Business Insights from the EDA Of Customers, Products and Transaction Datasets

1. Regional Distribution of Customers

- Insight: The distribution of customers across regions is as follows:

    - Asia: 45 customers

    - Europe: 50 customers

    - North America: 46 customers

    - South America: 59 customers

- Actionable Strategy: South America has the highest customer count, which indicates potential growth opportunities in this region. Consider dedicating more marketing efforts, tailored products, or localized services in South America to further strengthen the customer base. Europe and North America are also significant markets, and maintaining strong marketing strategies for these regions will be crucial to sustain growth. Asia, with a relatively

smaller customer base, could benefit from region-specific campaigns or partnerships to increase engagement.

- Insight: If customer acquisition costs are high in regions with fewer customers (such as Asia), this could signal that the region is more expensive to penetrate or that current marketing strategies are not yielding the desired results.

2. Positive Correlation Between Quantity and Total Value

- Insight: There is a clear relationship between the quantity of products sold and the total sales value. This suggests that higher volumes of sales generally lead to increased revenue.

- Actionable Strategy: Focus on strategies that increase the volume of product sales. For example, bundling products, offering volume-based discounts, or running flash sales could help boost quantities sold and, in turn, revenue.

- Insight: The distribution of product prices shows skewness, meaning the majority of products are priced within a specific range, while a few high or low-priced items could create outliers.

3. Outliers in Quantity or Total Value

- Insight: Boxplots revealing extreme outliers in quantity or total value suggest that there may be unusual transactions, such as large orders or errors in the data (e.g., duplicate entries or wrong data entry).

- Actionable Strategy: Investigate these outliers to ensure they are legitimate transactions. If the outliers are due to data issues, cleaning the data will improve decision-making accuracy. If the outliers are legitimate, analyze the factors behind large purchases and use that information to target similar high-value customers.