**PROJECT REPORT**

The objective of this project is to analyze the ACMEs Superstore Sales data-set using SQL queries to extract valuable and insights related to sales performance, customer behavior, and product categories.

The dataset contains data on order details of customers which includes;

* Order ID: Unique identifier for each order, enabling tracking and analysis of individual transactions.
* Customer ID: Unique identifier for each customer, allowing for customer-centric analysis and segmentation.
* Order Date: Date when the order was placed, providing insights into the temporal aspects of sales.
* Ship Date: Date when the order was shipped, helping in analyzing order fulfillment timelines.
* Ship Mode: Shipping mode for the order, indicating the delivery method chosen by the customer (e.g., standard, same-day).
* Segment: Customer segment categorization (e.g., Consumer, Corporate, Home Office), facilitating customer behavior analysis.
* Region: Geographic region where the customer is located (e.g., West, Central, East), aiding in regional sales analysis.
* Category: Product category classification (e.g., Furniture, Technology, Office Supplies), allowing for category-based analysis.
* Sub-Category: More detailed classification of the product within a category (e.g., Chairs, Desktops, Paper).
* Product Name: Name of the specific product purchased, providing details about the items sold.
* Sales: Sales revenue generated by each product, a crucial metric for financial analysis.
* Quantity: Number of units of each product purchased, offering insights into product demand.
* Discount: The discount applied to each product, influencing overall revenue and profit margins.
* Profit: The profit generated by each product, a key metric for evaluating business performance.

**PROJECT METHODOLOGIES**

The methodologies used in this for this project are as follows;

1. Data Exploration which is to get a general overview of the data by using SQL queries to perform basic descriptive statistics such as count, sum, average to retrieve the total number of orders, customers, and products in the dataset and to calculate and display the total sales, average discount, and profit for each product category.
2. Data Analysis to answer specific business questions using SQL queries which includes Identifying the top 10 customers with the highest total sales, Calculating the average order value for each customer segment, Analyzing the sales trend over time by displaying the monthly sales for each year in the dataset, Identifying the month with the highest sales, Determining the top 5 best-selling products based on the quantity sold, Calculating the profit margin for each product and display the results, Analyzing the impact of discounts on sales and profit, Calculating the average discount for each product category, creating a segmentation analysis by dividing customers into different groups based on their total purchases and Provide insights into the characteristics of each customer group.

**ACTIONABLE INSIGHTS**

Based on the data analysis, I derived the following actionable insights

1. The average order value is higher for the customers who belong to the small business segment. Therefore we can target this segment with more personalized offers and promotion to increase their loyalty and retention.
2. The sales show a clear seasonal pattern, with the highest peak in April and June and the lowest dip in January and March as shown in the table below:

|  |  |  |
| --- | --- | --- |
| **YEAR** | **MONTH** | **MONTHLY\_SALES** |
| 2015 | 4 | 389831.946947813 |
| 2015 | 6 | 355368.799412251 |
| 2015 | 2 | 326101.469921827 |
| 2015 | 5 | 306572.071463108 |
| 2015 | 1 | 274766.921662569 |
| 2015 | 3 | 271696.67007494 |

1. The technology category has the highest total sales and the second highest total profit among all categories indicating a high demand and margin for this category. Therefore, we can invest more in this category and explore new opportunities and markets for technology products.
2. The furniture category has the second highest total sales but the lowest total profit implying a low profitability and a high cost for the category. Therefore, we can review the pricing and cost strategy for furniture products and improve the customer satisfaction and retention in this category.
3. The office supply category has the lowest total sales but the highest total profit suggesting high profitability and a low cost. Therefore , we can leverage this category as a cross-selling or up-selling opportunity by bundling it with other product or offering discount for bulk purchases.