

Power BI Hands-on Assessment

Tanya Yadav

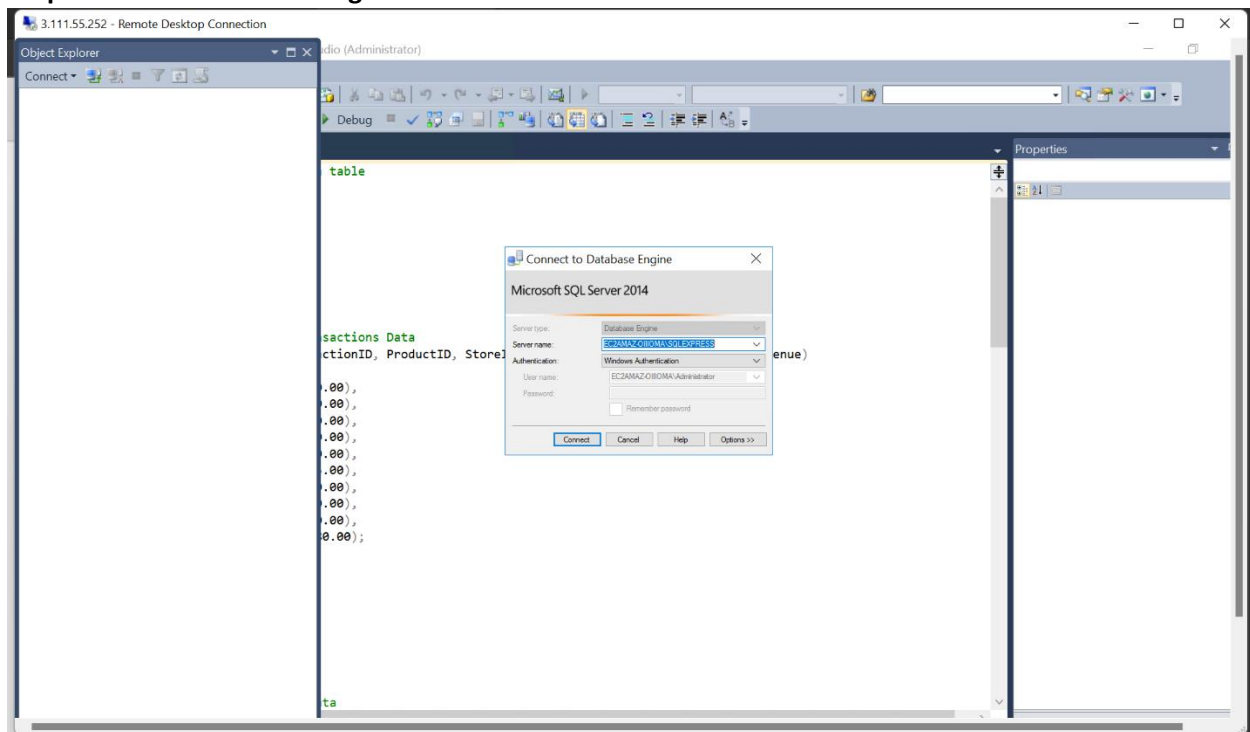
IDA-ERM

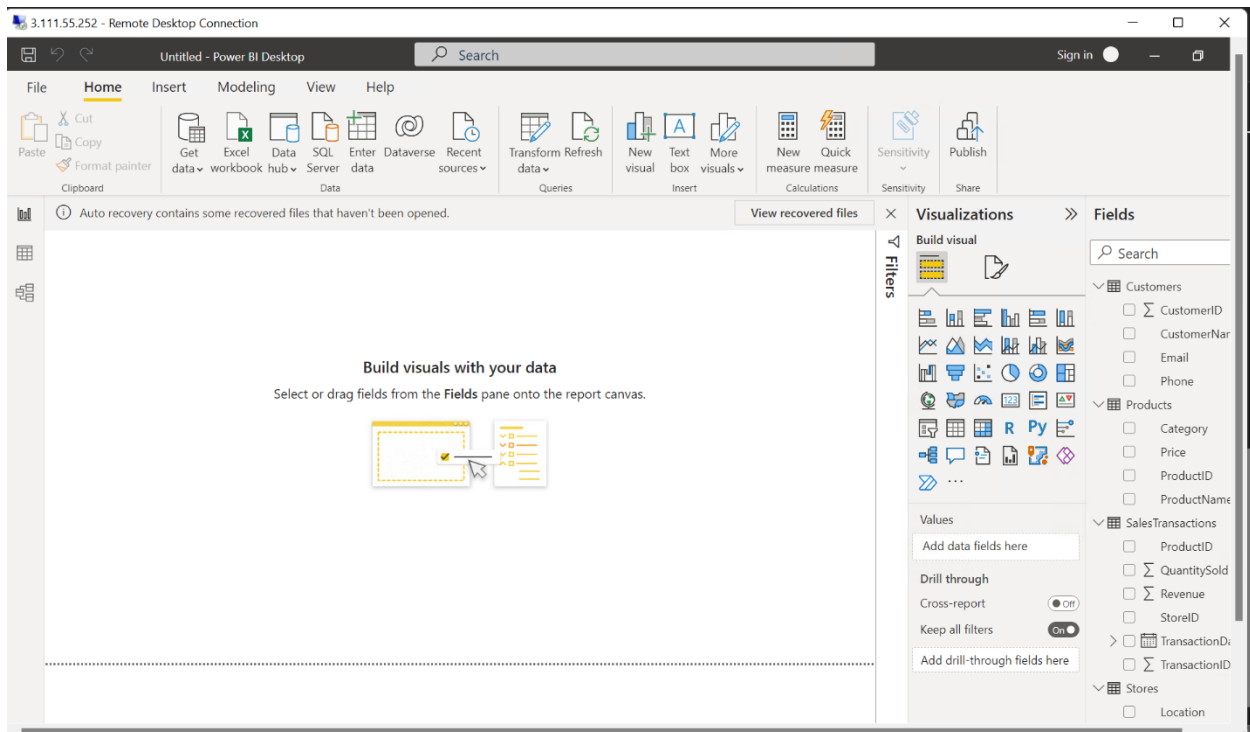
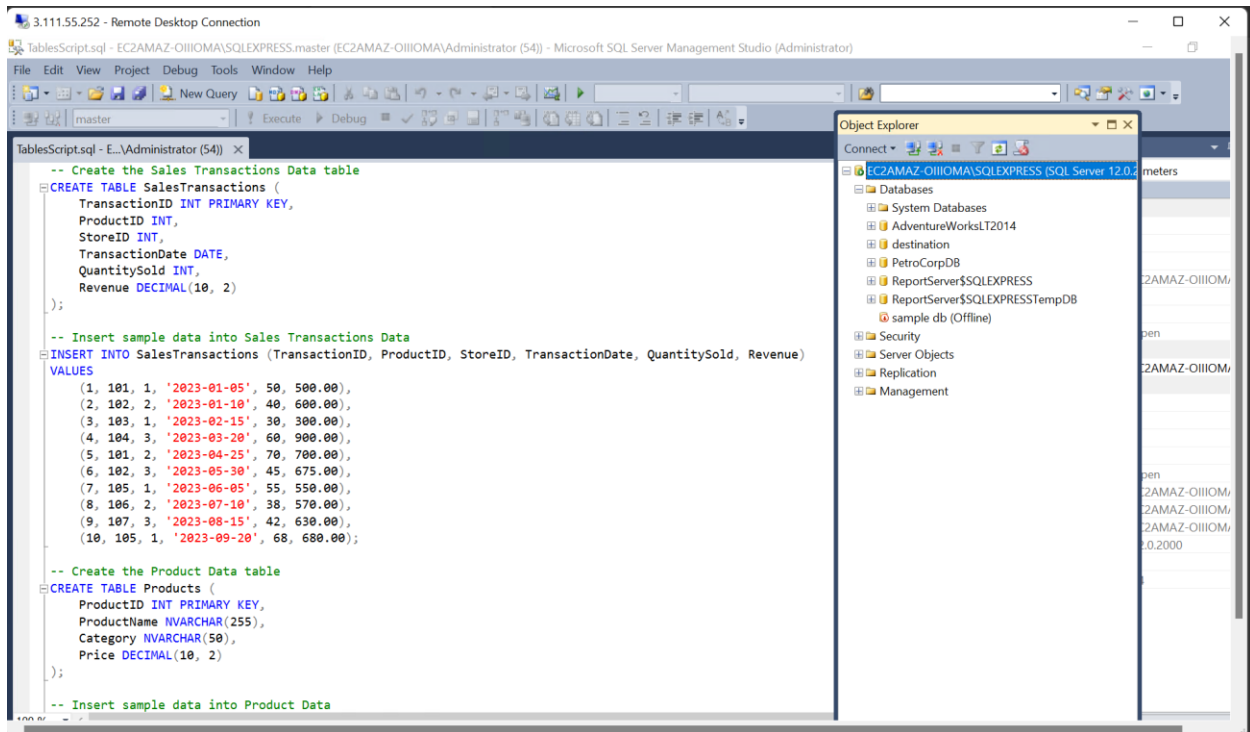
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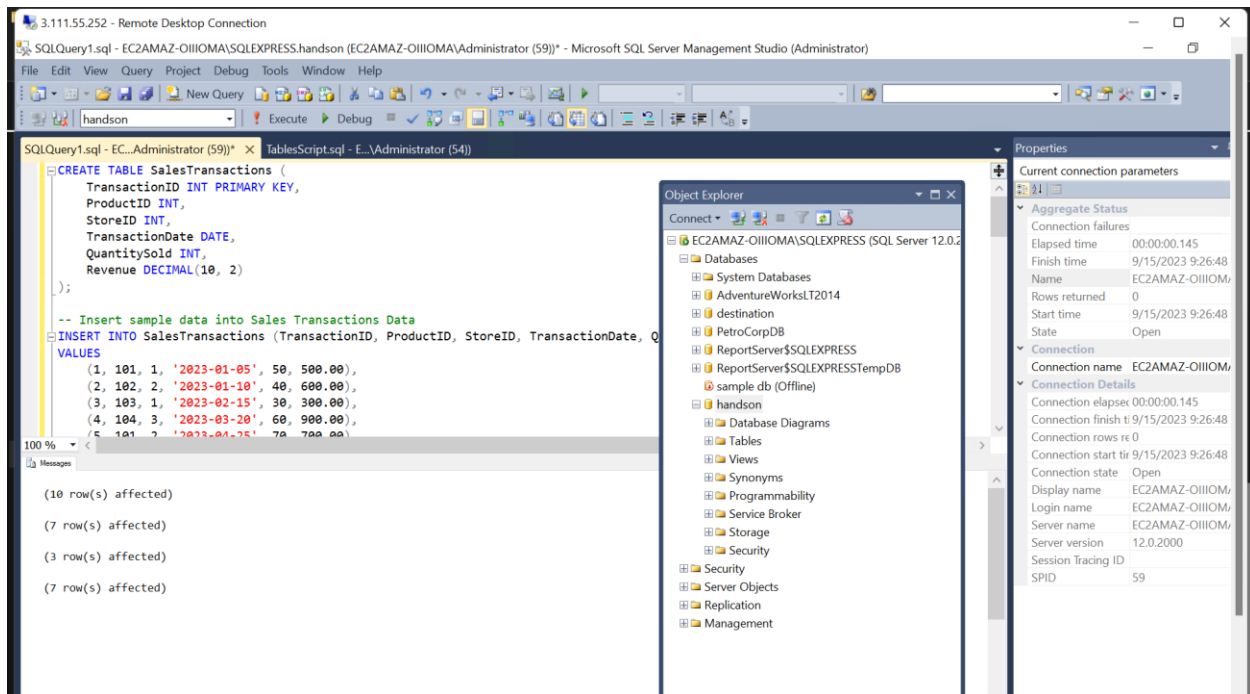
Scenario: Sales Performance Analysis with Power BI

In this scenario, let's imagine you work for a retail company, and you've been tasked with analyzing the sales performance of your products and stores using Power BI.

Requirement 1: Data Loading

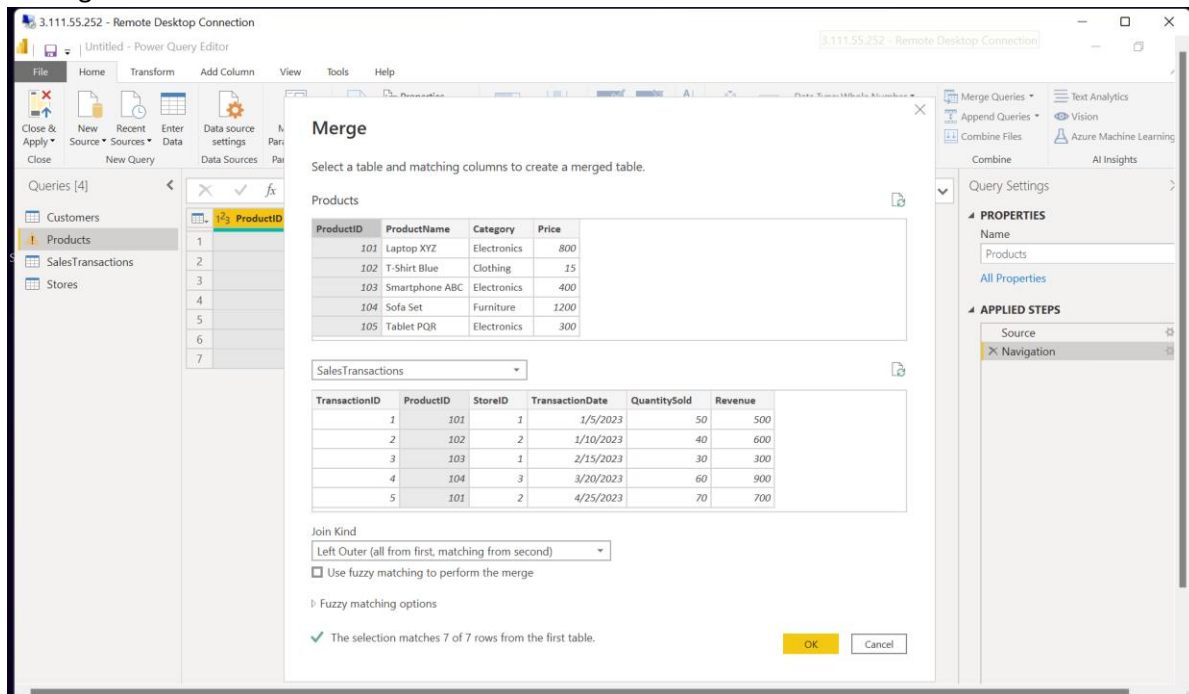






Requirement 2: Data Transformation

- Merge Tables: • Clean Data: • Create Calculated Columns: • Filter Data:



Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Properties

Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Table Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning

Queries [4] Customers Products SalesTransactions Stores

fx = Table.NestedJoin(dbo_Products, {"ProductID"}, SalesTransactions, {"ProductID"}, "SalesTransactions",

	ProductID	Product Name	Category	Price	SalesTransactions
1	101	Laptop XYZ	Electronics	800	Table
2	102	T-Shirt Blue	Clothing	15	Table
3	103	Smartphone ABC	Electronics	400	Table
4	104	Sofa Set	Furniture	1200	Table
5	105	Tablet PQR	Electronics	300	Table
6	106	Jeans Black	Clothing	40	Table
7	107	Chair	Furniture	80	Table

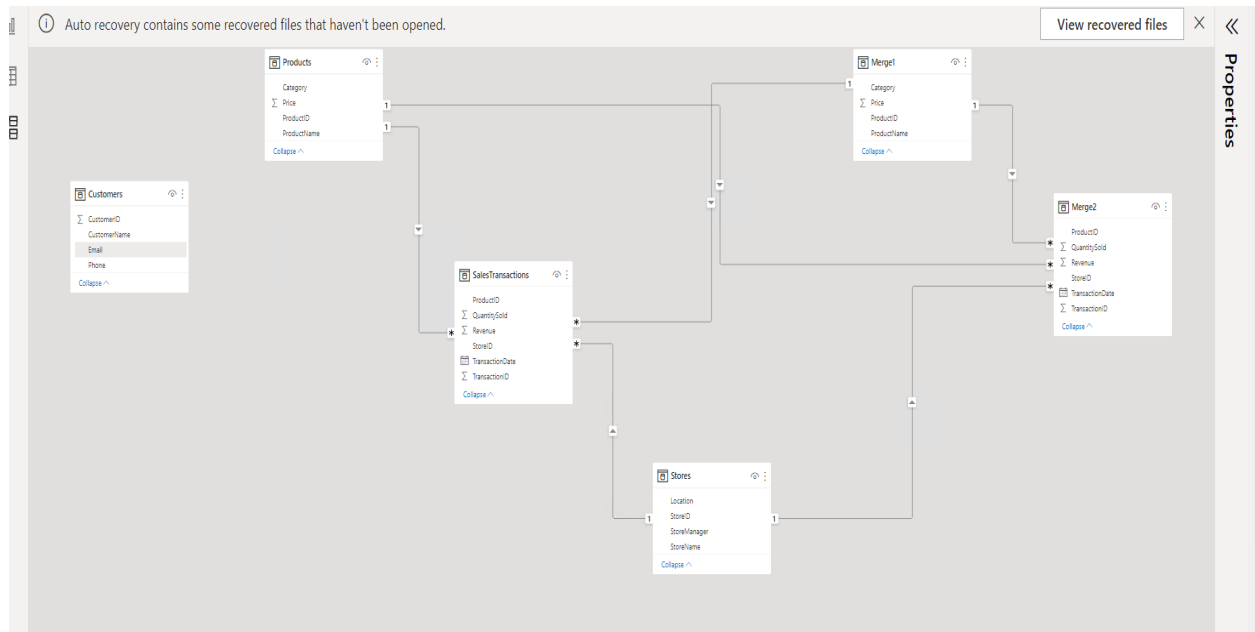
Query Settings

PROPERTIES

Name: Products

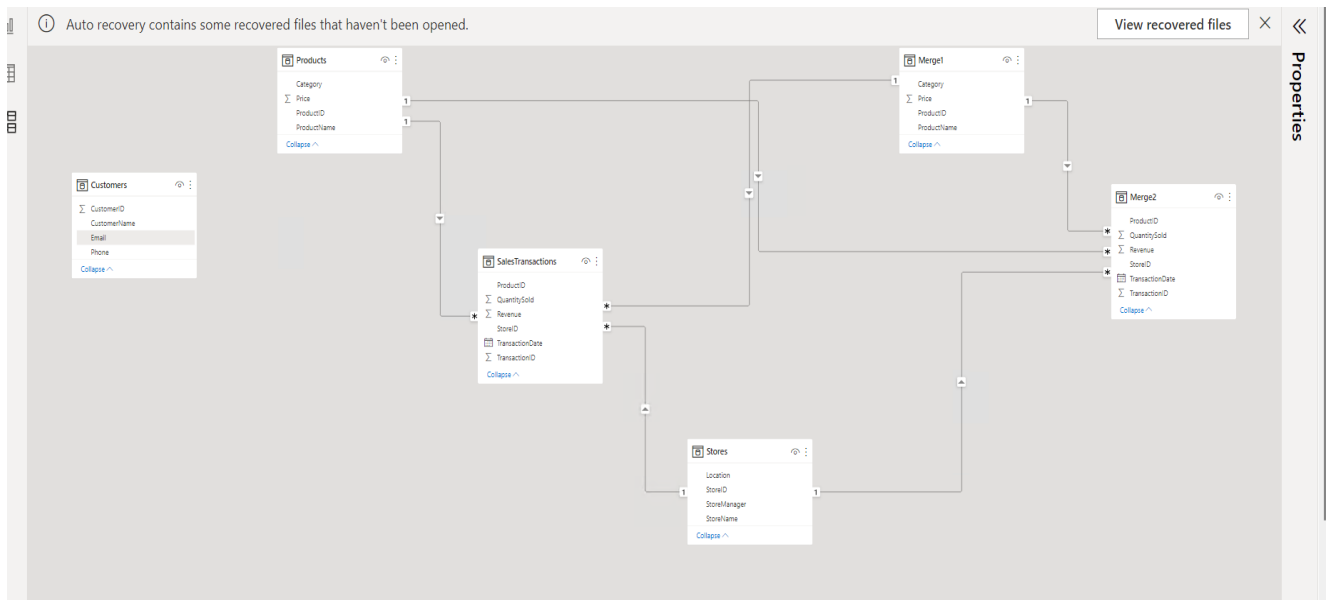
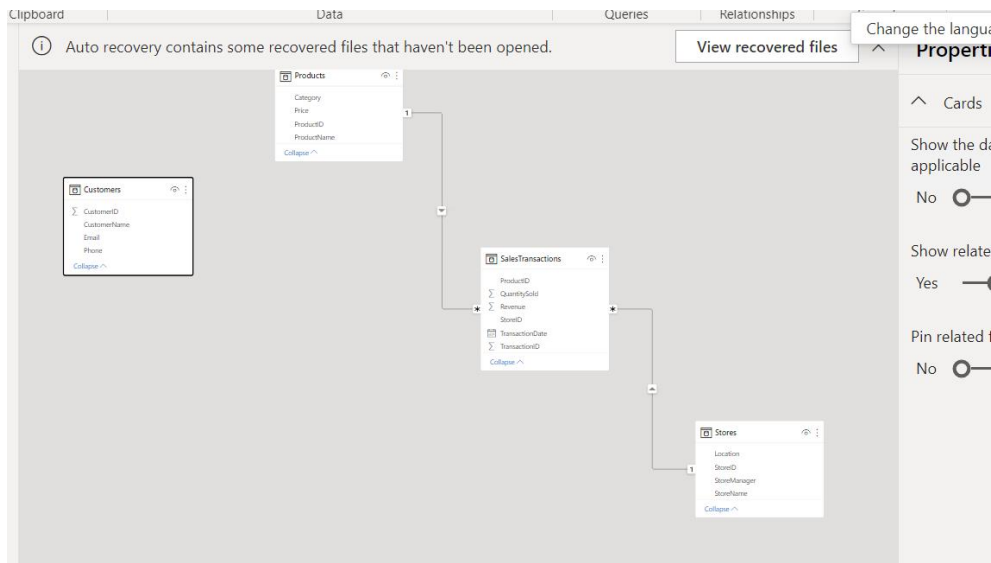
APPLIED STEPS

Source Navigation Merged Queries

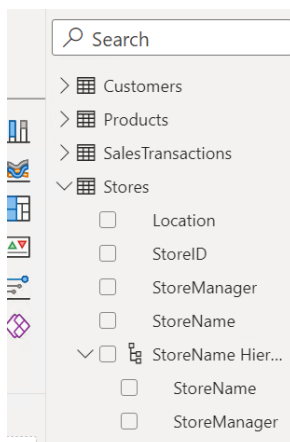


Requirement 3: Data Modelling

- Create Relationships:
- Create Hierarchies:



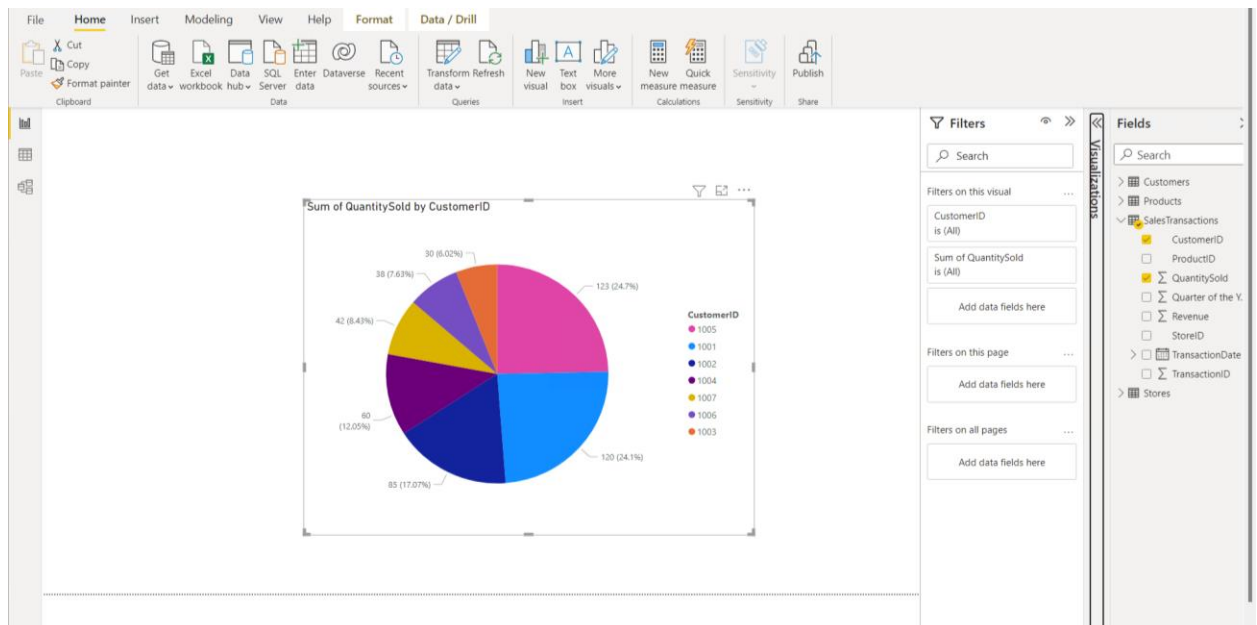
Data hierarchy:



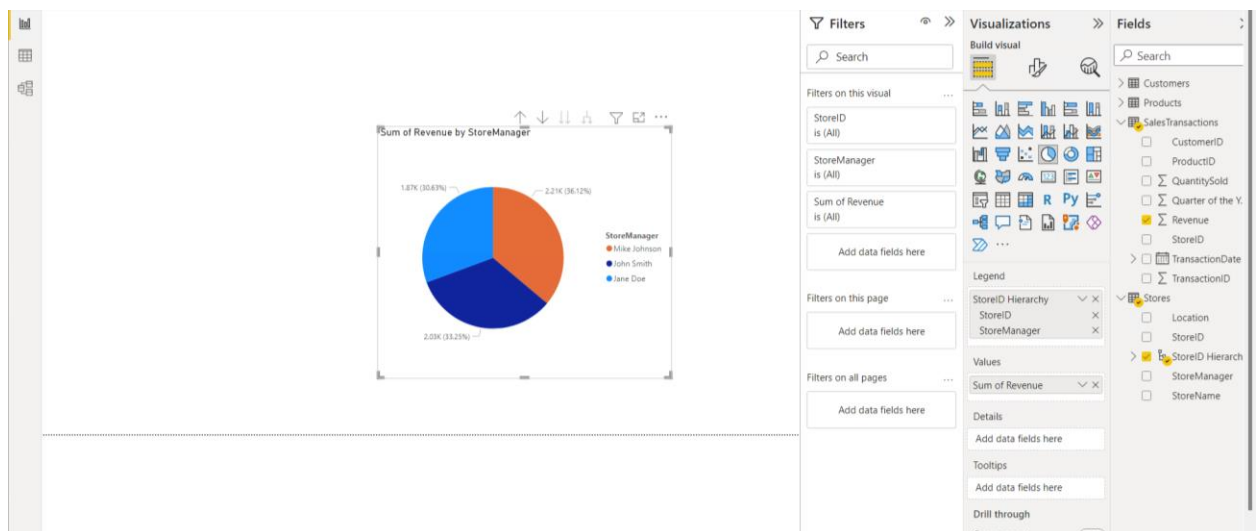
Requirement 4: Business Queries and Analysis –

Who are the top-spending customers based on their total purchase amount? 2. How is sales revenue distributed among different store managers? 3. What is the average price of products in each category? 4. Are there specific days of the week when sales are higher? 5. How do sales trends vary by product category on a monthly basis? 6. What percentage of products account for 80% of total sales revenue? 7. Are there any trends in repeat customer purchases? 8. Which product categories perform best at each store location? 9. Are there any seasonal patterns or trends in sales for specific products or categories? 10. Can customers be segmented into high, medium, and low-value segments based on their

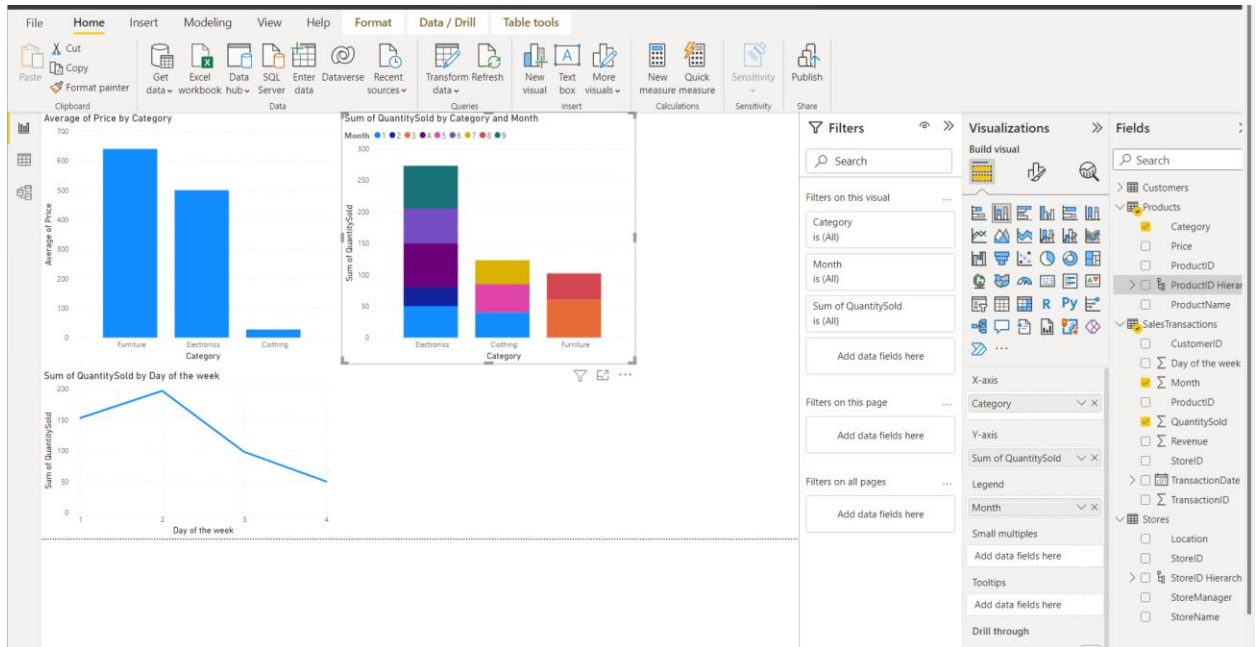
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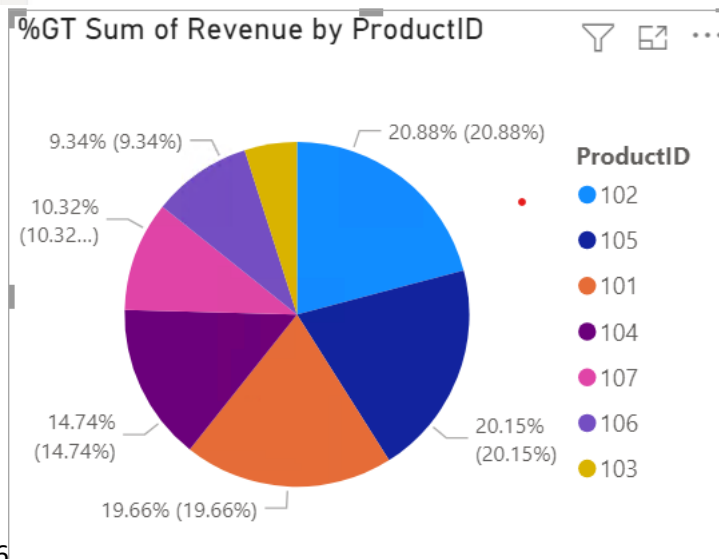
• 2



- 3,4,5

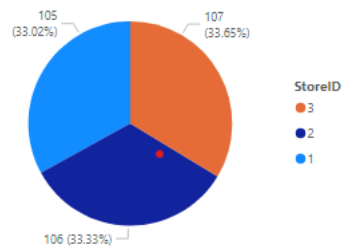


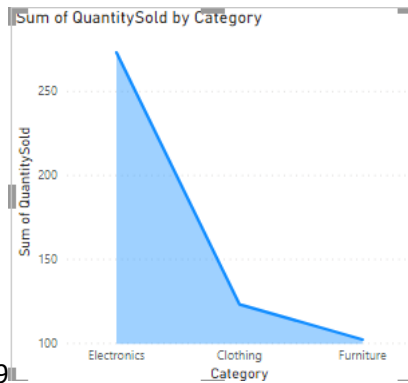
- 6



- 8

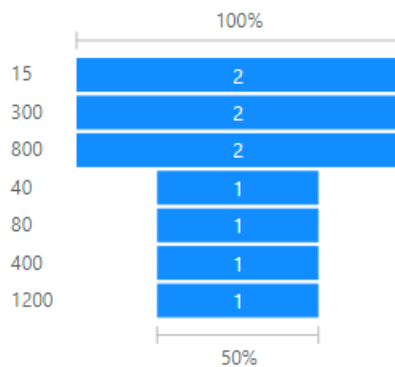
Max of ProductID by StoreID





• 9

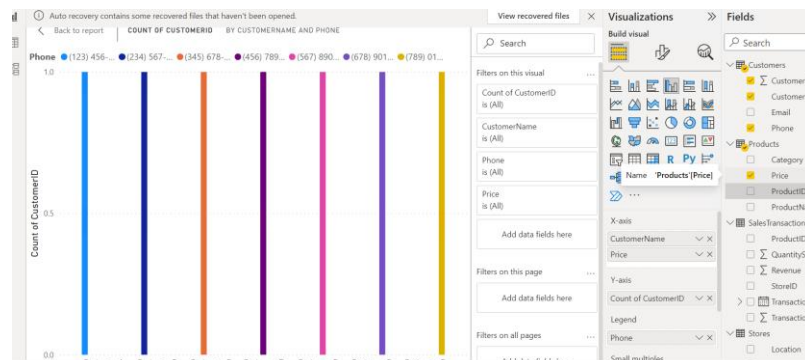
Count of CustomerID by Price

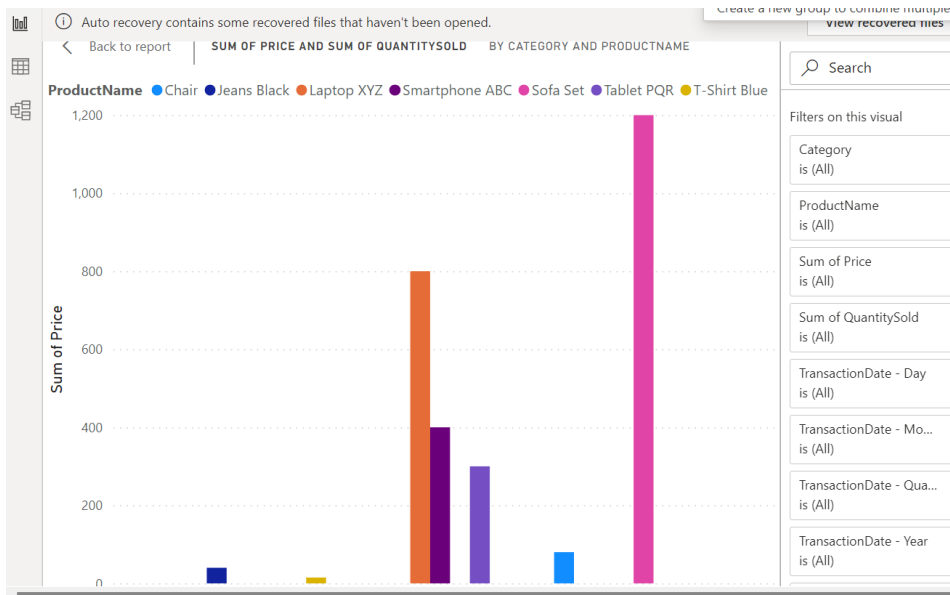
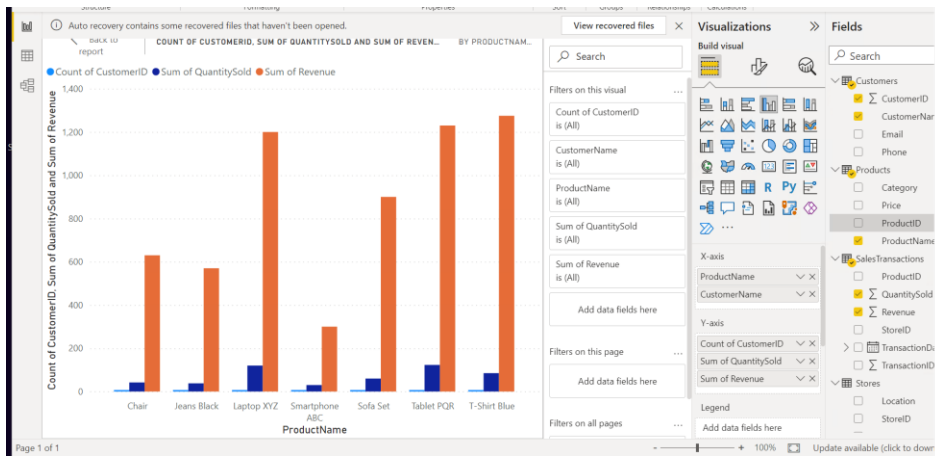
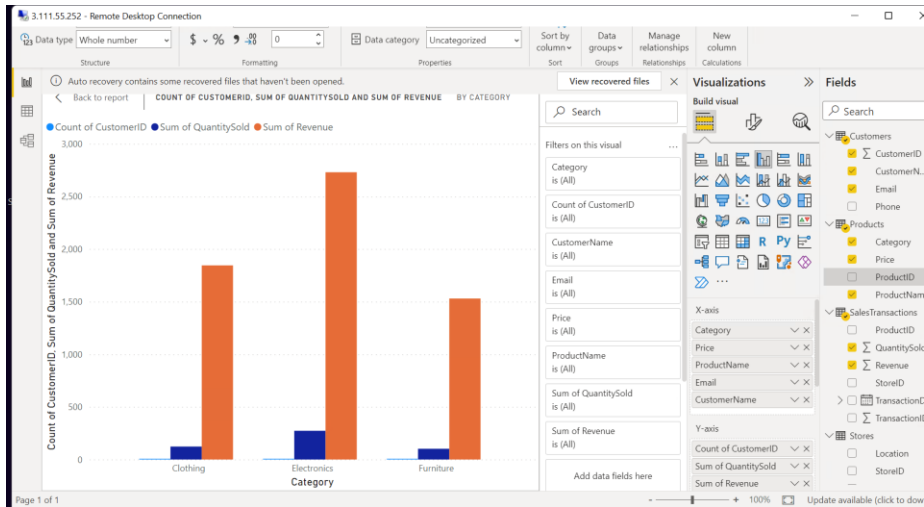


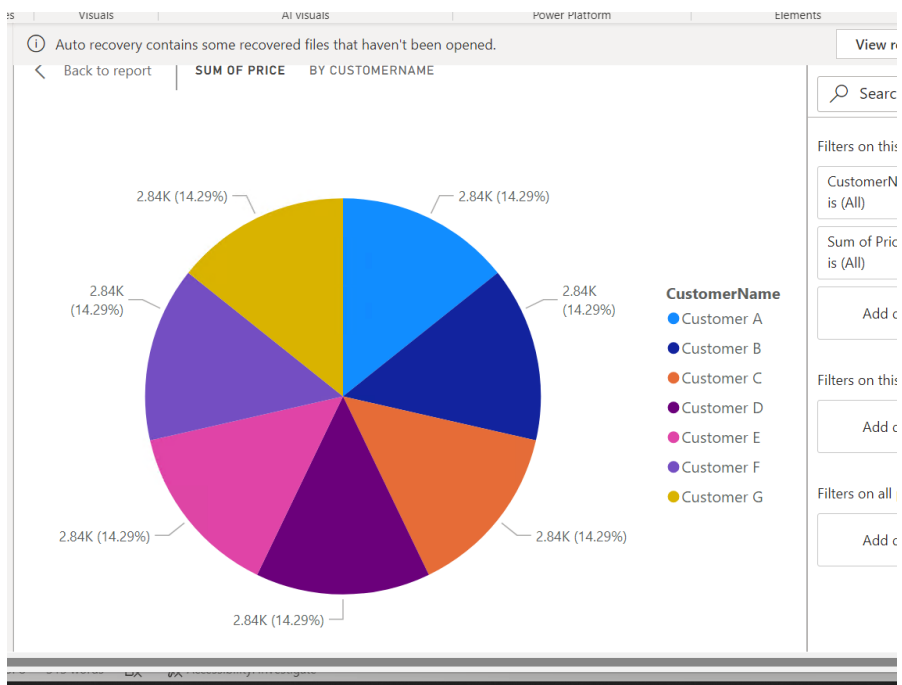
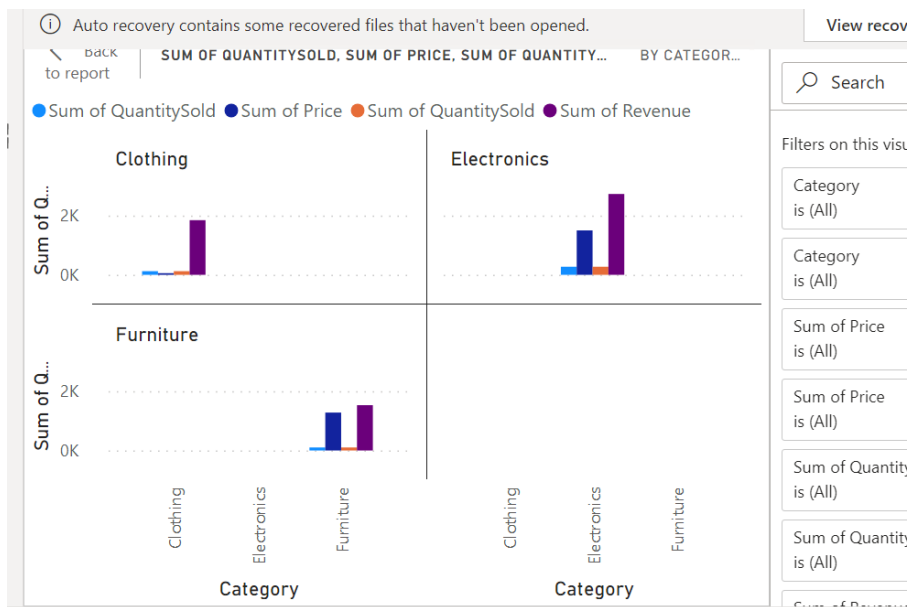
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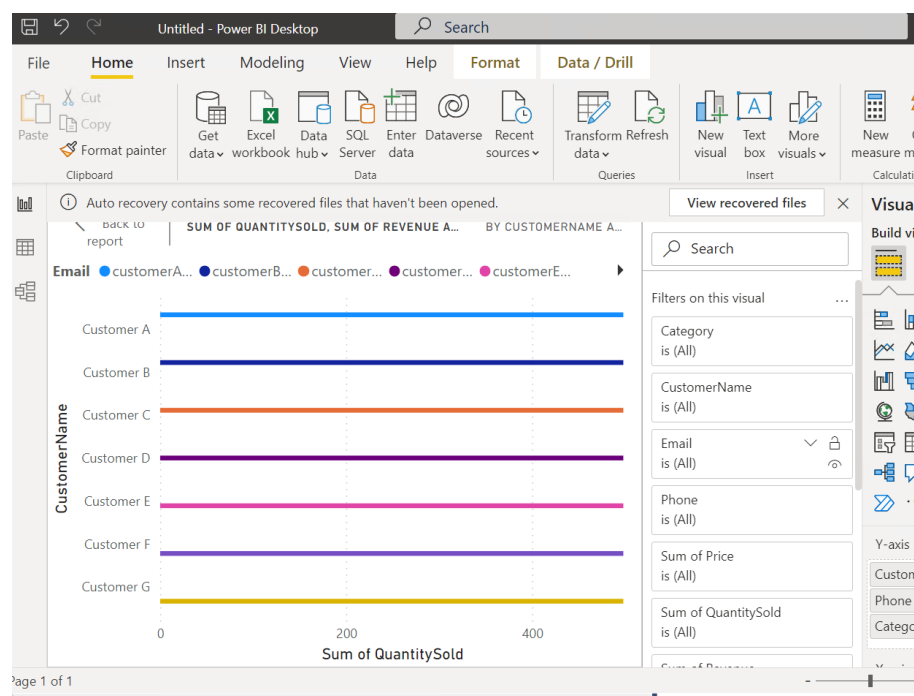
Requirement 5: Data Insights and Recommendations-

- Analyze Patterns: Identify patterns and trends in the data, such as seasonality or regional variations and show it or mark it.
- Generate Insights: Provide actionable insights based on your analysis. For example, suggest increasing marketing efforts for the most profitable product category.
- Create Visual Stories: Use storytelling techniques to communicate your findings in the reports and dashboards



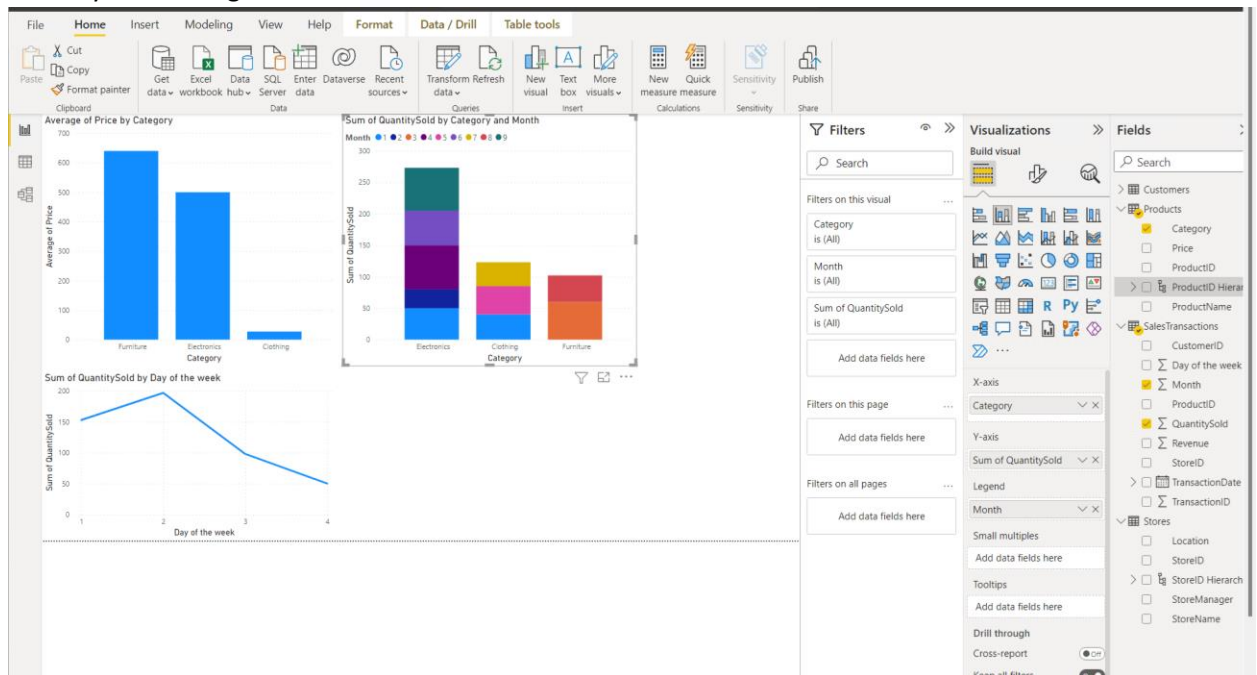




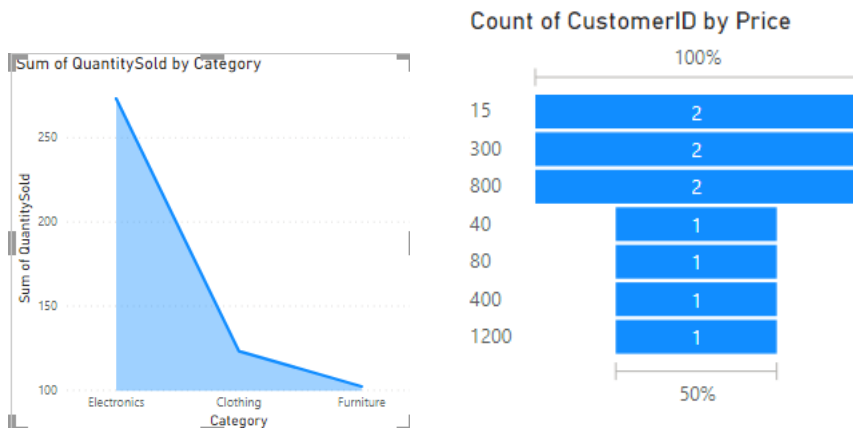


Finally, we conclude the following outcomes-

- Tuesday has the highest sale.



- As the sales of electronics good are the highest, and customer buy the most between price ranges 15-800, the company should release more electronics products in that range. there should be more sales on Tuesday and on the months when sales are the highest i.e. 4th and 9th months.



- As we can see that Customer B has higher spendings in products, try sending promotional mail to top spending customers to increase revenue.
- Month 20th day has higher spending, try sending discount or sales mails before that to increase the spending.
- Keep the stock full in the stores which has higher customers to ensure increased revenue.
- Electronics seems to be the most profitable category due to a combination of high sales volume and product prices.