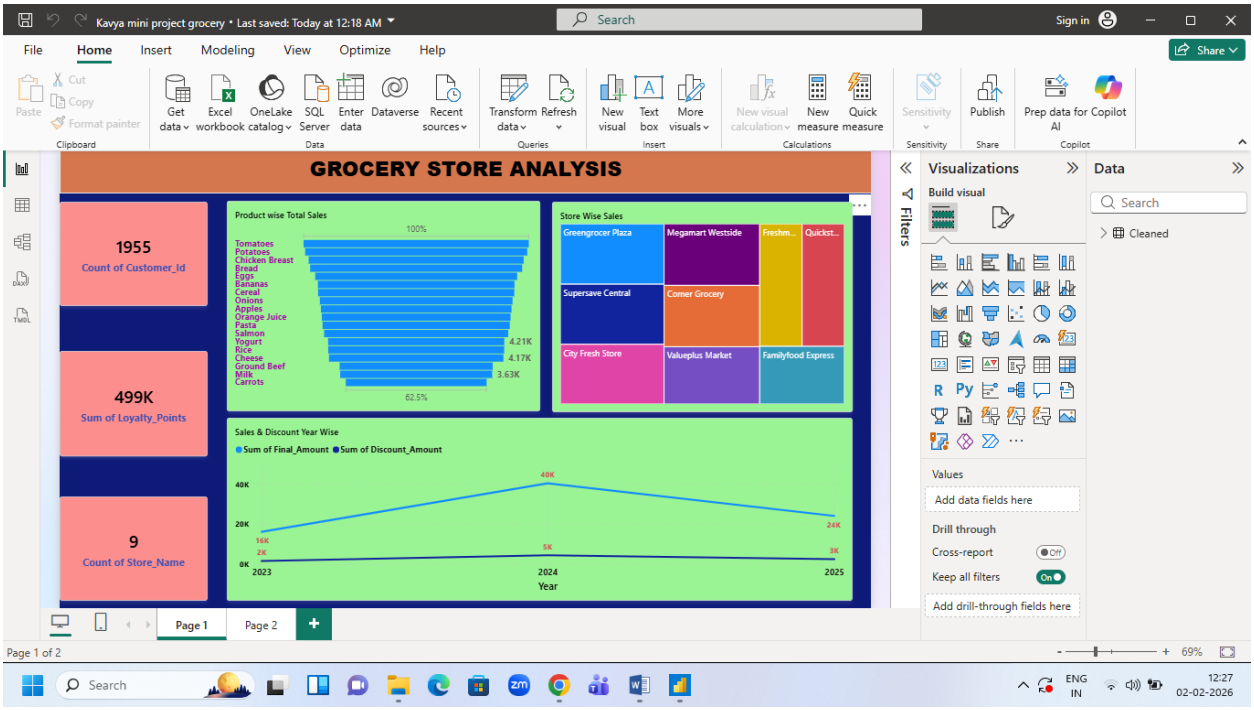
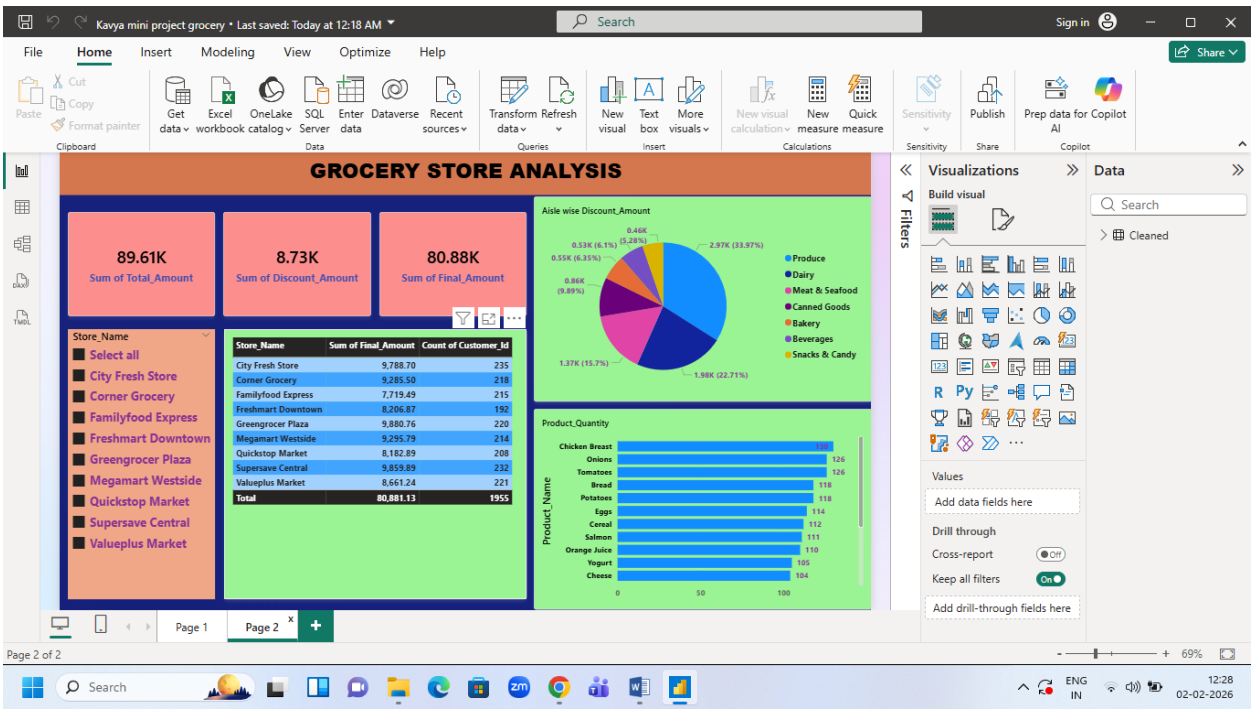
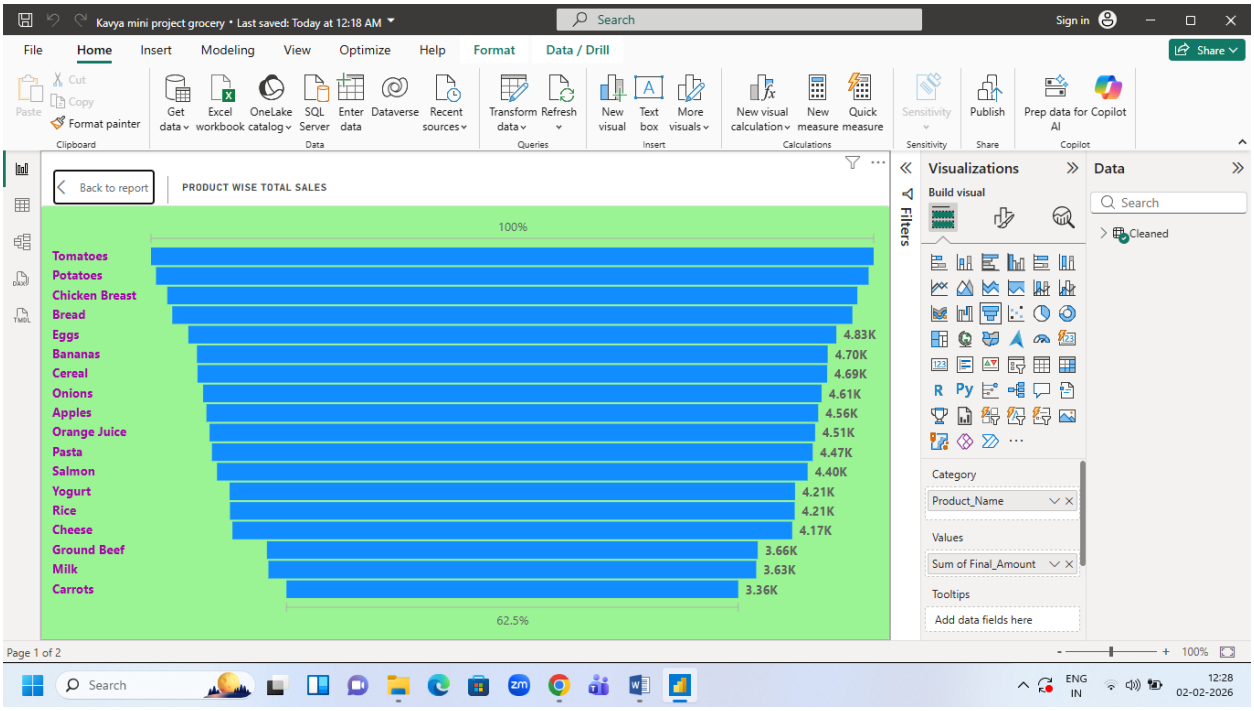
Complete dashboard pictures

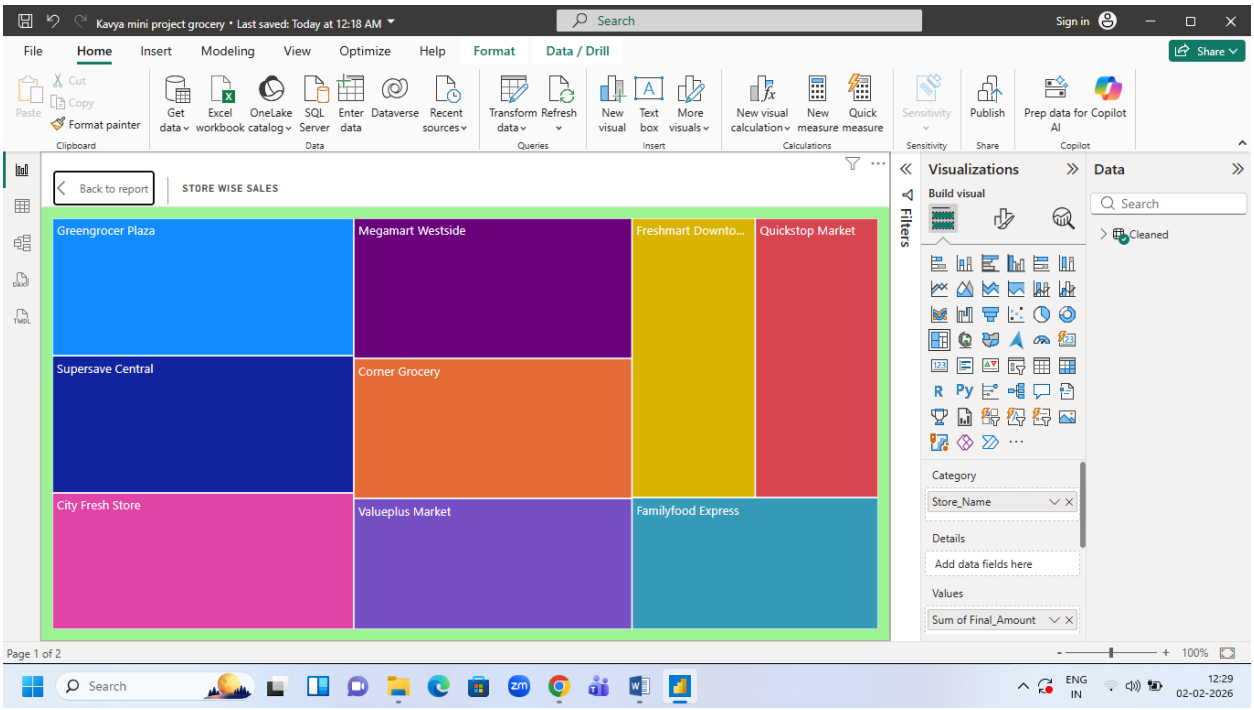
Individual Visualization Pictures

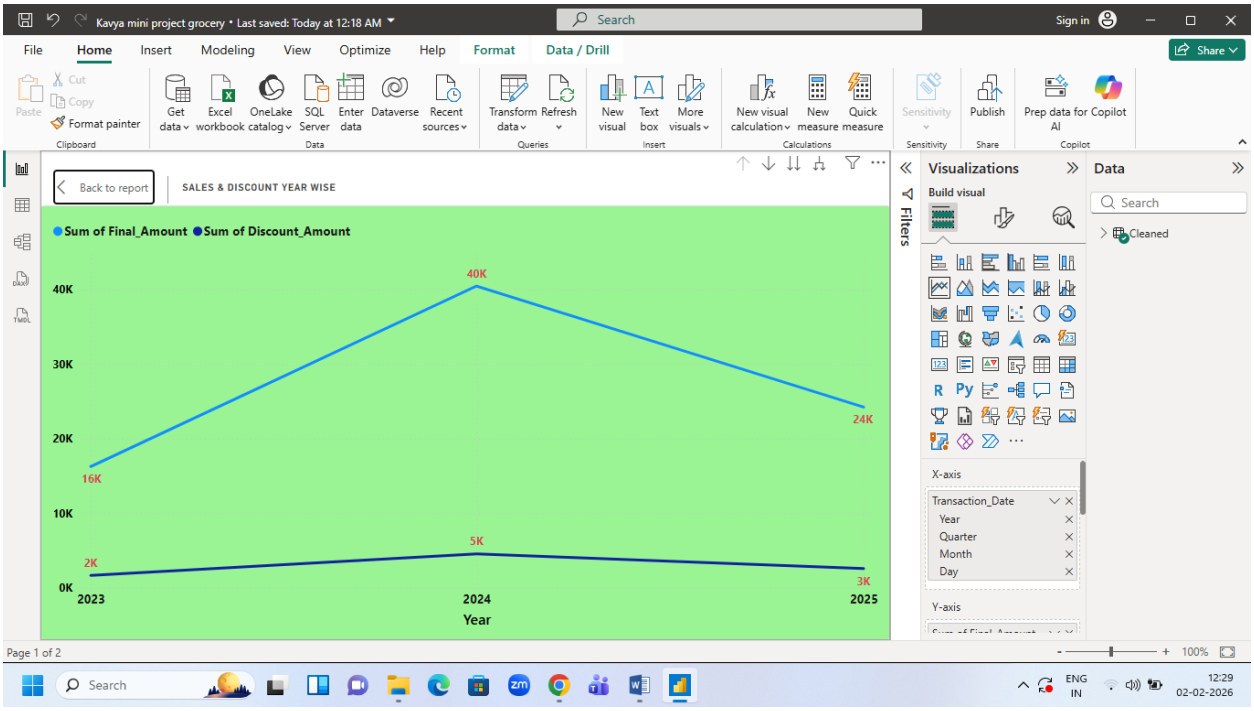
Project Over View

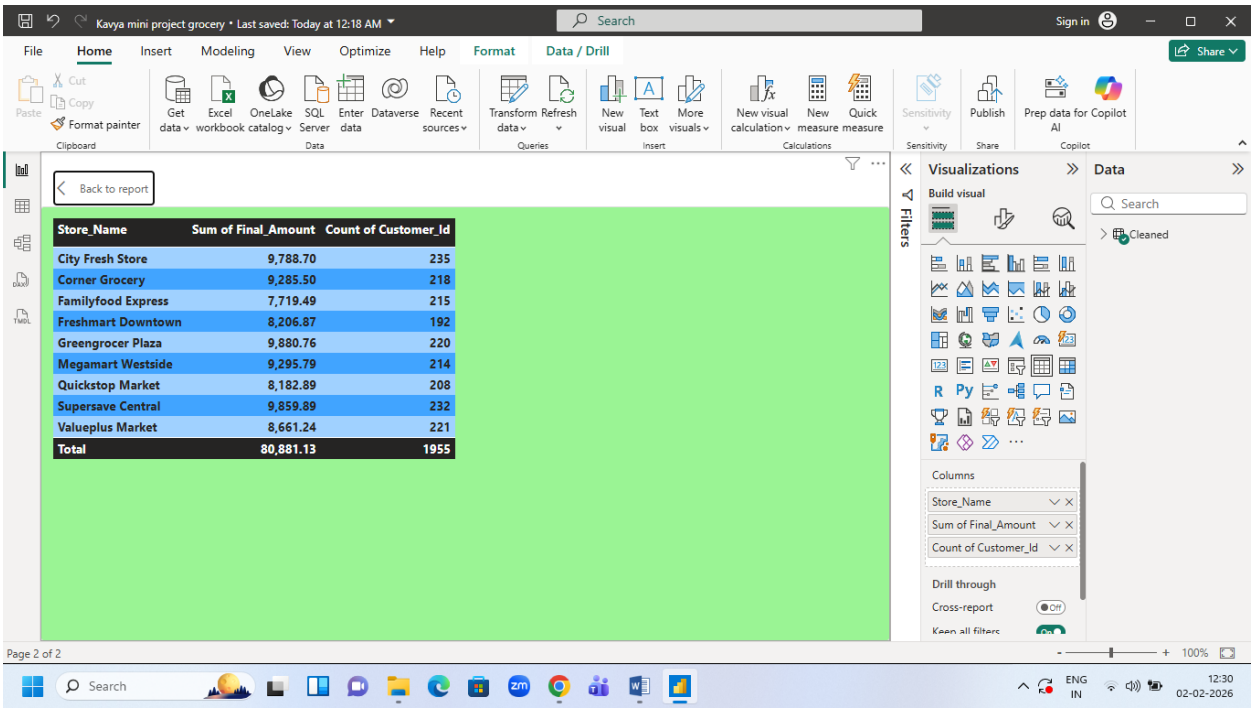


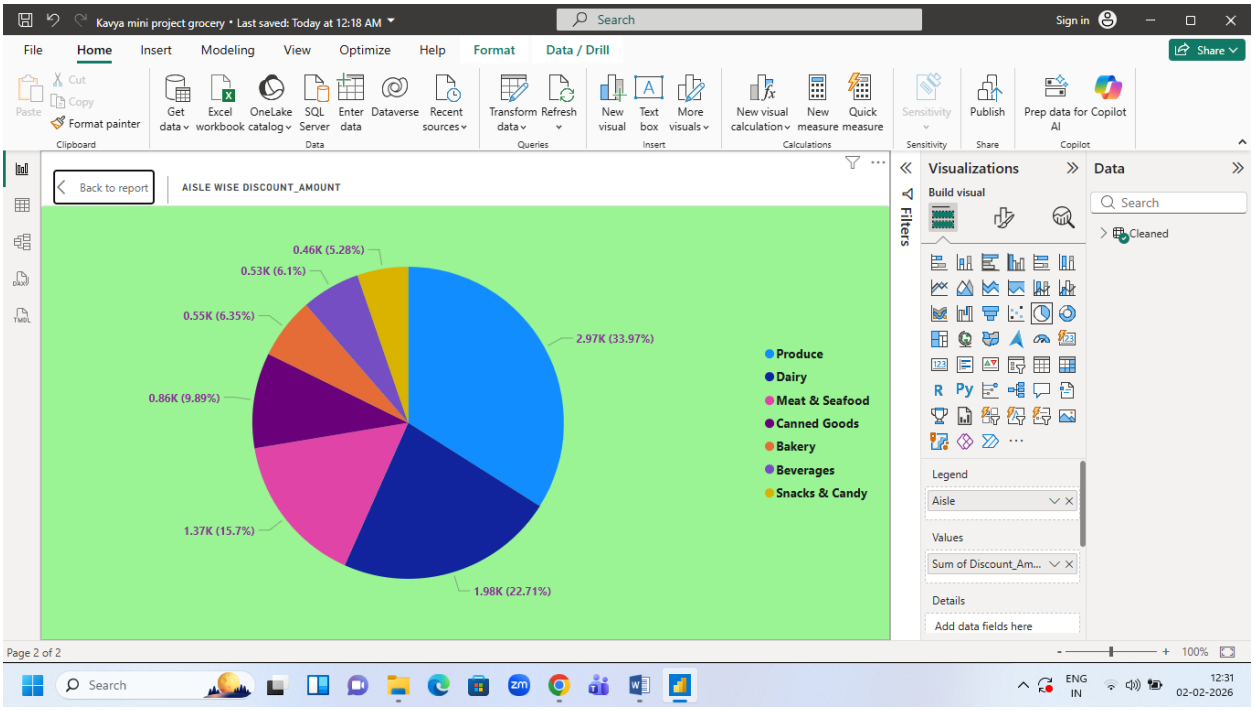



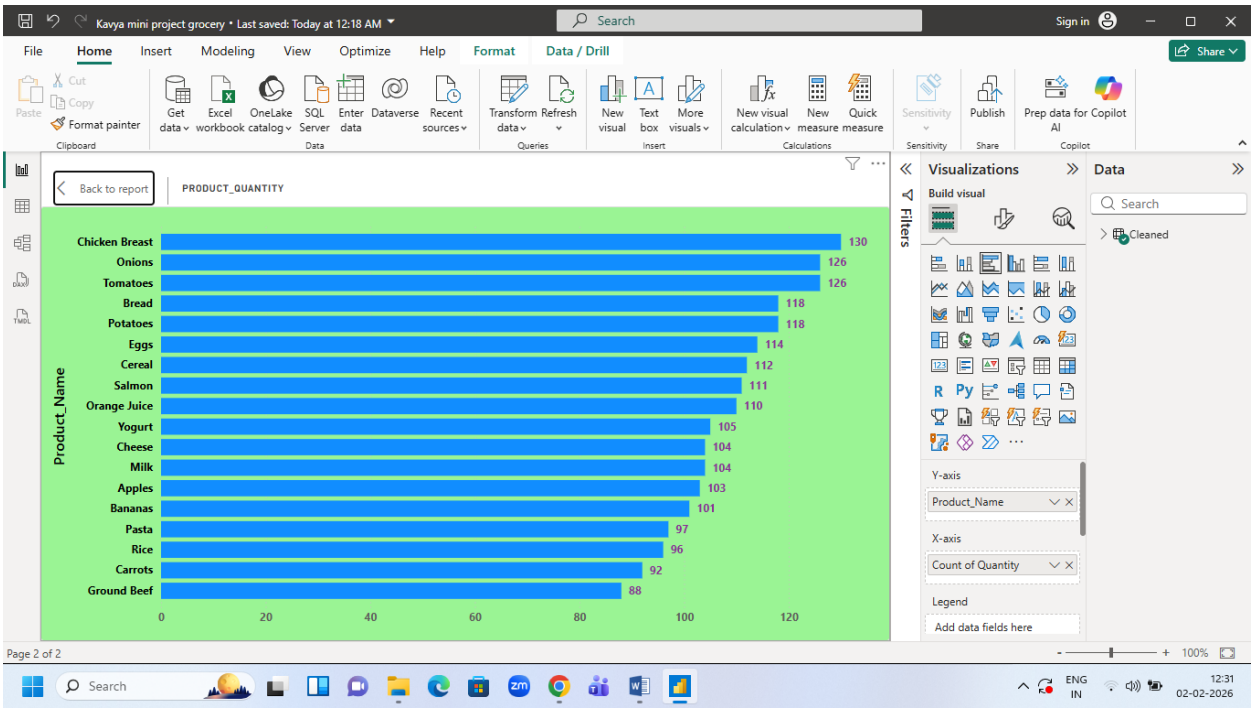

Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
PRODUCT WISE TOTAL SALES
100%
Tomatoes
Potatoes
Chicken Breast
Bread
Eggs
4.83K
Bananas
4.70K
Cereal
4.69K
Onions
4.61K
Apples
4.56K
Orange Juice
4.51K
Pasta
4.47K
Salmon
4.40K
Yogurt
4.21K
Rice
4.21K
Cheese
4.17K
Ground Beef
3.66K
Milk
3.63K
Carrots
3.36K
62.5%
Visualizations
Build visual
Data
Search
Cleaned
Filters
Category
Product_Name
Values
Sum of Final_Amount
Tooltips
Add data fields here
Page 1 of 2
100%
ENG
IN
12:28
02-02-2026


Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
STORE WISE SALES
Greengrocer Plaza
Megamart Westside
Freshmart Downto...
Quickstop Market
Supersave Central
Corner Grocery
City Fresh Store
Valueplus Market
Familyfood Express
Visualizations
Build visual
Data
Search
Cleaned
Filters
Category
Store_Name
Details
Add data fields here
Values
Sum of Final_Amount
Page 1 of 2
100%
ENG
IN
12:29
02-02-2026


Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
SALES & DISCOUNT YEAR WISE
Sum of Final_Amount
Sum of Discount_Amount
40K
30K
20K
10K
0K
16K
24K
2K
5K
3K
2023
2024
2025
Year
Visualizations
Build visual
Data
Search
Cleaned
Filters
X-axis
Transaction_Date
Year
Quarter
Month
Day
Y-axis
Page 1 of 2
100%
Search
ENG
IN
12:29
02-02-2026


Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
Store_Name | Sum of Final_Amount | Count of Customer_Id
City Fresh Store | 9,788.70 | 235
Corner Grocery | 9,285.50 | 218
Familyfood Express | 7,719.49 | 215
Freshmart Downtown | 8,206.87 | 192
Greengrocer Plaza | 9,880.76 | 220
Megamart Westside | 9,295.79 | 214
Quickstop Market | 8,182.89 | 208
Supersave Central | 9,859.89 | 232
Valueplus Market | 8,661.24 | 221
Total | 80,881.13 | 1955
Visualizations
Build visual
Data
Search
Cleaned
Filters
Columns
Store_Name
Sum of Final_Amount
Count of Customer_Id
Drill through
Cross-report
Off
Page 2 of 2
100%
Search
ENG
IN
12:30
02-02-2026


Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
AISLE WISE DISCOUNT_AMOUNT
0.46K (5.28%)
0.53K (6.1%)
0.55K (6.35%)
2.97K (33.97%)
0.86K (9.89%)
1.37K (15.7%)
1.98K (22.71%)
Produce
Dairy
Meat & Seafood
Canned Goods
Bakery
Beverages
Snacks & Candy
Visualizations
Build visual
Data
Search
Cleaned
Legend
Aisle
Values
Sum of Discount_Am...
Details
Add data fields here
Filters
Page 2 of 2
100%
Search
ENG
IN
12:31
02-02-2026


Kavya mini project grocery • Last saved: Today at 12:18 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Back to report
PRODUCT_QUANTITY
Product_Name
Chicken Breast 130
Onions 126
Tomatoes 126
Bread 118
Potatoes 118
Eggs 114
Cereal 112
Salmon 111
Orange Juice 110
Yogurt 105
Cheese 104
Milk 104
Apples 103
Bananas 101
Pasta 97
Rice 96
Carrots 92
Ground Beef 88
0
20
40
60
80
100
120
Visualizations
Build visual
Data
Search
Cleaned
Y-axis
Product_Name
X-axis
Count of Quantity
Legend
Add data fields here
Filters
Page 2 of 2
100%
Search
ENG
IN
12:31
02-02-2026

# 🛒 Grocery Sales & Performance Analysis using Power BI

## 📌 Executive Summary

This project focuses on analyzing grocery retail transaction data to gain insights into sales performance, product contribution, store efficiency, and customer loyalty behavior. Using a structured data cleaning approach and interactive Power BI dashboards, the project transforms raw transactional data into meaningful, decision-ready insights that can support business and operational decision-making.

---

## ❓ Problem Statement

Retail grocery businesses generate large volumes of transactional data, but raw data often contains inconsistencies such as incorrect date formats, negative revenue values due to discounts, missing values, and inconsistent naming conventions. Without proper data validation and visualization, these issues can lead to inaccurate reporting and poor business decisions.

---

## 🕮 Background

Grocery retailers rely on accurate sales, product, and customer data to optimize inventory, pricing strategies, and promotional effectiveness. However, transactional datasets typically require significant preprocessing before analysis. This project simulates a real-world retail analytics scenario where raw data must be cleaned, validated, and visualized to extract reliable business insights.

---

## 🎯 Project Objectives

The primary objectives of this project are:

- To clean and validate raw grocery transaction data
- To standardize financial, date, and categorical fields
- To analyze sales trends and discount impact
- To evaluate product and aisle-level performance
- To assess store-wise sales contribution

- To understand customer loyalty and purchasing behavior
- To present insights through interactive Power BI dashboards

---

## Scope of the Project

This project covers:

- Grocery transaction sales analysis
- Product and aisle-level performance evaluation
- Store-wise revenue and sales trends
- Discount impact on final sales
- Customer loyalty points analysis

The project does not include forecasting or predictive modeling and focuses on descriptive and diagnostic analytics.

---

## Data Sources

- **Raw Dataset:** Grocery retail transaction data containing customer purchases, product details, pricing, discounts, and loyalty points.
- **Cleaned Dataset:** An Excel file created after validating and standardizing the raw data for analysis.

---

## Data Cleaning & Preparation

Data preparation was performed in two stages:

### 1. Excel (Data Cleaning Layer)

- Corrected negative final sales values caused by excessive discounts
- Standardized date formats for time-based analysis
- Normalized store names, product names, and categories
- Ensured numerical columns were free from text and inconsistencies
- Preserved all records without deleting rows

### 2. Power BI (Reporting Layer)

- Handled blank and null values contextually using Power Query and DAX
- Applied business logic based on reporting requirements
- Prepared the data model for accurate KPI calculation and visualization

---

# 🔍 Methodology

1. Imported raw transactional data
2. Performed data validation and cleaning in Excel
3. Loaded the cleaned dataset into Power BI
4. Handled missing values and applied transformations in Power BI
5. Created calculated measures and KPIs
6. Designed interactive dashboards for business insights
7. Analyzed trends and summarized key findings

---

# 🛠️ Tools & Technologies

- **Microsoft Excel** – Data cleaning and preprocessing
- **Power BI** – Data modeling, DAX calculations, and dashboard creation

---

# 📈 Key Dashboards & Insights

The Power BI dashboards provide insights into:

- Overall sales and net sales performance
- Discount impact on revenue
- Product and aisle-wise contribution
- Store-level sales trends
- Customer loyalty points and engagement

The dashboards are interactive, allowing users to filter and explore data dynamically.

---

## ✅ Expected Outcomes

- Accurate and reliable sales reporting
- Clear understanding of product and store performance
- Visibility into discount effectiveness
- Improved insights into customer loyalty behavior
- Business-ready dashboards for decision-makers

---

## ⚠ Limitations & Assumptions

- The dataset represents historical transaction data only
- Customer behavior analysis is limited to available transaction records
- Loyalty points are assumed to be directly related to purchase value

---

## 🏁 Conclusion

This project demonstrates a complete end-to-end data analytics workflow, starting from raw data validation to clean, interactive Power BI dashboards. By separating data cleaning and reporting responsibilities, the analysis ensures accuracy, flexibility, and business relevance. The final dashboards enable stakeholders to quickly understand sales performance, identify trends, and support informed decision-making in a retail grocery context.