SUPERMARKET SALES ANALYSIS AND FORECASTING

BACKGROUND & PROBLEM STATEMENT:-

We aim to analyze supermarket sales data to find trends and insights that can help in making strategic decisions. This analysis will include key metrics like total sales, quantity sold, delivery time, and profit. By examining sales patterns by category and sub-category, identifying peak sales times, and finding top-selling items, we want to improve operational efficiency and customer satisfaction. Our goal is to use these insights to enhance marketing strategies, product offerings, and overall business performance, leading to higher profits and sustained growth.

SOLUTION:-

Our solution involves conducting a thorough analysis the supermarket sales data using various techniques. By using tools like data visualization, we aim to discover actionable insights that will guide strategic decisions. This data-driven approach will help us optimize marketing efforts, refine product offerings, and improve operational efficiency, ultimately increasing profits and customer satisfaction.

PROJECT SCOPE & METHODOLOGY:-

1. **Data Collection**: Collect sales data from all supermarket locations for a specific time period.
2. **Data Cleaning and Preparation:** Cleanse the data to remove any inconsistencies or errors, and prepare it for analysis.
3. **Key Performance Indicator Analysis**: Calculate and analyze key metrics like total sales, quantity sold, average delivery time, and profit.
4. **Sales Pattern Analysis:** Analyze sales by category and sub-category to find top and bottom-selling items.
5. **Peak Sales Time Analysis:** Identify the busiest sales times to optimize staffing and inventory.
6. **Data Visualization**: Visualize the findings using charts, graphs, and dashboards to communicate insights effectively.
7. **Recommendations**: Provide actionable recommendations based on the analysis to optimize marketing strategies, menu offerings, and operational efficiency

GOALS & KPIs:-

The goal is to leverage these insights to refine marketing strategies, and overall business approach, ultimately driving increased profitability and sustained growth.

KPIs:-

- **Total Sales**
- **Quantity Sold**
- **Average Delivery Time**
- **Total Profit**

RECOMMENDED ANALYSIS:-

1. **Sum of Sales by Category**:
   - **What are the total sales for each product category?**
2. **Sum of Sales by Ship Mode:**
   - **How do sales vary by different shipping modes?**
3. **Sum of Sales by sub-Category**:
   - **Which sub-category within a category has the highest sales?**
4. **Sum of Sales by Segment**:
   - **How are sales distributed among different segments?**
5. **Sum of Sales by Payment Mode**:
   - **What are the total sales for each payment mode?**
6. **Sum of Sales by Month (with year-wise legend)**:
   - **How do monthly sales compare across different years?**
7. **Sum of profit by Month (with year-wise legend)**
   - **How do monthly profit compare across different years?**

CONCLUSION:-

This project provided valuable insights into supermarket sales. By analyzing sales data using data visualization tools like Power BI, we identified key aspects like sales by category and sub-category, and customer preferences in shipping and payment methods.

The findings show that certain days and times have peak sales, and specific product categories drive most sales. We also found out which shipping and payment methods are preferred by customers.

These insights help us make better decisions on operations, marketing, and product offerings. By focusing on peak sales times, promoting popular categories, and reevaluating underperforming items, we can improve overall sales performance and customer satisfaction.