

Superstore Data Analysis

Graduation Team Project



Project team members:

Hassnaa Zinhom Ebrahim	Data Cleaning and preprocessing
Nehal Mohamed Mohamed	Exploratory Data Analysis (EDA) using SQL Server Management Studio
Israa Mohamed Metwally	Performance analysis using SQL Server Management Studio
Alaa Elsayed Ragab	Data Visualization using Power BI
Reham Alaa ElDien Mohamed	Recommendations and development
Safaa Abdellatif Ahmed	Project facilitator Presentation designer

Used Tools:



1. Microsoft Excel:

Extracted and prepared data from an Excel file for analysis.



2. Microsoft SQL Server:

Uploaded data to a SQL database and performed data analysis using SQL queries.



3. Microsoft Power BI:

Created interactive dashboards to support decision-making.



Objective:

- Understand sales trends over the years and across product categories
- Analyze overall profitability and what drives gains or losses
- Identify best-selling products and most profitable ones
- Spot underperforming regions and suggest improvements
- Recommend strategies to improve efficiency and increase profits

Analysis Steps:



1.Data collection



2.Data cleaning & preprocessing



3.Exploratory data analysis (EDA)



4.Performance analysis



5.Data visualization



6.Recommendations
& Development

01

Data collection



Collect data from the initiative's datasets from Excel sheet:

Central_Superstore - Excel

File Home Insert Page Layout Formulas Data Review View Help

Paste

Clipboard

Calibri 11 A⁺ A⁻ B I U

Font

General

Alignment

\$ %

Number

Styles

Cells

Editing

Add-ins

11 : fx Row ID

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer	Customer Segment	Country	City	State	Postal Code	Region	Product Line Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit
7981	CA-2011-1	1/3/2013	1/7/2013	Standard (DP-13000)	Darren Po	Consumer	United States	Houston	Texas	77095	Central	OFF-PA-1C Office Supr Paper	Message B	16.448	2	0.2	5.5	
740	CA-2011-1	1/4/2013	1/8/2013	Standard (PO-19195)	Phillina O	Home Office	United States	Naperville	Illinois	60540	Central	OFF-LA-1C Office Supr Labels	Avery 508	11.784	3	0.2	4.2	
741	CA-2011-1	1/4/2013	1/8/2013	Standard (PO-19195)	Phillina O	Home Office	United States	Naperville	Illinois	60540	Central	OFF-ST-10 Office Supr Storage	SAFCO Bo	272.736	3	0.2	-64.7	
742	CA-2011-1	1/4/2013	1/8/2013	Standard (PO-19195)	Phillina O	Home Office	United States	Naperville	Illinois	60540	Central	OFF-BI-10 Office Supr Binders	GBC Stand	3.54	2	0.8	-5.	
7661	CA-2011-1	1/7/2013	1/7/2013	Standard (VS-21820)	Vivek Sun	Consumer	United States	Huntsville	Texas	77340	Central	FUR-FU-1C Furniture	Furnishing	Howard M	76.728	3	0.6	-53.7
7662	CA-2011-1	1/7/2013	1/7/2013	Standard (VS-21820)	Vivek Sun	Consumer	United States	Huntsville	Texas	77340	Central	OFF-BI-10 Office Supr Binders	Acco Four	10.43	7	0.8	-18.2	
593	CA-2011-1	1/9/2013	1/9/2013	Standard (MS-17830)	Melanie S	Consumer	United States	Laredo	Texas	78041	Central	OFF-AR-1C Office Supr Art	Newell 31	9.344	2	0.2	1.	
594	CA-2011-1	1/9/2013	1/9/2013	Standard (MS-17830)	Melanie S	Consumer	United States	Laredo	Texas	78041	Central	TEC-AC-1C Technolog Accessori	Memorex	31.2	3	0.2	!	
6327	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-ST-10 Office Supr Storage	Eldon Fol	13.98	1	0	4.0	
6328	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	FUR-FU-1C Furniture	Furnishing	Eldon Clus	272.94	3	0	30.0
6329	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-BI-10 Office Supr Binders	Acco Pres	19.05	5	0	8.5	
6330	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-AP-1C Office Supr Appliance	Holmes R	247.716	4	0.1	93.5	
6331	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-ST-10 Office Supr Storage	Fellowes i	66.58	2	0	15.5	
6332	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-AR-1C Office Supr Art	Panasonic	43.92	3	0	12.7	
6333	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	FUR-FU-1C Furniture	Furnishing	Ultra Door	14.73	3	0	4.8
6334	CA-2011-1	1/9/2013	1/9/2013	Standard (XP-21865)	Xylona Pri	Consumer	United States	Westland	Michigan	48185	Central	OFF-BI-10 Office Supr Binders	Storex Du	29.7	5	0	13.	
9887	CA-2011-1	1/9/2013	1/9/2013	Standard (SG-20605)	Speros Go	Consumer	United States	Lafayette	Indiana	47905	Central	OFF-FA-1C Office Supr Fasteners	Alliance B	5.94	3	0	0	
8150	CA-2011-1	1/9/2013	1/9/2013	First Class CA-11965	Carol Adai	Corporate	United States	Rapid City	South Dak	57701	Central	OFF-BI-10 Office Supr Binders	Wilson Joi	10.68	2	0	5.0	
8151	CA-2011-1	1/9/2013	1/9/2013	First Class CA-11965	Carol Adai	Corporate	United States	Rapid City	South Dak	57701	Central	FUR-BO-1C Furniture	Bookcase	Safco Valu	141.96	2	0	39.7
6388	CA-2011-1	2/4/2013	2/4/2013	Standard (MV-18190)	Mike Vitt	Consumer	United States	Detroit	Michigan	48234	Central	OFF-PA-1C Office Supr Paper	Xerox 197	10.56	2	0	4.	
6389	CA-2011-1	2/4/2013	2/4/2013	Standard (MV-18190)	Mike Vitt	Consumer	United States	Detroit	Michigan	48234	Central	OFF-ST-10 Office Supr Storage	Space Soli	229.94	2	0	6.8	

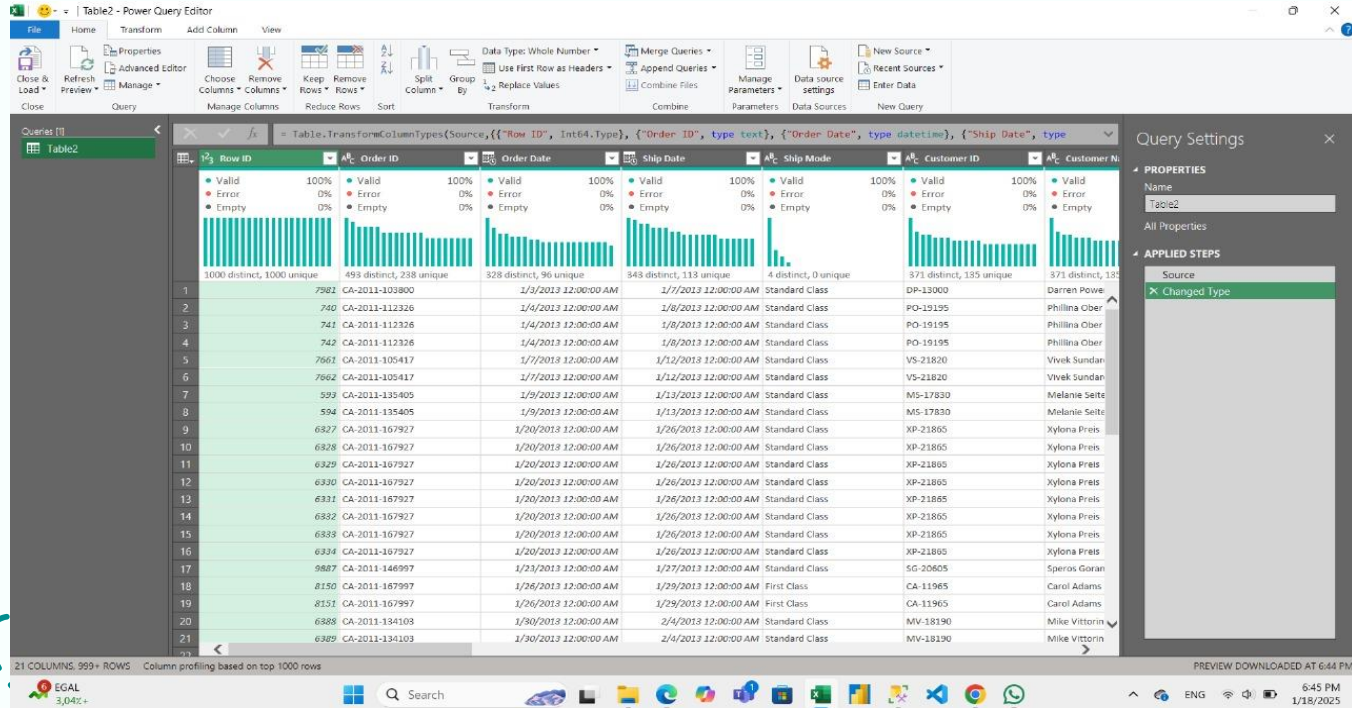
Central_Superstore +

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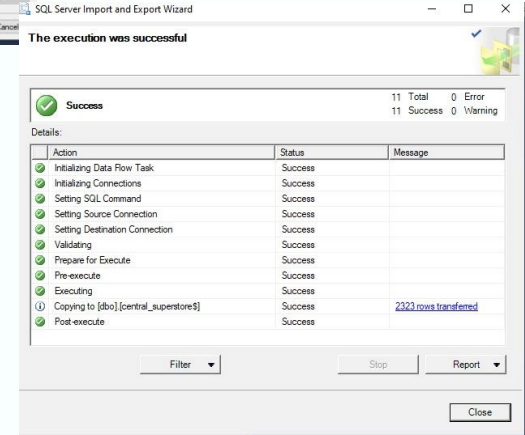
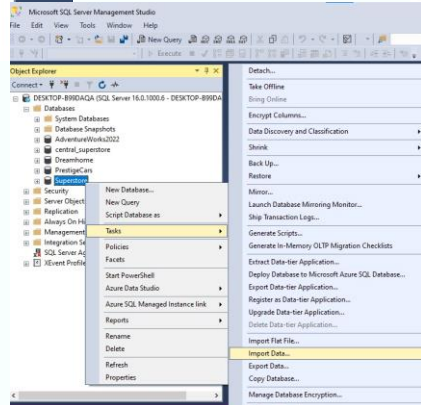
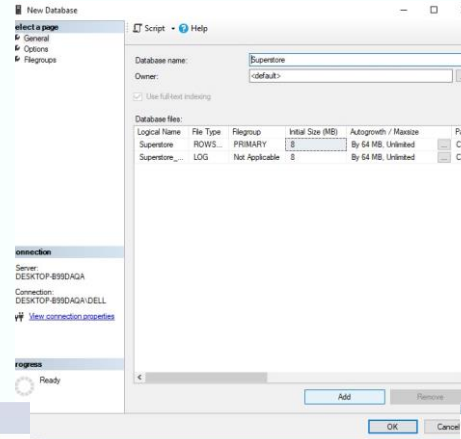
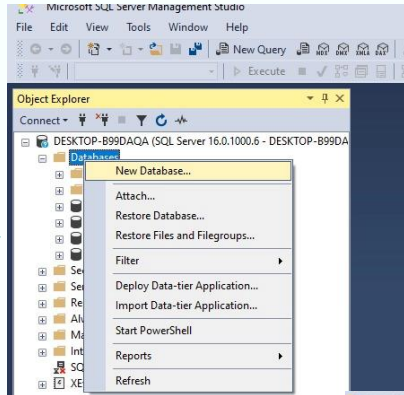
Data cleaning & preprocessing



Reviewing the data using Power Query, found it to be free of errors and missing values.



Uploading the data to SQL and Creating physical Database



03

Exploratory data analysis (EDA)



Exploratory data analysis (EDA)

- \$501K in sales, \$39.7K profit, and 8.8K items sold.

- Top 5 customers drove strong revenue, led by Tamara Chand with \$18.4K in sales.

Final project sql.s....-B99DAQA\DELL (64))* -> X

```
--Summary Overview--  
--1-total sales, profit, and quantity sold.  
SELECT  
    SUM(Sales) AS Total_Sales,  
    SUM(Profit) AS Total_Profit,  
    SUM(Quantity) AS Total_Quantity  
FROM Central_Region;  
-----  
--2-top 5 customers by total sales.  
SELECT top 5  
    [Customer Name],  
    SUM(Quantity) AS Total_Quantity,  
    COUNT(DISTINCT [Order ID]) AS Total_Orders,  
    SUM(Sales) AS Total_Sales  
FROM Central_Region  
GROUP BY [Customer Name]  
ORDER BY Total_Sales DESC
```

100 %

Results Messages

	Total_Sales	Total_Profit	Total_Quantity
1	501239.890800001	39706.3625	8780

	Customer Name	Total_Quantity	Total_Orders	Total_Sales
1	Tamara Chand	24	2	18437.138
2	Adrian Barton	48	5	12181.594
3	Becky Martin	37	1	10539.896
4	Sanjit Chand	17	1	9900.19
5	Harry Marie	33	4	6621.4788

Exploratory data analysis (EDA)

- Consumer segment leads with over half of total quantity sold (51.47%)

- Strong growth in YoY profit until 2015, followed by a decline in 2016

Final project sql.s...-B99DAQA\DELL (64)* -> X

```
--3-distribution of quantity sold by customer segment.  
SELECT  
    Segment,  
    SUM(Quantity) AS Total_Quantity,  
    ROUND(SUM(Quantity) * 100.0 / (SELECT SUM(Quantity) FROM Central_Region), 2) AS Percentage  
FROM Central_Region  
GROUP BY Segment;  
-----  
--4-Year-over-Year (YoY) profit.  
SELECT  
    YEAR([Order Date]) AS Year,  
    SUM(Profit) AS Total_Profit  
FROM  
    Central_Region  
GROUP BY  
    YEAR([Order Date])  
ORDER BY
```

100 %

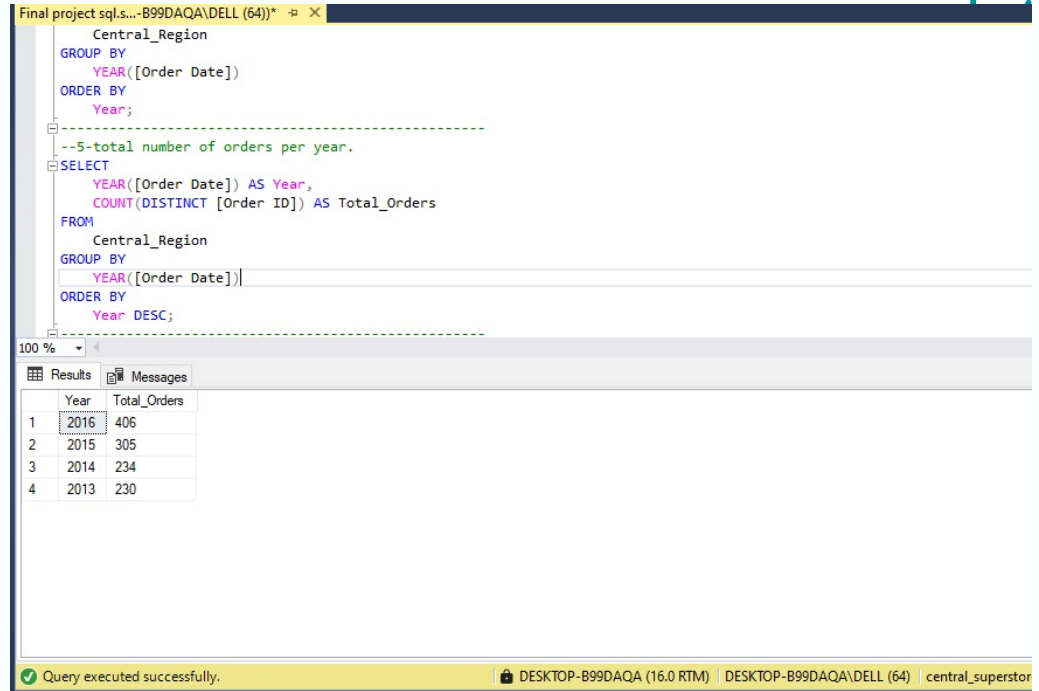
Results Messages

	Segment	Total_Quantity	Percentage
1	Corporate	2604	29.66
2	Home Office	1657	18.87
3	Consumer	4519	51.47

	Year	Total_Profit
1	2013	539.5533999999996
2	2014	11716.802
3	2015	19899.1629
4	2016	7550.844199999999

Exploratory data analysis (EDA)

-The total number of orders has steadily increased year over year, reaching 406 orders in 2016, showing a positive growth trend from 230 orders in 2013



```
Final project sql.s...-B99DAQA\DELL (64))* -> X
Central_Region
GROUP BY
  YEAR([Order Date])
ORDER BY
  Year;

--5-total number of orders per year.
SELECT
  YEAR([Order Date]) AS Year,
  COUNT(DISTINCT [Order ID]) AS Total_Orders
FROM
  Central_Region
GROUP BY
  YEAR([Order Date])
ORDER BY
  Year DESC;
```

	Year	Total_Orders
1	2016	406
2	2015	305
3	2014	234
4	2013	230

Query executed successfully. DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (64) | central_superstor

04

Performance analysis



KPIS:



Sales Analysis



Profitability Analysis

Performance analysis

Sales Analysis:

-Sales were stable, peaking in 2015 with \$147.4K and slightly dropping to \$147.1K in 2016.

--Sales Analysis--

```
--6-Total Sales by Year
SELECT
    YEAR([Order Date]) AS Year,
    SUM(Sales) AS Total_Sales
FROM
    Central_Region
GROUP BY
    YEAR([Order Date])
ORDER BY
    Year DESC;

--7- total sales by quarter.
SELECT
    DATEPART(QUARTER, [Order Date]) AS Quarter,
    YEAR([Order Date]) AS Year,
```

.00 %

Results		Messages	
	Year	Total_Sales	
1	2016	147098.1282	
2	2015	147429.376	
3	2014	102874.222	
4	2013	103838.1646	

Performance analysis

Sales Analysis:

-Q4 showed the highest sales, with 2016 outperforming earlier years

Final project sql.s...-B99DAQA\DELL (64))*

```
--7- total sales by quarter.
SELECT
    DATEPART(QUARTER, [Order Date]) AS Quarter,
    YEAR([Order Date]) AS Year,
    SUM(Sales) AS Total_Sales
FROM
    Central_Region
GROUP BY
    YEAR([Order Date]), DATEPART(QUARTER, [Order Date])
ORDER BY
    Year DESC, Quarter;
```

-- 8-Average sales per category.
SELECT
 [Category],
 AVG(Sales) AS Average Sales

100 %

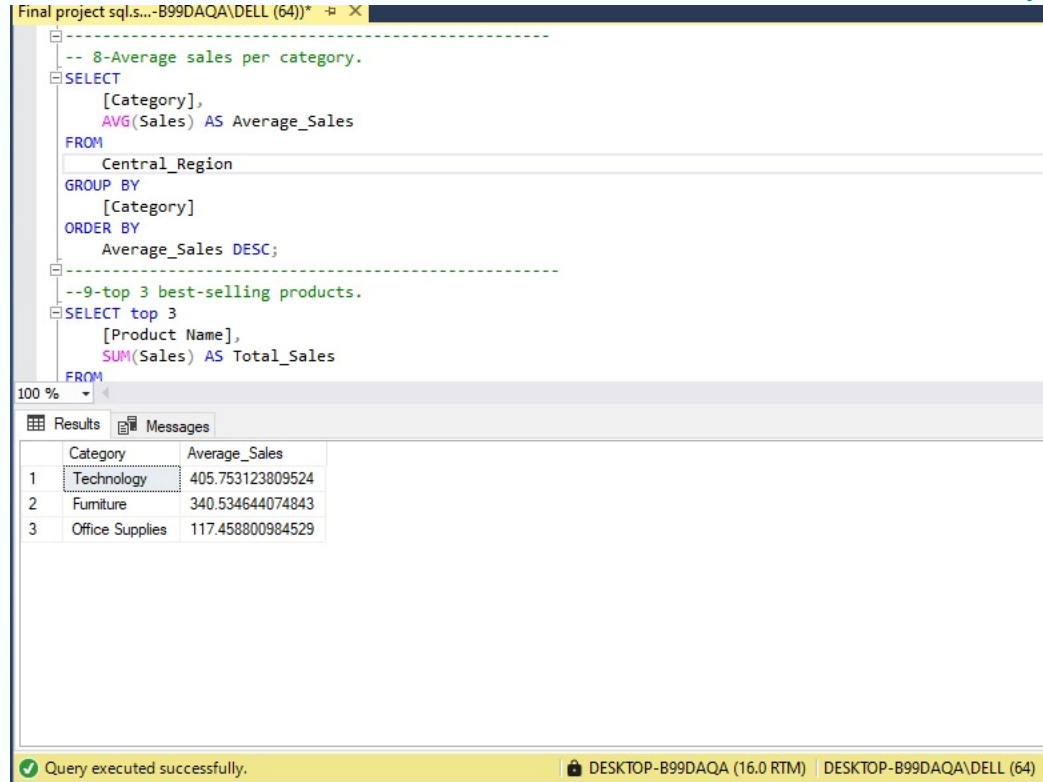
Results Messages

	Quarter	Year	Total_Sales
1	1	2016	40530.0572
2	2	2016	27938.739
3	3	2016	32468.947
4	4	2016	46160.385
5	1	2015	20211.697
6	2	2015	25709.345
7	3	2015	33428.3802
8	4	2015	68079.9538
9	1	2014	11768.3656
10	2	2014	23979.145
11	3	2014	24485.5382

Performance analysis

Sales Analysis:

-Technology has the highest avg. sales per order, while Office Supplies have the lowest.



The screenshot shows a SQL Server Enterprise Manager window with a query executed successfully. The query is divided into two parts: one for average sales per category and another for the top 3 best-selling products. The results are displayed in a table with columns for Category and Average_Sales.

```
-- 8-Average sales per category.
SELECT
    [Category],
    AVG(Sales) AS Average_Sales
FROM
    Central_Region
GROUP BY
    [Category]
ORDER BY
    Average_Sales DESC;

--9-top 3 best-selling products.
SELECT top 3
    [Product Name],
    SUM(Sales) AS Total_Sales
FROM
```

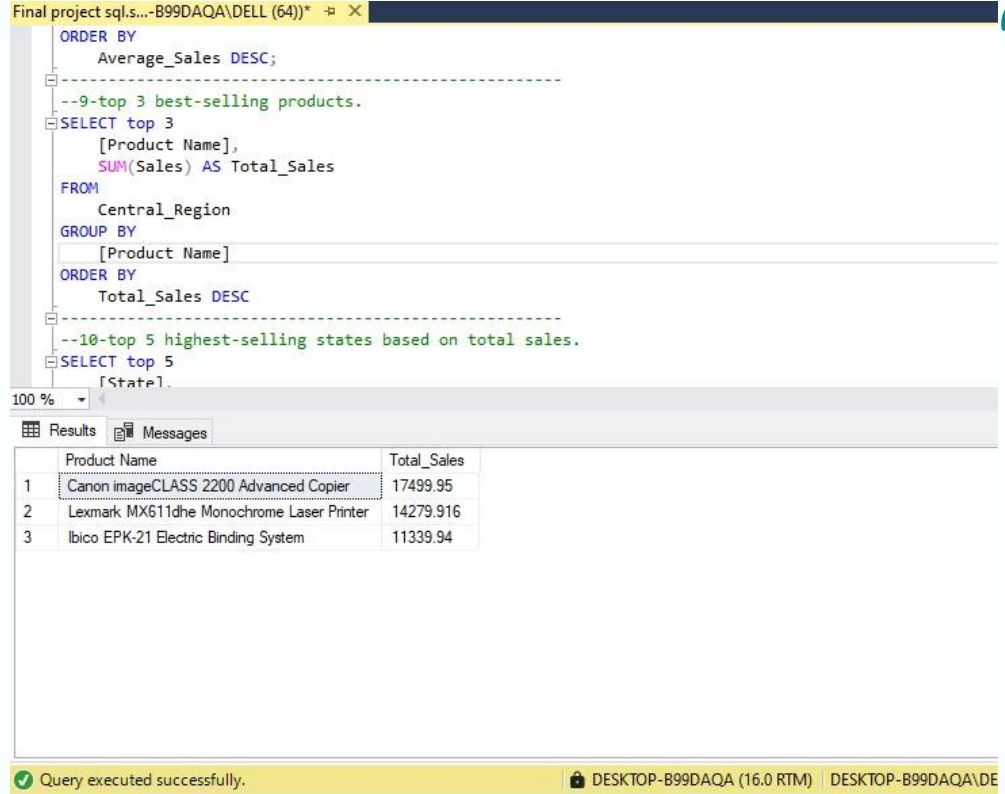
	Category	Average_Sales
1	Technology	405.753123809524
2	Furniture	340.534644074843
3	Office Supplies	117.458800984529

Query executed successfully. | DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (64)

Performance analysis

Sales Analysis:

-High-end office machines lead sales, with Canon image CLASS topping at \$17.5K.



```
Final project sql.s...-B99DAQA\DELL (64))* -> X
ORDER BY
    Average_Sales DESC;
--9-top 3 best-selling products.
SELECT top 3
    [Product Name],
    SUM(Sales) AS Total_Sales
FROM
    Central_Region
GROUP BY
    [Product Name]
ORDER BY
    Total_Sales DESC
--10-top 5 highest-selling states based on total sales.
SELECT top 5
    [State].
```

	Product Name	Total_Sales
1	Canon imageCLASS 2200 Advanced Copier	17499.95
2	Lexmark MX611dhe Monochrome Laser Printer	14279.916
3	Ibico EPK-21 Electric Binding System	11339.94

100 %

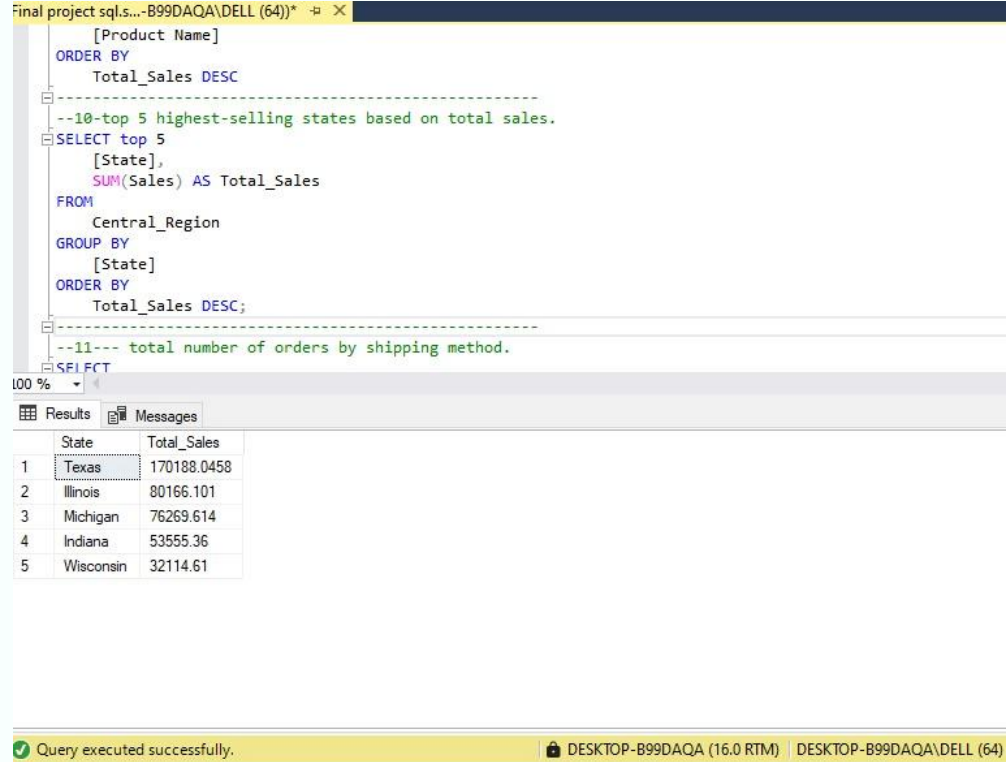
Results Messages

Query executed successfully. DESKTOP-B99DAQA (16.0 RTM) DESKTOP-B99DAQA\DE

Performance analysis

Sales Analysis:

-Texas leads sales by a wide margin, followed by Illinois and Michigan



The screenshot shows a SQL query window with the following text:

```
Final project sql.s...-B99DAQA\DELL (64))* X
[Product Name]
ORDER BY
    Total_Sales DESC
-----
--10-top 5 highest-selling states based on total sales.
SELECT top 5
    [State],
    SUM(Sales) AS Total_Sales
FROM
    Central_Region
GROUP BY
    [State]
ORDER BY
    Total_Sales DESC;
-----
--11--- total number of orders by shipping method.
SELECT
```

Below the query, the 'Results' tab is active, displaying a table with 2 columns: 'State' and 'Total_Sales'.

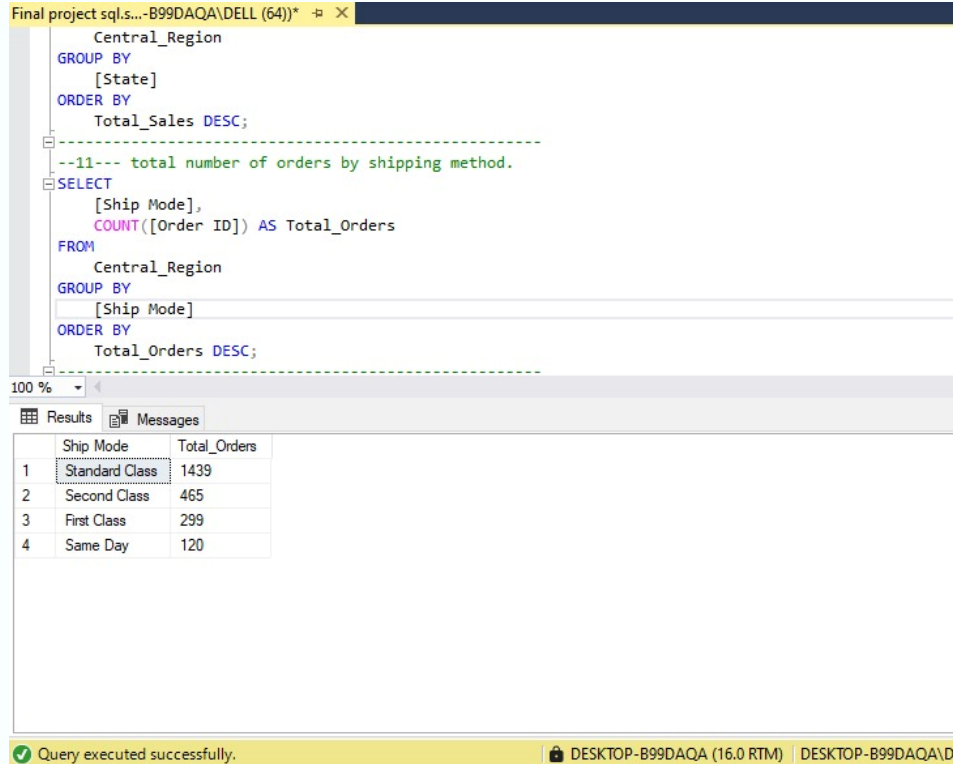
	State	Total_Sales
1	Texas	170188.0458
2	Illinois	80166.101
3	Michigan	76269.614
4	Indiana	53555.36
5	Wisconsin	32114.61

At the bottom of the window, a status bar indicates: 'Query executed successfully.' and 'DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (64)'

Performance analysis

Sales Analysis:

-Standard Class dominates shipping, while Same Day is rarely used



The screenshot shows a SQL query window with the following code:

```
Final project sql.s...-B99DAQA\DELL (64))* -> X
Central_Region
GROUP BY
[State]
ORDER BY
Total_Sales DESC;
-----
--11--- total number of orders by shipping method.
SELECT
[Ship Mode],
COUNT([Order ID]) AS Total_Orders
FROM
Central_Region
GROUP BY
[Ship Mode]
ORDER BY
Total_Orders DESC;
```

Below the query, the 'Results' tab is active, displaying a table with 2 columns: 'Ship Mode' and 'Total_Orders'.

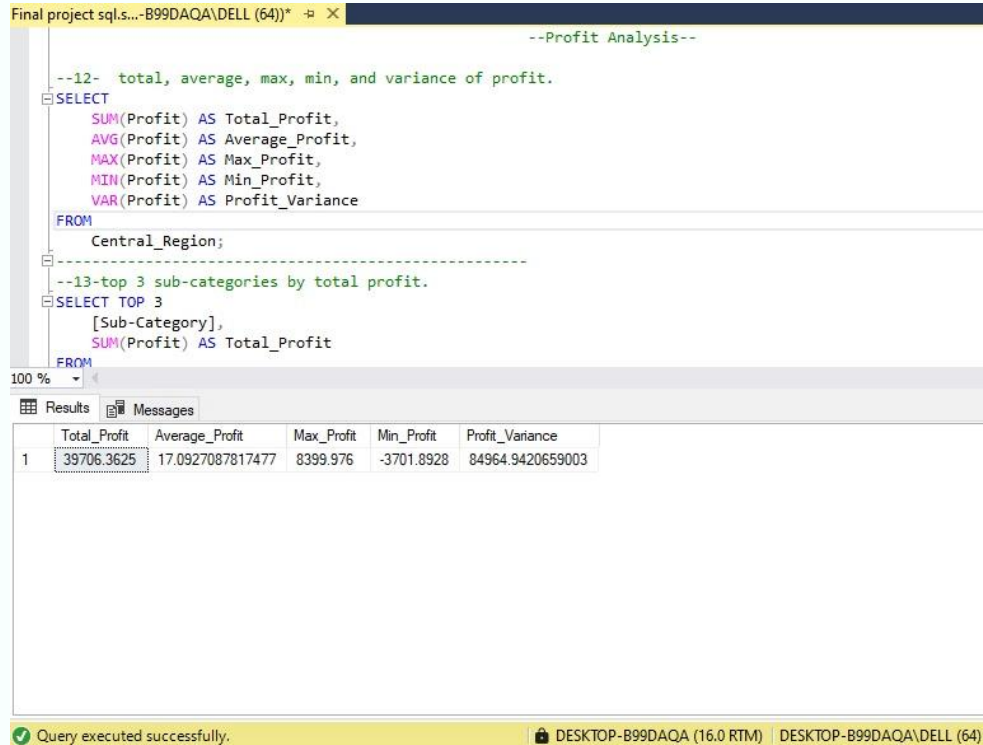
	Ship Mode	Total_Orders
1	Standard Class	1439
2	Second Class	465
3	First Class	299
4	Same Day	120

At the bottom, a status bar indicates 'Query executed successfully.' and the server information 'DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DI'.

Performance analysis

Profit Analysis:

-High profit variability
total: \$39.7K, avg:
\$17.09, max: \$8.4K, min:
-\$3.7K and a high
variance (~84.9K)
suggests wide fluctuation
in profitability



```
--Profit Analysis--

--12- total, average, max, min, and variance of profit.
SELECT
    SUM(Profit) AS Total_Profit,
    AVG(Profit) AS Average_Profit,
    MAX(Profit) AS Max_Profit,
    MIN(Profit) AS Min_Profit,
    VAR(Profit) AS Profit_Variance
FROM
    Central_Region;

--13-top 3 sub-categories by total profit.
SELECT TOP 3
    [Sub-Category],
    SUM(Profit) AS Total_Profit
FROM
```

	Total_Profit	Average_Profit	Max_Profit	Min_Profit	Profit_Variance
1	39706.3625	17.0927087817477	8399.976	-3701.8928	84964.9420659003

Query executed successfully.

DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (64)

Performance analysis

Profit Analysis:

▶ -Copiers, Phones, and Accessories are the region's top profit drivers

```
Final project sqls...-B99DAQA\DELL (64))* -> X
Central_Region;
-----
--13-top 3 sub-categories by total profit.
SELECT TOP 3
    [Sub-Category],
    SUM(Profit) AS Total_Profit
FROM
    Central_Region
GROUP BY
    [Sub-Category]
ORDER BY
    Total_Profit DESC;
-----
--14-bottom 3 sub-categories by total profit.
SELECT TOP 3
    [Sub-Category],
    SUM(Profit) AS Total_Profit
```

100 %

Results Messages

	Sub-Category	Total_Profit
1	Copiers	15608.8413
2	Phones	12323.0267
3	Accessories	7251.6306

Query executed successfully. DESKTOP-B99DAQA (16.0 RTM) DESKTOP-B99DAQA\DEI

Performance analysis

Profit Analysis:

-These sub-categories are unprofitable, with Furnishings leading losses

```
Final project sql.s...-B99DAQA\DELL (64))* -> X
[Sub-Category]
ORDER BY
    Total_Profit DESC;
-----
--14-bottom 3 sub-categories by total profit.
SELECT TOP 3
    [Sub-Category],
    SUM(Profit) AS Total_Profit
FROM
    Central_Region
GROUP BY
    [Sub-Category]
ORDER BY
    Total_Profit ASC;
-----
--15--- total profit by category and percentage contribution.
SELECT
```

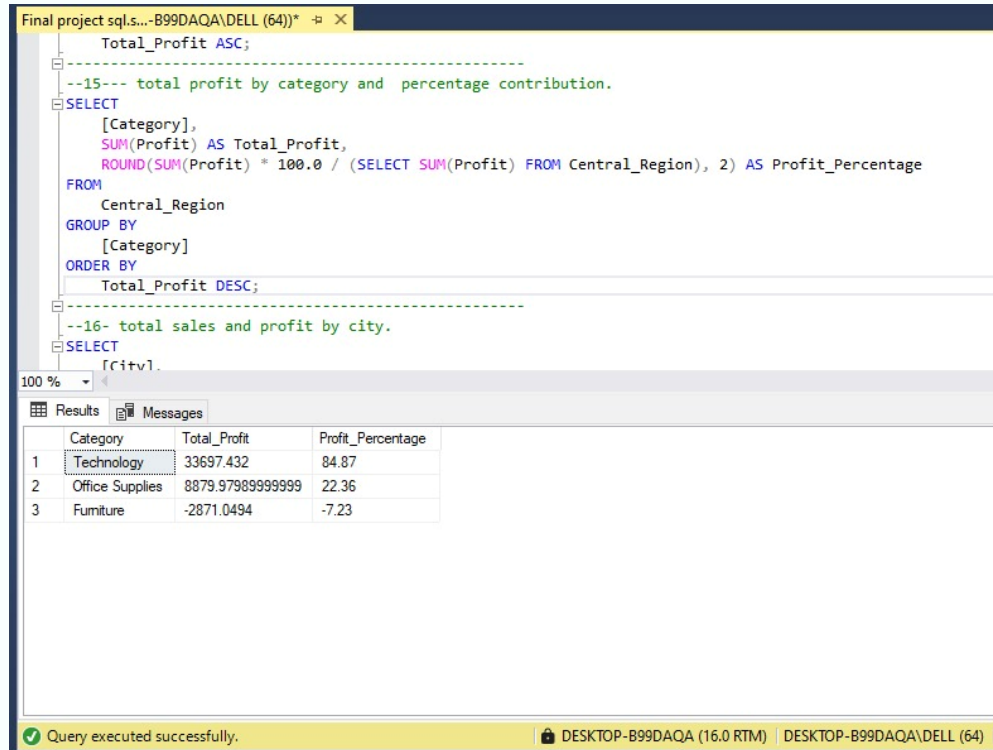
	Sub-Category	Total_Profit
1	Furnishings	-3906.2168
2	Tables	-3559.6504
3	Appliances	-2638.6175

Query executed successfully. DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (

Performance analysis

Profit Analysis:

-Technology is the primary profit driver, contributing ~85% of total profit. Office Supplies add moderate value (22%), while Furniture shows a loss, negatively impacting overall profitability.



```
Final project sql.s...-B99DAQA\DELL (64))* - X
Total_Profit ASC;
-----
--15--- total profit by category and percentage contribution.
SELECT
[Category],
SUM(Profit) AS Total_Profit,
ROUND(SUM(Profit) * 100.0 / (SELECT SUM(Profit) FROM Central_Region), 2) AS Profit_Percentage
FROM
Central_Region
GROUP BY
[Category]
ORDER BY
Total_Profit DESC;
-----
--16- total sales and profit by city.
SELECT
[City],
SUM(Sales) AS Total_Sales,
SUM(Profit) AS Total_Profit
FROM
Central_Region
GROUP BY
[City]
ORDER BY
Total_Sales DESC;
```

100 %

Results Messages

	Category	Total_Profit	Profit_Percentage
1	Technology	33697.432	84.87
2	Office Supplies	8879.979899999999	22.36
3	Furniture	-2871.0494	-7.23

Query executed successfully.

DESKTOP-B99DAQA (16.0 RTM) | DESKTOP-B99DAQA\DELL (64)

Performance analysis

Profit Analysis:

-Despite high sales, **Houston** and **Chicago** suffer from major losses, indicating operational inefficiencies or discount-heavy strategies.

Final project sqls...-B99DAQA\DELL (64))* - X

```
--16- total sales and profit by city.
SELECT
    [City],
    SUM(Sales) AS Total_Sales,
    SUM(Profit) AS Total_Profit
FROM
    Central_Region
GROUP BY
    [City]
ORDER BY
    Total_Profit DESC;
```

100 %

Results Messages

	City	Total_Sales	Total_Profit
1	Detroit	42446.944	13181.7908
2	Lafayette	19630.45	8976.0973
3	Minneapolis	16870.54	6824.5846
4	Jackson	15420.036	5525.1992
5	Springfield	15051.38	3905.5891
6	Milwaukee	11410.22	2793.0851
7	Indianapolis	9306.42	2741.6538
8	Columbus	7960.4	2522.4846
9	Midland	5291.512	2293.6828
10	Richmond	6235.15	1881.862
11	Omaha	6312.53	1841.6268
12	Oklahoma City	6596.82	1580.7607
13	Tulsa	5556.97	1506.935
14	Lakeville	4260.95	1346.6021
15	Franklin	4774.25	1292.7752

Query executed successfully.

DESKTOP-B99DAQA (16.0 RTM) DESKTOP-B99DAQA\DELL (64)

05

Data visualization





Data visualization

Using Power BI

-Get data from the Excel sheet and load it to Power BI for visualization.

Navigator

Central_Region1

Preview downloaded on Sunday, April 13, 2025

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID
7981	CA-2011-103800	1/3/2013	1/7/2013	Standard Class	DP-13000
740	CA-2011-112326	1/4/2013	1/8/2013	Standard Class	PO-19195
741	CA-2011-112326	1/4/2013	1/8/2013	Standard Class	PO-19195
742	CA-2011-112326	1/4/2013	1/8/2013	Standard Class	PO-19195
7661	CA-2011-105417	1/7/2013	1/12/2013	Standard Class	VS-21820
7662	CA-2011-105417	1/7/2013	1/12/2013	Standard Class	VS-21820
593	CA-2011-135405	1/9/2013	1/13/2013	Standard Class	MS-17830
594	CA-2011-135405	1/9/2013	1/13/2013	Standard Class	MS-17830
6327	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6328	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6329	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6330	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6331	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6332	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6333	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
6334	CA-2011-167927	1/20/2013	1/26/2013	Standard Class	XP-21865
9887	CA-2011-146997	1/23/2013	1/27/2013	Standard Class	SG-20605
8150	CA-2011-167997	1/26/2013	1/29/2013	First Class	CA-11965
8151	CA-2011-167997	1/26/2013	1/29/2013	First Class	CA-11965
6388	CA-2011-134103	1/30/2013	2/4/2013	Standard Class	MV-18190
6389	CA-2011-134103	1/30/2013	2/4/2013	Standard Class	MV-18190
541	CA-2011-140795	2/1/2013	2/3/2013	First Class	BD-11500

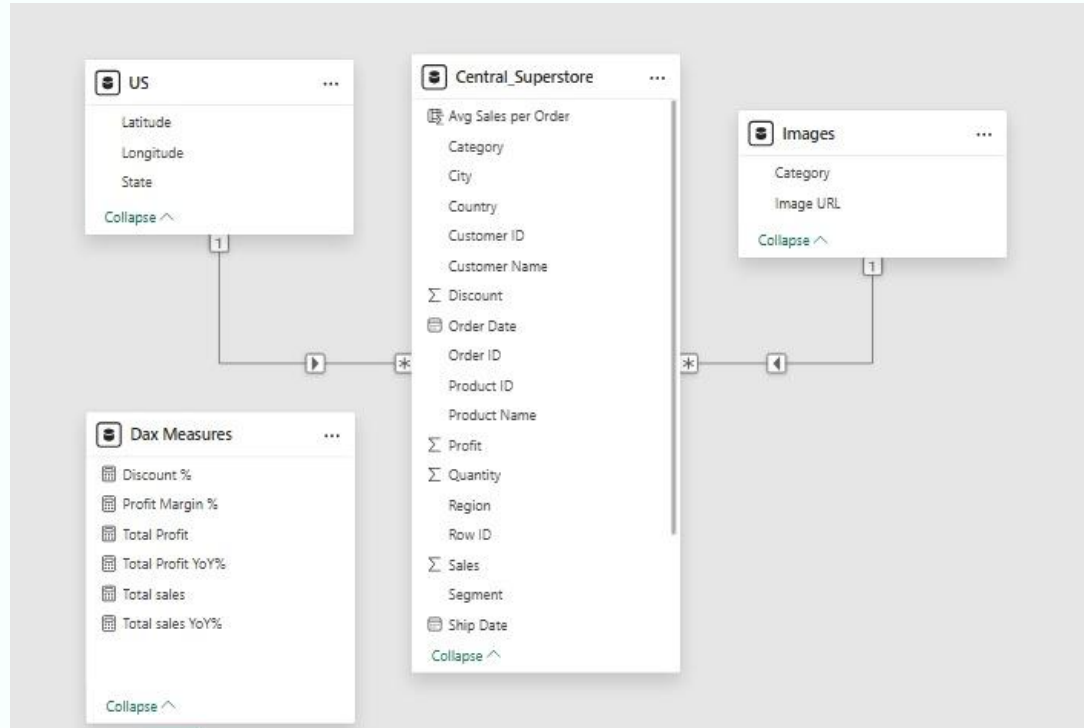
Load Transform Data Cancel

Data visualization

Using Power BI

- To facilitate Visualization, we created 2 new tables, one for: adding Images URLs for the categories, and another for adding the longitudes and latitudes of the states.

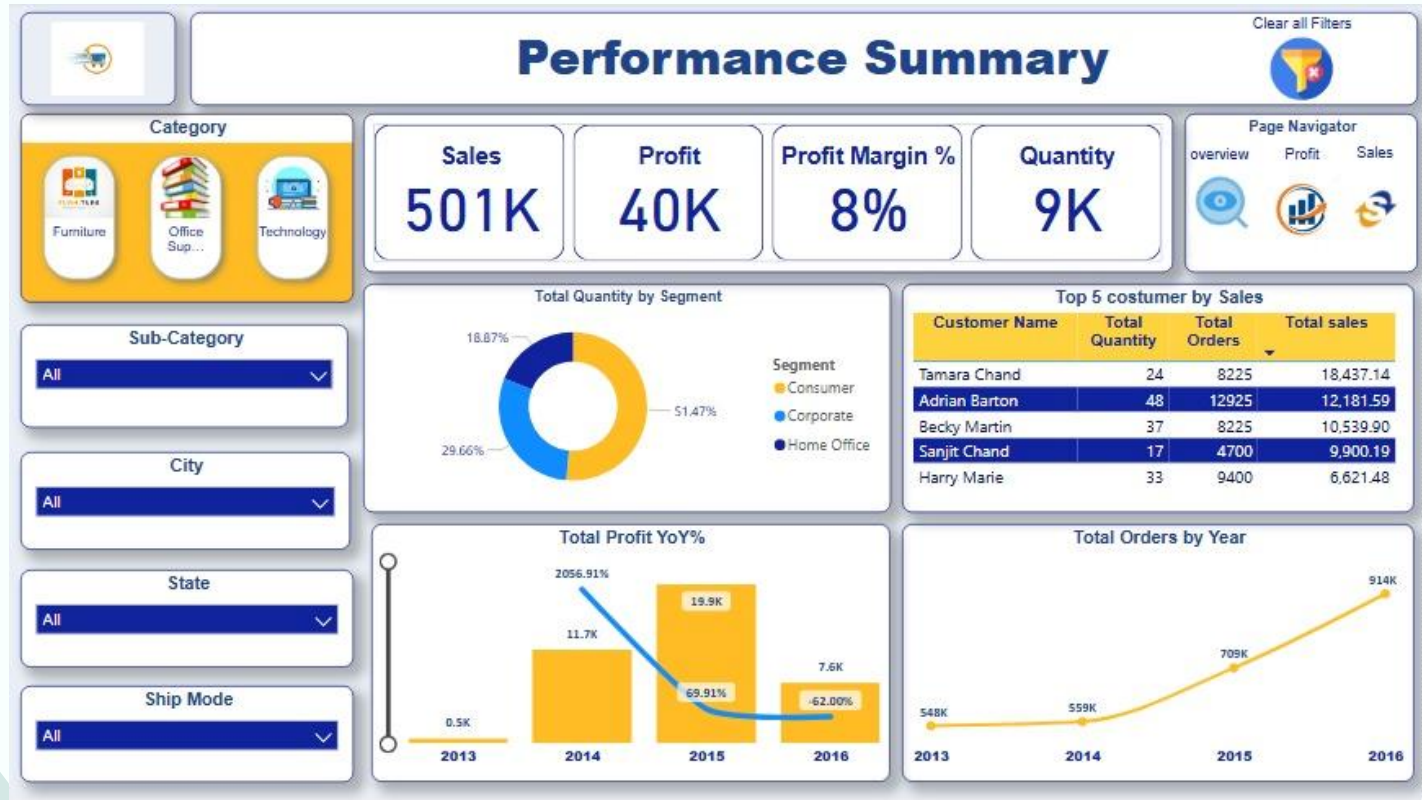
-Create required Dax measures for analysis.



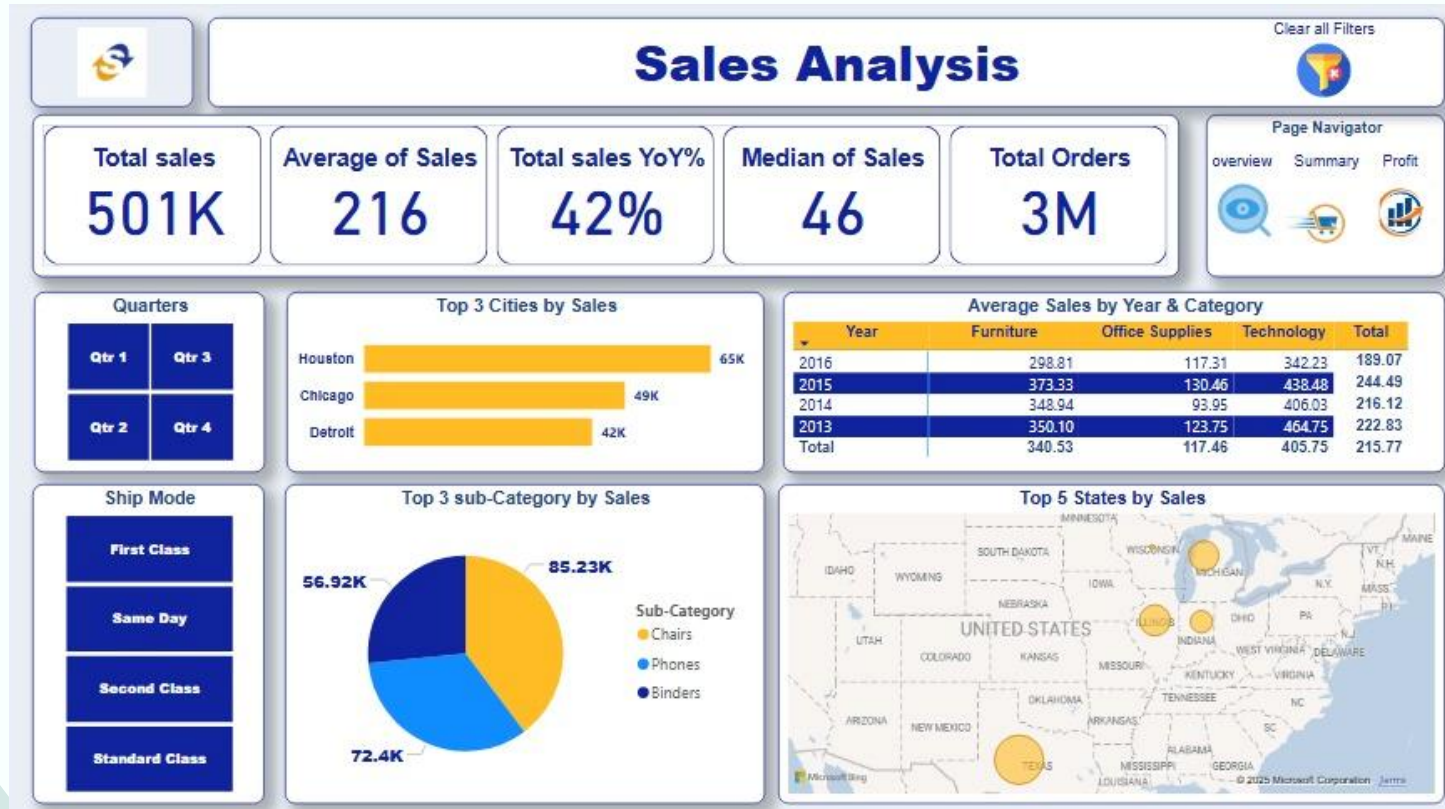
Data visualization



Data visualization



Data visualization



Data visualization



06

Recommendations & Development



Recommendations & Development

-Optimize Unprofitable Regions:



Investigate losses in Houston and Chicago likely due to high costs or excessive discounts.

- Conduct cost-to-serve analysis and adjust pricing/operations.



-Leverage Technology Segment:

Tech drives ~85% of profit. Focus on Copiers, Phones, Accessories.

- Expand product lines and tailor offers to high-performing categories.

Recommendations & Development



-Reevaluate Furniture Strategy:
Furniture shows consistent losses.

- Consider reducing SKUs or revising pricing/coststructure.



-Maximize Q4 Opportunities:
Q4 leads in sales across all years.

- Strengthen seasonal campaigns and optimize inventory ahead of Q4.

Recommendations & Development



-Strengthen Customer Loyalty:

Top 5 customers contribute significant revenue.

- Develop loyalty programs and targeted incentives.



-Improve Shipping Efficiency:

Standard Class dominates; Same Day underused.

- Reassess shipping options and potential pricing adjustments.

Recommendations & Development



-Stabilize Profit Margins:

High profit variance indicates pricing inconsistency.

- Implement margin-based pricing strategies.



-Forecast and Plan Proactively:

Slight sales dip in 2016 after peak in 2015.

- Use predictive analytics to guide inventory and sales strategy.

Recommendations & Development



- Expand Sales Channels through Online Store:
Current sales are limited to traditional methods, which may restrict growth potential.
 - Launching an online store can reach a wider customer base, increase convenience, and boost both sales and profitability.

Thanks!

Do you have any question?
Feel free to ask!



[GitHub repo link for the project](#)



[Google Drive Link for the project](#)