty
    FROM sales_data_sample
    GROUP BY FORMAT(ORDERDATE, 'yyyy-MM'), PRODUCTCODE
```

```
),
RankedProducts AS (
    SELECT *,
        RANK() OVER (PARTITION BY Month ORDER BY TotalQty DESC) AS rnk
    FROM MonthlyProductSales
)
SELECT Month, PRODUCTCODE, TotalQty
FROM RankedProducts
WHERE rnk = 1;
```

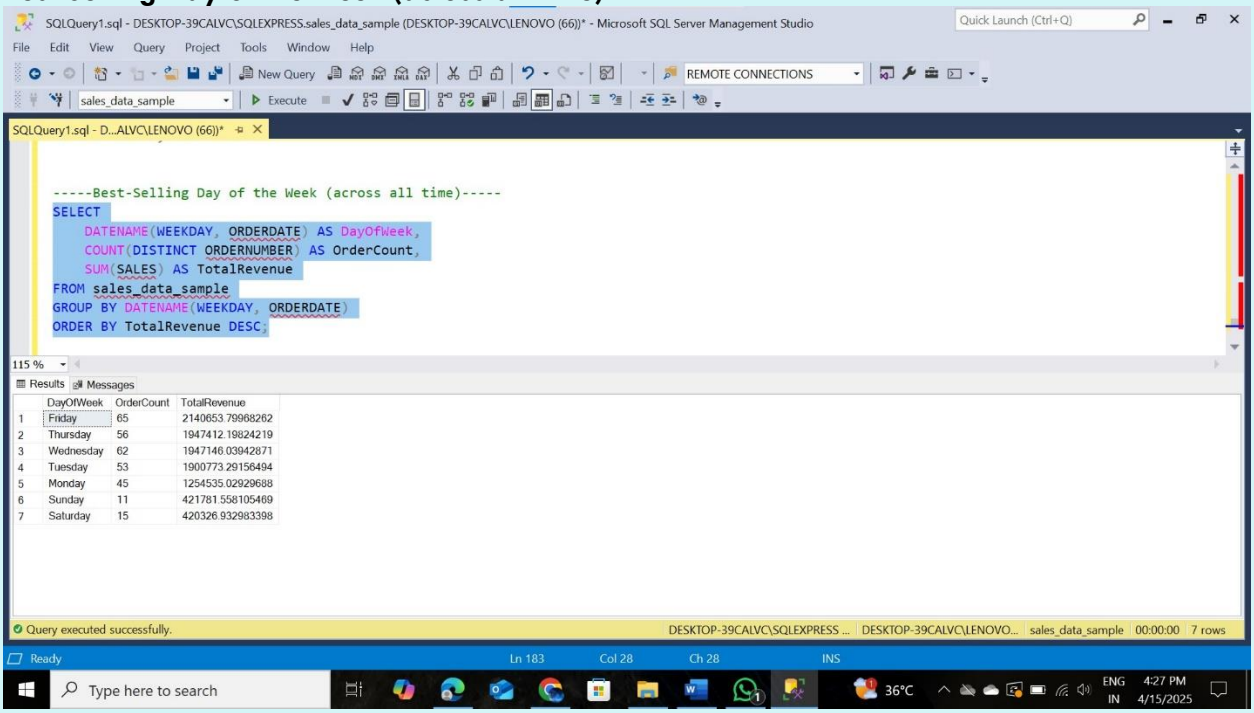
115 %

Results | Messages

	Month	PRODUCTCODE	TotalQty
1	2003-01	S18_2248	50
2	2003-02	S10_4757	50
3	2003-02	S24_3949	50
4	2003-02	S24_3816	50
5	2003-03	S18_4668	50
6	2003-04	S72_3212	50
7	2003-05	S24_1628	50
8	2003-05	S18_4600	50
9	2003-05	S12_2823	50
10	2003-06	S24_3816	50
11	2003-06	S24_3949	50
12	2003-07	S18_1367	49
13	2003-08	S12_2823	49

Query executed successfully.

Best-Selling Day of the Week (across all time)



Orders by Quarter

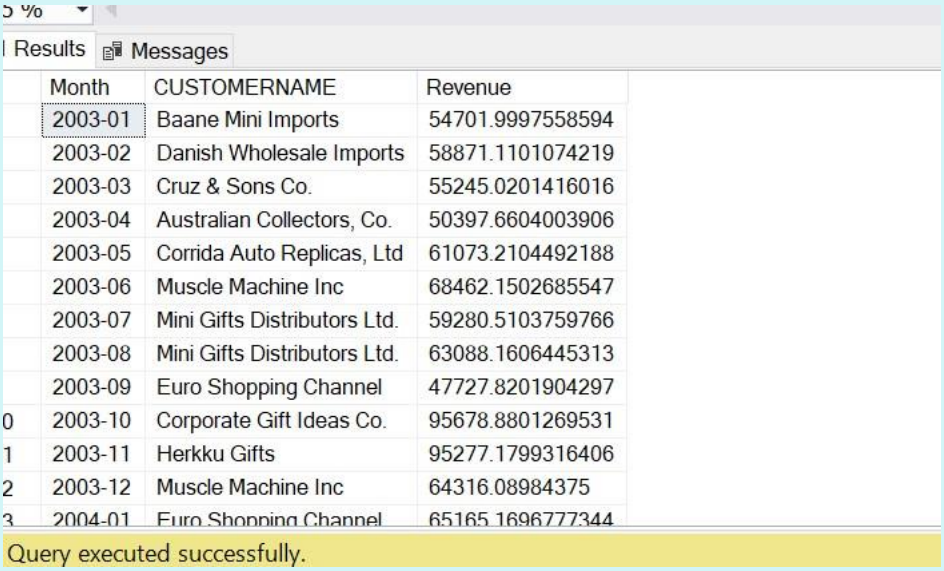
```sql
--Orders by Quarter----
SELECT
    CONCAT(YEAR(ORDERDATE), '-Q', DATEPART(QUARTER, ORDERDATE)) AS Quarter,
    COUNT(DISTINCT ORDERNUMBER) AS TotalOrders,
    SUM(SALES) AS TotalRevenue
FROM sales_data_sample
GROUP BY YEAR(ORDERDATE), DATEPART(QUARTER, ORDERDATE)
ORDER BY Quarter;
```

Results | Messages

Quarter	TotalOrders	TotalRevenue
2003-Q1	14	445094.689758301
2003-Q2	19	562365.221801758
2003-Q3	19	649514.541503906
2003-Q4	52	1860005.09417725
2004-Q1	25	833730.678649902
2004-Q2	28	766260.730529785
2004-Q3	34	1109396.26745605
2004-Q4	57	2014774.91674805
2005-Q1	36	1071992.35809326
2005-Q2	23	719494.350585938

Top Customer by Month

```sql
WITH MonthlyCustomerRevenue AS (
    SELECT
        FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
        CUSTOMERNAME,
        SUM(SALES) AS Revenue
    FROM sales_data_sample
    GROUP BY FORMAT(ORDERDATE, 'yyyy-MM'), CUSTOMERNAME
),
RankedRevenue AS (
    SELECT *,
        RANK() OVER (PARTITION BY Month ORDER BY Revenue DESC) AS rnk
    FROM MonthlyCustomerRevenue
)
SELECT Month, CUSTOMERNAME, Revenue
FROM RankedRevenue
WHERE rnk = 1;
```



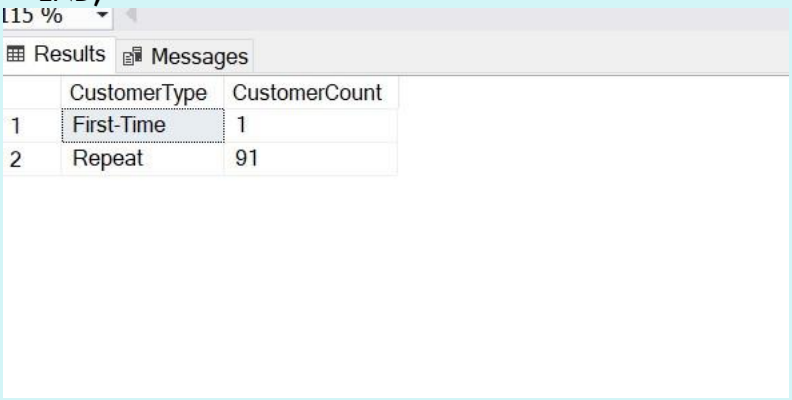
Results Messages

	Month	CUSTOMERNAME	Revenue
	2003-01	Baane Mini Imports	54701.9997558594
	2003-02	Danish Wholesale Imports	58871.1101074219
	2003-03	Cruz & Sons Co.	55245.0201416016
	2003-04	Australian Collectors, Co.	50397.6604003906
	2003-05	Corrida Auto Replicas, Ltd	61073.2104492188
	2003-06	Muscle Machine Inc	68462.1502685547
	2003-07	Mini Gifts Distributors Ltd.	59280.5103759766
	2003-08	Mini Gifts Distributors Ltd.	63088.1606445313
	2003-09	Euro Shopping Channel	47727.8201904297
0	2003-10	Corporate Gift Ideas Co.	95678.8801269531
1	2003-11	Herkku Gifts	95277.1799316406
2	2003-12	Muscle Machine Inc	64316.08984375
3	2004-01	Euro Shopping Channel	65165.1696777344

Query executed successfully.

Repeat vs. First-Time Customers

```
WITH CustomerOrderStats AS (
    SELECT
        CUSTOMERNAME,
        COUNT(DISTINCT ORDERNUMBER) AS OrderCount
    FROM sales_data_sample
    GROUP BY CUSTOMERNAME
)
SELECT
    CASE
        WHEN OrderCount = 1 THEN 'First-Time'
        ELSE 'Repeat'
    END AS CustomerType,
    COUNT(*) AS CustomerCount
FROM CustomerOrderStats
GROUP BY
    CASE
        WHEN OrderCount = 1 THEN 'First-Time'
        ELSE 'Repeat'
    END;
```



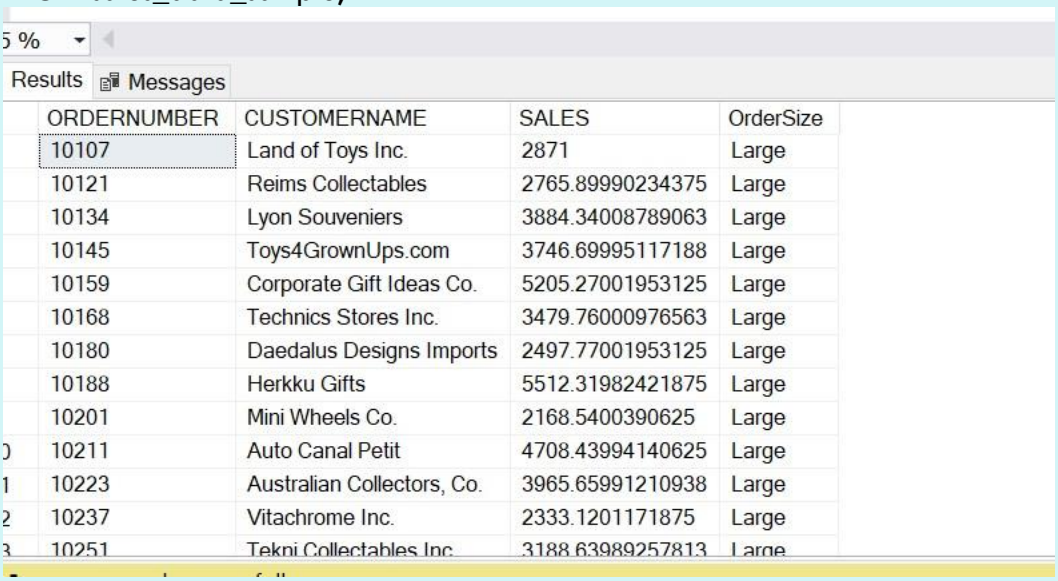
Results Messages

	CustomerType	CustomerCount
1	First-Time	1
2	Repeat	91

Order Size Buckets

```
SELECT
```

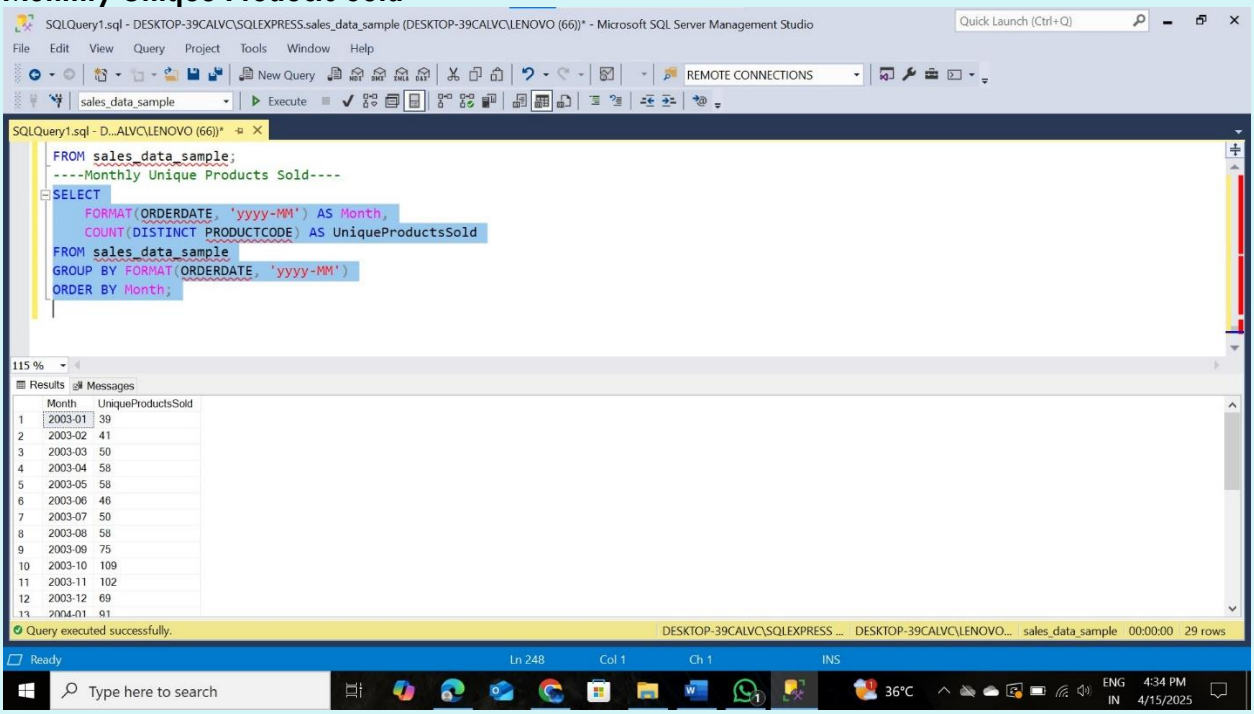
```
    ORDERNUMBER,
    CUSTOMERNAME,
    SALES,
    CASE
        WHEN SALES < 500 THEN 'Small'
        WHEN SALES BETWEEN 500 AND 2000 THEN 'Medium'
        ELSE 'Large'
    END AS OrderSize
FROM sales_data_sample;
```



Results | Messages

ORDERNUMBER	CUSTOMERNAME	SALES	OrderSize
10107	Land of Toys Inc.	2871	Large
10121	Reims Collectables	2765.89990234375	Large
10134	Lyon Souveniers	3884.34008789063	Large
10145	Toys4GrownUps.com	3746.69995117188	Large
10159	Corporate Gift Ideas Co.	5205.27001953125	Large
10168	Technics Stores Inc.	3479.76000976563	Large
10180	Daedalus Designs Imports	2497.77001953125	Large
10188	Herkku Gifts	5512.31982421875	Large
10201	Mini Wheels Co.	2168.5400390625	Large
10211	Auto Canal Petit	4708.43994140625	Large
10223	Australian Collectors, Co.	3965.65991210938	Large
10237	Vitachrome Inc.	2333.1201171875	Large
10251	Tekni Collectables Inc.	3188.63989257813	Large

Monthly Unique Products Sold



Create a View for Monthly Sales Summary

```
CREATE VIEW vw_MonthlySalesSummary AS
SELECT
```

```
    FORMAT(ORDERDATE, 'yyyy-MM') AS Month,
    SUM(SALES) AS TotalRevenue,
    COUNT(DISTINCT ORDERNUMBER) AS TotalOrders,
    COUNT(DISTINCT CUSTOMERNAME) AS ActiveCustomers
FROM sales_data_sample
GROUP BY FORMAT(ORDERDATE, 'yyyy-MM');
```

THANK YOU BY DURGAM MANOHAR