**📊 Blinkit Sales Analysis Project Report**

**🔍 Project Objective**

The main objective of this project is to **analyze Blinkit's sales performance, customer satisfaction, and inventory distribution** using structured data analysis and visualizations in Power BI. The insights gained will help identify performance trends, optimization areas, and factors influencing revenue and customer experience.

**🧩 Data Overview**

* **Dataset**: BlinkIT Grocery Data.csv
* **Tool Used**: Microsoft SQL Server for query analysis; Power BI for visualization (intended).
* **Fields of Interest**:
  + Total\_Sales
  + Item\_Fat\_Content
  + Item\_Type
  + Rating
  + Outlet\_Location\_Type
  + Outlet\_Establishment\_Year
  + Outlet\_Size
  + Outlet\_Type
  + Item\_Visibility

**🧼 Data Cleaning**

**Cleaned Column: Item\_Fat\_Content**

To ensure consistency:

sql

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UPDATE blinkit\_data

SET Item\_Fat\_Content =

CASE

WHEN Item\_Fat\_Content IN ('LF', 'low fat') THEN 'Low Fat'

WHEN Item\_Fat\_Content = 'reg' THEN 'Regular'

ELSE Item\_Fat\_Content

END;

**Validation:**

sql

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SELECT DISTINCT Item\_Fat\_Content FROM blinkit\_data;

This ensures consistent categories like "Low Fat" and "Regular" for analysis and reporting.

**📌 Key Performance Indicators (KPIs)**

| **KPI** | **Query Summary** |
| --- | --- |
| **Total Sales** | ₹X Million – using SUM(Total\_Sales) |
| **Average Sales** | ₹X per item – using AVG(Total\_Sales) |
| **No. of Items Sold** | N – using COUNT(\*) |
| **Average Rating** | X.X / 5 – using AVG(Rating) |

**📊 Detailed Analysis & Insights**

**A. Total Sales by Fat Content**

* Analyzed sales contribution by Low Fat vs Regular items.
* Query:

sql

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SELECT Item\_Fat\_Content, SUM(Total\_Sales)

FROM blinkit\_data

GROUP BY Item\_Fat\_Content;

📌 **Insight**: Consumer preference can be understood via comparative revenue.

**B. Total Sales by Item Type**

* Identifies top-selling item categories.
* Query:

sql

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SELECT Item\_Type, SUM(Total\_Sales)

FROM blinkit\_data

GROUP BY Item\_Type

ORDER BY Total\_Sales DESC;

📌 **Insight**: Useful for inventory and marketing strategy.

**C. Fat Content Sales by Outlet Location**

* Pivot view:

sql

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SELECT Outlet\_Location\_Type,

ISNULL([Low Fat], 0) AS Low\_Fat,

ISNULL([Regular], 0) AS Regular

FROM (

SELECT Outlet\_Location\_Type, Item\_Fat\_Content, SUM(Total\_Sales) AS Total\_Sales

FROM blinkit\_data

GROUP BY Outlet\_Location\_Type, Item\_Fat\_Content

) AS SourceTable

PIVOT (

SUM(Total\_Sales)

FOR Item\_Fat\_Content IN ([Low Fat], [Regular])

) AS PivotTable;

📌 **Insight**: Helps optimize store stocking based on location preferences.

**D. Sales by Outlet Establishment Year**

* Helps identify performance by store age.

sql

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SELECT Outlet\_Establishment\_Year, SUM(Total\_Sales)

FROM blinkit\_data

GROUP BY Outlet\_Establishment\_Year;

📌 **Insight**: Older vs. newer store performance trends.

**E. Percentage of Sales by Outlet Size**

* Evaluates outlet size contribution to revenue.

sql

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SELECT Outlet\_Size, SUM(Total\_Sales),

SUM(Total\_Sales) \* 100.0 / SUM(SUM(Total\_Sales)) OVER() AS Sales\_Percentage

FROM blinkit\_data

GROUP BY Outlet\_Size;

📌 **Insight**: Identify if larger outlets always perform better.

**F. Sales by Outlet Location**

* Sales by area (urban, suburban, etc.).

sql

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SELECT Outlet\_Location\_Type, SUM(Total\_Sales)

FROM blinkit\_data

GROUP BY Outlet\_Location\_Type

ORDER BY Total\_Sales DESC;

📌 **Insight**: Evaluate regional performance.

**G. All Metrics by Outlet Type**

* A multi-metric comparison:

sql

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SELECT Outlet\_Type,

SUM(Total\_Sales) AS Total\_Sales,

AVG(Total\_Sales) AS Avg\_Sales,

COUNT(\*) AS No\_Of\_Items,

AVG(Rating) AS Avg\_Rating,

AVG(Item\_Visibility) AS Item\_Visibility

FROM blinkit\_data

GROUP BY Outlet\_Type;

📌 **Insight**: Holistic view to compare outlet types.

**📈 Visualizations (Power BI Suggestions)**

* **Bar Chart**: Sales by Item\_Type
* **Pie Chart**: % Sales by Outlet\_Size
* **Stacked Column**: Sales by Fat\_Content across Outlet\_Location\_Type
* **Line Graph**: Year-wise Sales Trends
* **Heatmap**: Correlation of Rating, Sales, and Visibility

**🎯 Conclusion**

This analysis provided a 360-degree view of Blinkit's performance metrics. From identifying top-selling categories to understanding location-based preferences and customer ratings, this report delivers valuable insights to support data-driven decisions in marketing, stocking, and store development strategies.