**PROJECT REPORT**

**About the Data:** The dataset I crafted simulates a business dealing in electronics, clothing, and food items. It includes crucial details such as location (states), order specifics, order numbers, customer IDs (primary key), order IDs (tracking daily or per item orders), individual item amounts, total order values, and payment methods.

**Electronics:** Smartphone X Laptop Pro Fitness Tracker Wireless Earbuds LED TV 4KHome Security Camera Gaming Console

**Clothing:** Designer Jeans Handcrafted Jewelry Sunglasses Fashion Handbag

**Food:** Organic Coffee Beans Gourmet Chocolate Box

**Data Cleaning and Analysis:** I meticulously cleaned the dataset using Excel. I then harnessed SQL's power by employing WHERE, SELECT, FROM, ORDER BY, GROUP BY, SUM, FUNCTION, and AVERAGE clauses to answer pivotal questions. These inquiries ranged from total and average revenue to monthly and daily trends, payment methods, and state-based order analysis. The goal was to compare SQL results with Power BI outcomes.

**Reporting and Power BI Integration:** Results were documented in a comprehensive report using Microsoft Word. Subsequently, I merged SQL data into Power BI. In Power BI, I added an order day column extracted from the date format and devised new measures for calculating averages, total orders, and more.

**Learning Experience:** A significant takeaway from this project is the potential of Power BI for effective data presentation and visualization when used skillfully.

**KPI Requirements:**

1. Total Revenue
2. Average Order Value
3. Total Quantity of Products Sold
4. Total Orders
5. Average Products per Order

**Chart Requirements:**

1. Daily Trend for Total Orders
2. Monthly Trend for Total Orders
3. Percentage of Sales by Product Category
4. Percentage of Sales by Product Name
5. Total Products Sold by Category
6. Top 5 Best Sellers by Revenue and Total Quantity
7. Bottom 5 Sellers by Revenue and Total Quantity
8. Payment Method by Total Orders
9. Location by Total Orders

**Report Findings:**

**1. Sales Impact by Category:**

* Electronic products have the highest impact on total sales, followed by clothing.
* Food products contribute the least to total sales.

**2. Preferred Payment Methods:**

* Customers prefer to use cash for food items.
* PayPal is the preferred payment method for electronic items.

**3. Geographic Sales Distribution:**

* New York City has the highest number of orders, indicating a strong customer base.
* Chicago follows with a substantial number of orders.
* San Francisco has the lowest number of orders, suggesting potential for growth.

**4. Day and Month of Highest Orders:**

* Sunday experiences the highest number of orders, indicating a peak shopping day.
* Saturday and Monday also have significant order volumes.
* The month of July has the highest order activity, possibly due to seasonal factors or promotions.

**Recommendations:**

**1. Focus on Electronic and Clothing Categories:**

* Given that electronic products have the highest sales impact, consider expanding this category or running targeted promotions.
* Invest in marketing and inventory management for clothing items to capitalize on their popularity.

**2. Payment Convenience:**

* Continue to offer cash as a payment option for food items to cater to customer preferences.
* Enhance the checkout experience for electronic items by optimizing PayPal integration and offering secure payment options.

**3. Targeted Marketing in Key Cities:**

* Allocate marketing resources to New York City and Chicago to further boost sales.
* Explore strategies to increase sales in San Francisco, such as localized marketing campaigns or partnerships.

**4. Day and Month Strategies:**

* Leverage the high order volume on Sundays by running special promotions or sales events on this day.
* Consider analyzing the reasons behind the peak in July orders and replicate successful strategies during other months.

**5. Customer Engagement:**

* Implement a loyalty program or discounts for returning customers to foster customer retention.
* Collect feedback to understand customer preferences and improve the overall shopping experience.

These recommendations are based on my findings and can serve as a starting point for optimizing the store's operations and driving growth.