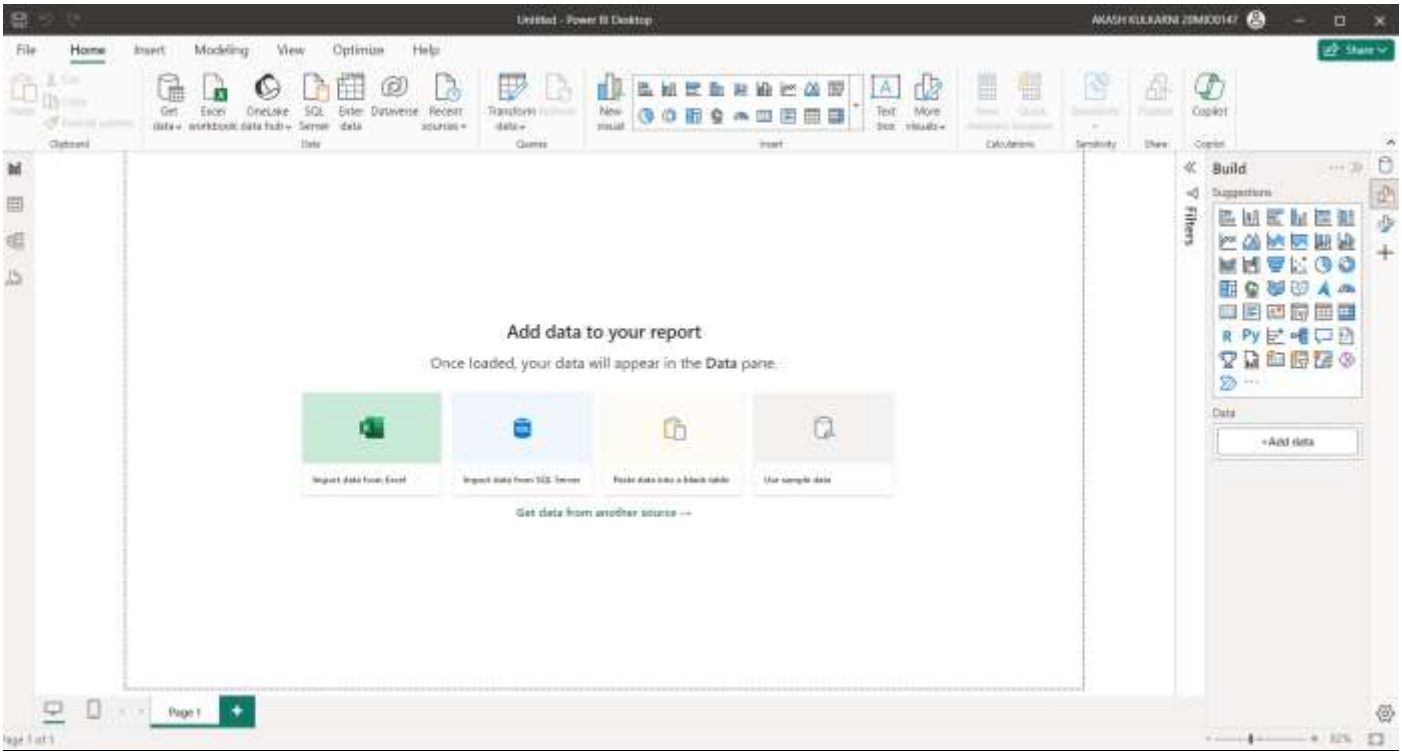
NAPQUEENS (Anarix.ai)

DATA ANALYTICS ASSIGNMENT:

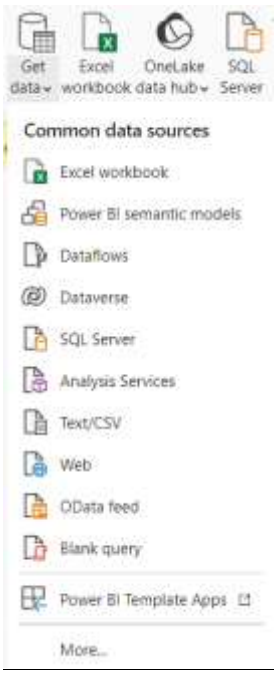
STEP-1:

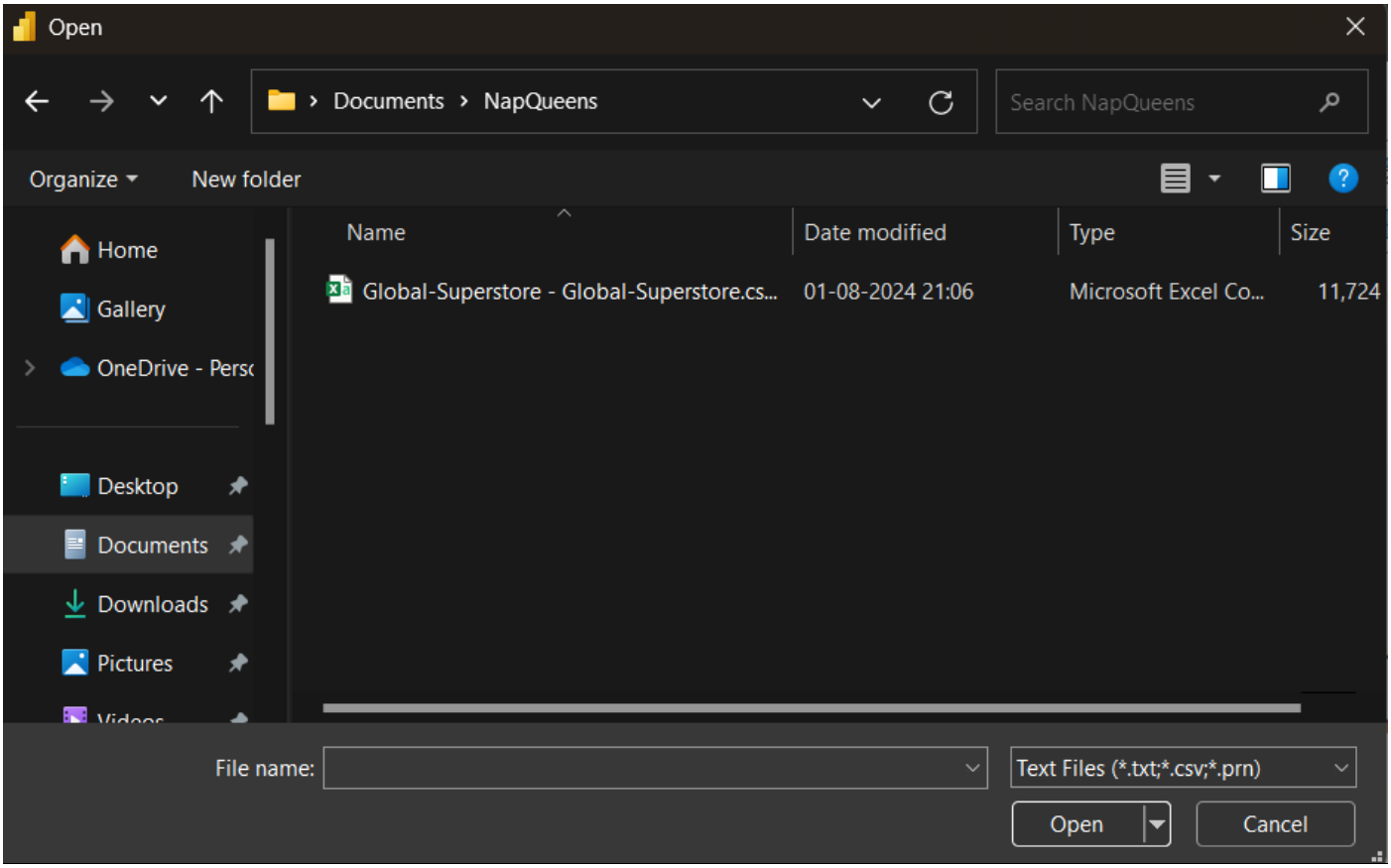
Open PowerBI.

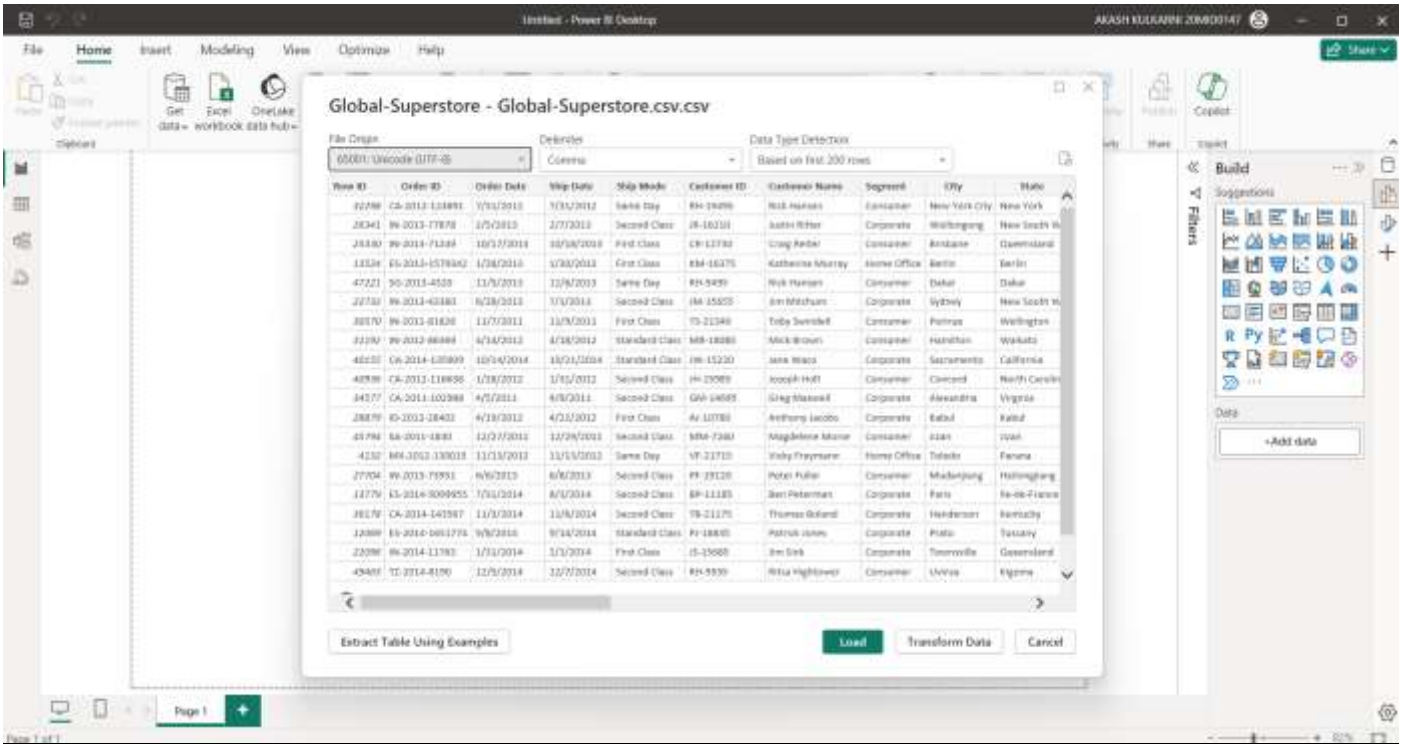


Import the dataset.(Text/csv).

With the use of Data Connectors, we have imported the dataset.





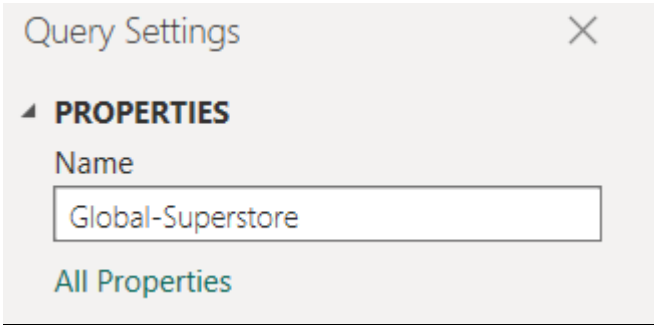


Here, we have to click on the option Transform Data to get into the Power Query Editor for the manipulation of the data.

It is backend of the PowerBI.

Initial basic steps after getting into the Power Query Editor.

Step-1:



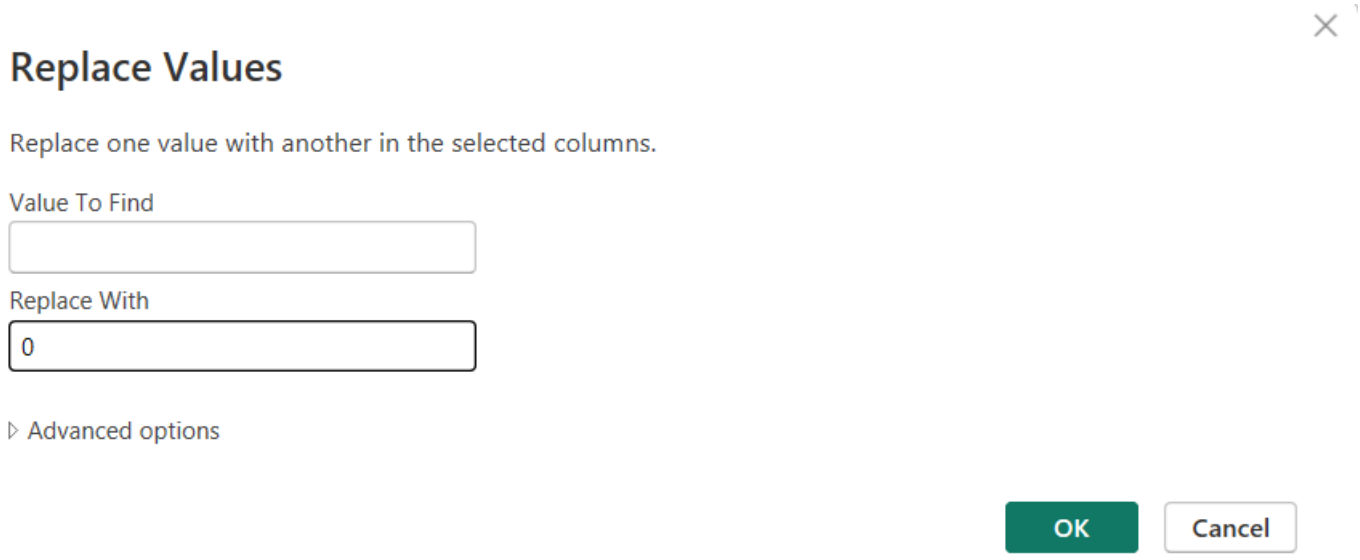
Changing from the long name to the short name can result in more understanding in future about the table.

Step-2:

Performing the Table Transformations.

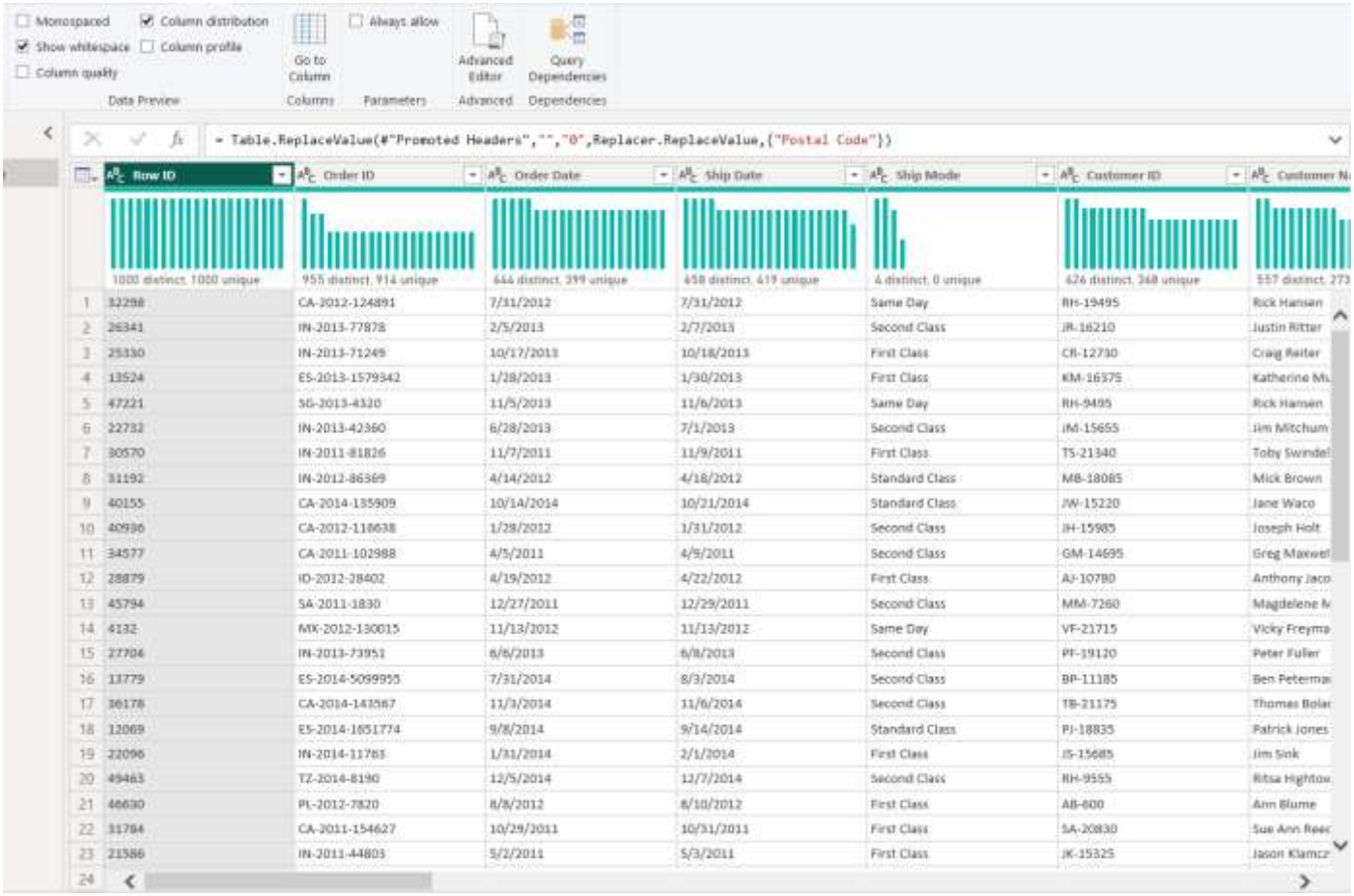
Check the datatypes for the columns. If there is any inconsistency, change the datatypes.

Step-3:



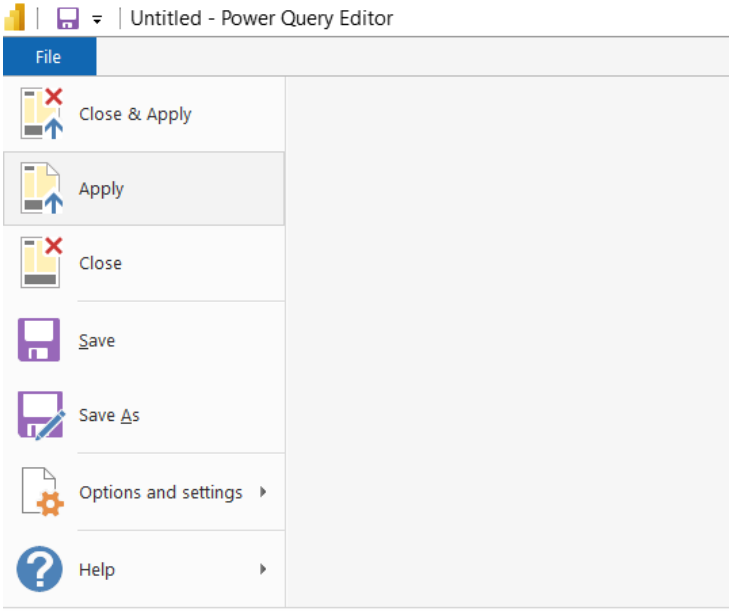
Since, we have a null in Postal Code. We have replaced it with 0.

Column Distribution:

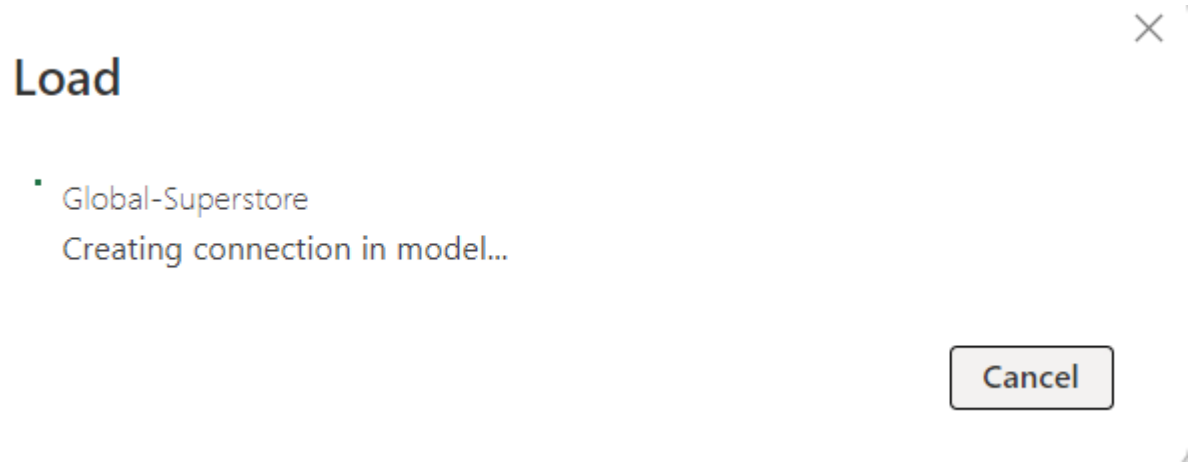


We also have an option of Column Profile, where it mainly shows every statistic and the uniqueness of the column. It is an essential step to know about the column distribution.

Now, we have to check the column quality for all the columns in the table. Since, Column Quality for all the columns are 100%. We can proceed further.

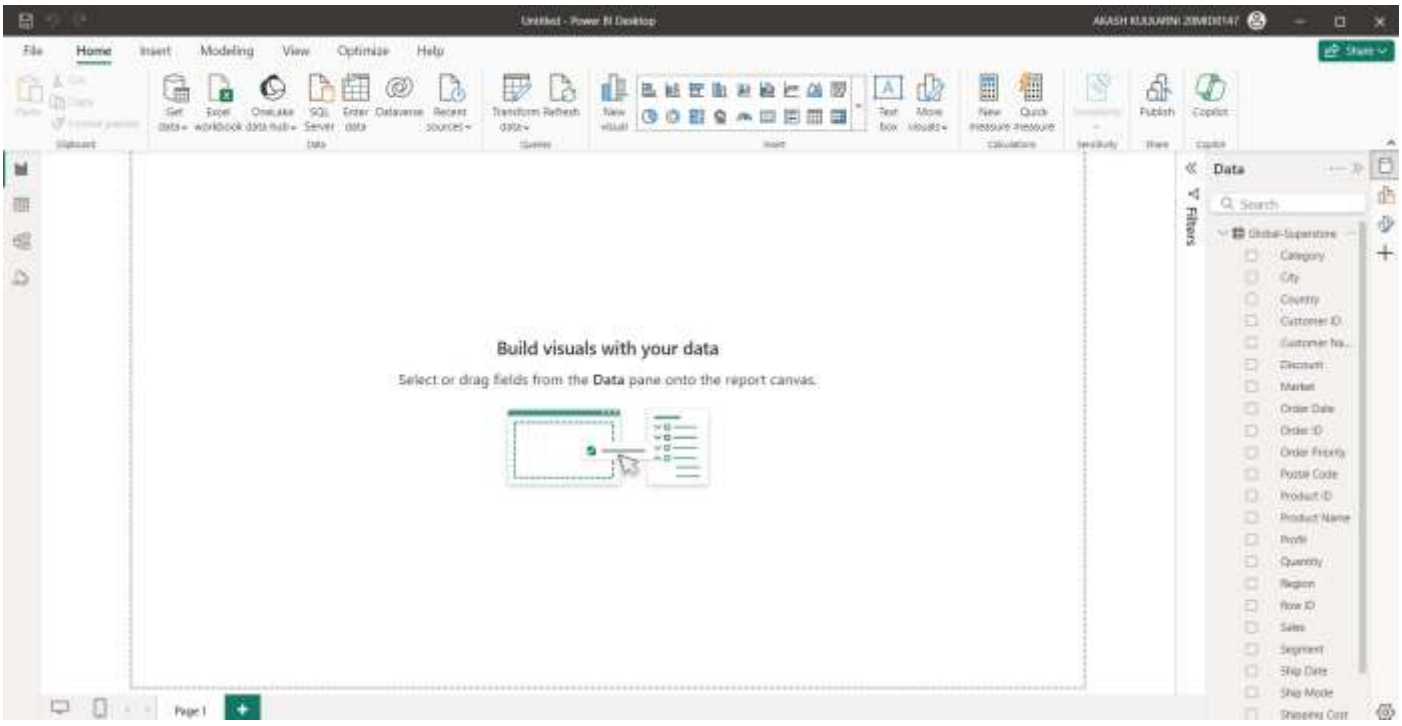


Once we click on the apply, it saves the tranformations.



Since, we don't have more than 1 tables. There is no need to connect the tables which is Modelling.

Modelling is performed to connect the different datasets to get the accurate results.



GOALS:

1). Track KPI's

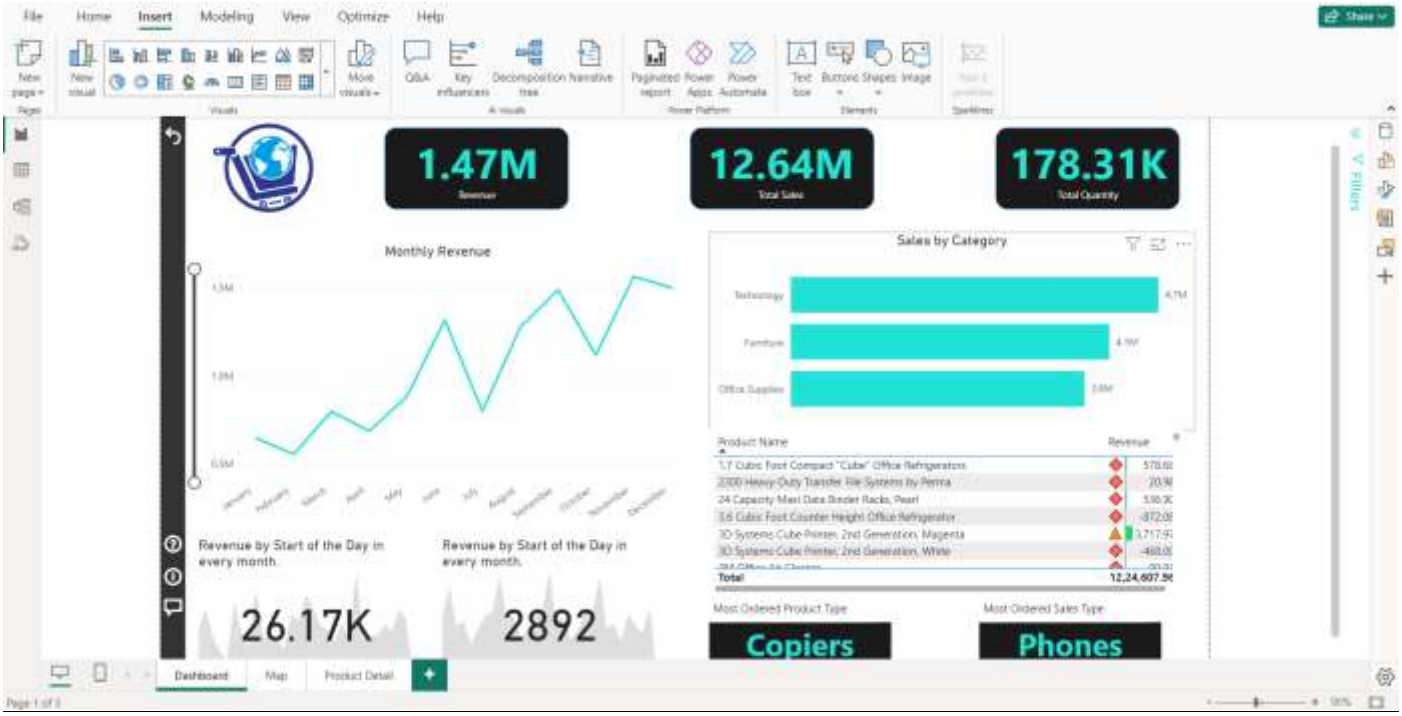
2). Compare regional performance

3). Analyze product level trends

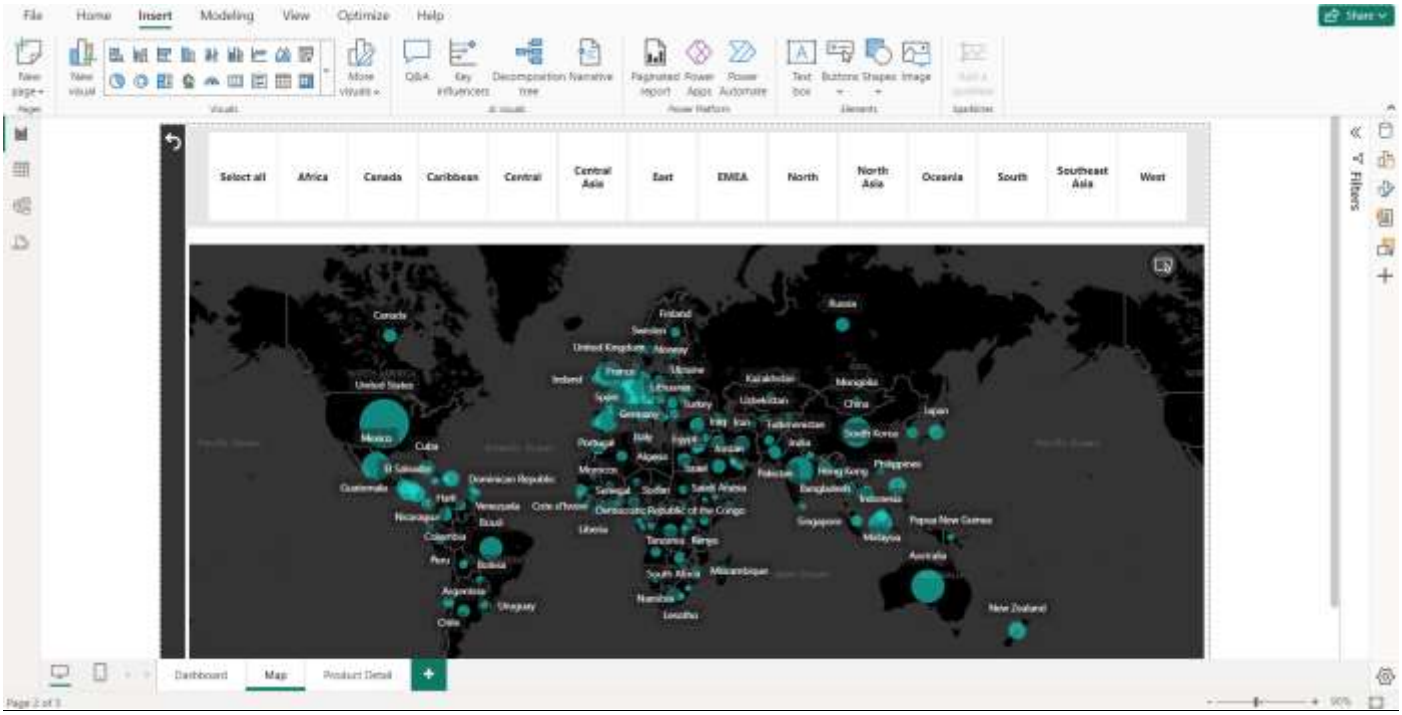
4). Identify high value customers

PowerBI:

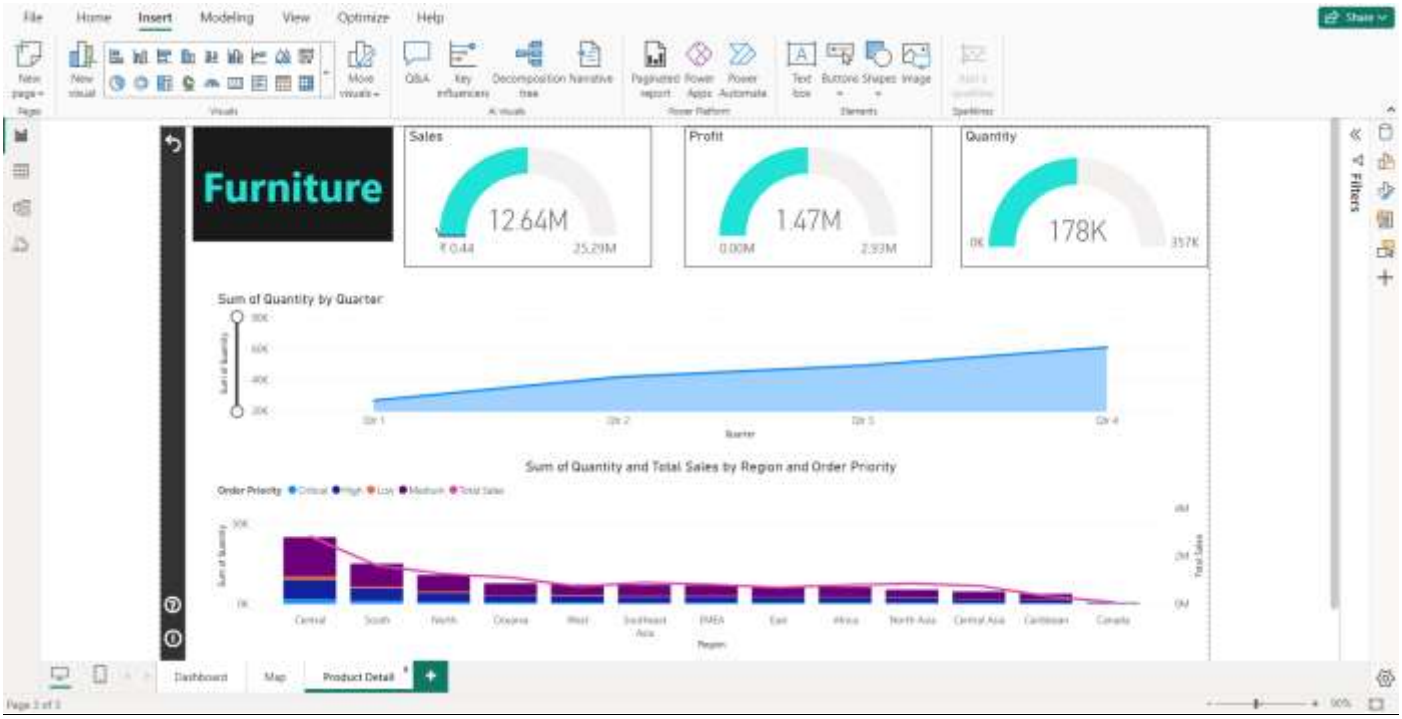
Dashboard:



Map:



Product Detail:



Explanation:

The Global Superstore dashboard is designed to provide comprehensive insights into the store's performance across different regions, products, and customer segments. The dashboard is structured into several key pages: an overview page, a map visualizations page, a product details page, and slicers and bookmarks for interactive data exploration. DAX (Data Analysis Expressions) is extensively used to create custom measures for more in-depth analysis.

Dashboard Page:

- **Purpose:** To provide a high-level summary of the store’s performance.
- **Components:**
    - **Key Performance Indicators (KPIs):** Sales, Profit, and Quantity Sold.
    - **Trends:** Line charts showing monthly sales and profit trends.
    - **Category Breakdown:** Bar charts displaying sales by category.

Key Insights:

- Observe seasonal trends and sales spikes.
- Understand which customer segments are most profitable.

Sample DAX Measures:

- Total Sales: Total Sales = SUM(Sales[Sales])
- Total Profit: Total Profit = SUM(Sales[Profit])
- Quantity Sold: Total Quantity = SUM(Sales[Quantity])

Map Visualizations Page:

- **Purpose:** To provide geographical insights into sales performance.
- **Components:**
  - **Sales by Country:** A filled map showing total sales by region.
  - **Profit by Region:** A bubble map indicating profit margins across different countries.

Key Insights:

- Identify regions with the highest and lowest sales.
- Pinpoint countries with the best profit margins.
- Visualize sales hotspots and understand geographic distribution.

Product Details Page:

- **Purpose:** To provide detailed insights into product performance.
- **Components:**
  - **Top Products:** A table or matrix showing top products by sales and profit.
  - **Product Sales Trends:** Line charts showing monthly sales trends for selected products.

Key Insights:

- Identify top-performing products.
- Analyze sales trends for individual products.

Slicers and Bookmarks:

- **Purpose:** To enable interactive data exploration and easy navigation.
- **Components:**
  - **Slicers:** Filters for date, region, category, and customer segment.
  - **Bookmarks:** Predefined views for quick access to specific insights (e.g., top regions, specific time periods).

Key Insights:

- Customize views to analyze data from different perspectives.
- Quickly switch between different reports and analyses.

Report Summary

Report Structure:

1. **Dashboard Overview:**
    - KPIs, trends, category breakdown, and customer segmentation.
2. **Map Visualizations:**
    - Filled maps, bubble maps, and heat maps.
3. **Product Details:**
    - Top products, product sales trends, and category performance.
4. **Interactive Elements:**
    - Slicers for dynamic filtering.
    - Bookmarks for quick navigation.

Data Source:

- Global Superstore dataset containing sales, profit, quantity, customer, and product information.

Tools Used:

- Power BI for data visualization and reporting.
- DAX for custom measures and calculations.
- Python for Data Analysis and visualization.

PowerBI Link : https://app.powerbi.com/groups/me/reports/3beb7f59-9099-4536-ba5f-95ca7d958848/c2f193ffbc17338b6a54?experience=power-bi

GitHub Link : https://github.com/akash1442/PowerBI-and-Python-Visualizations.

Gmail Link(All folders):
https://drive.google.com/drive/folders/1umI1WMUnC6OeEyj9b70PtuGVrG7_mF79?usp=sharing