** Analysis of the File:**

* ○ **Dataset Overview**: Understand the dataset's structure, including its dimensions and measures.
* ○ **Data Cleaning**: Verify if the data has been cleaned and prepared for visualization, ensuring there are no missing or inconsistent values.
* ○ **Visualization Review**: Examine the existing visualizations to understand their insights, effectiveness, and areas for improvement.

** Importance of Data Visualization:**

* ○ **Insight Generation**: Data visualization helps in generating insights by presenting data in a graphical format.
* ○ **Trend Identification**: Visualizations make it easier to identify trends, patterns, and anomalies in the data.
* ○ **Decision Making**: Effective visuals aid in making data-driven decisions.
* ○ **Communication**: Visuals communicate complex data in a simple and understandable way.

** Visualization in Tableau:**

* ○ **Dashboards**: Tableau dashboards combine multiple views and provide an interactive interface for exploring data.
* ○ **Charts and Graphs**: Use bar charts, line graphs, scatter plots, pie charts, and heat maps to represent different data aspects.
* ○ **Filters and Parameters**: Add interactivity with filters and parameters to allow users to customize their view.
* ○ **Calculated Fields**: Create new fields to derive additional insights from the existing data.

 **To proceed with the analysis and visualization review, follow these steps**:

* ○ **Open the File**: Open dashboard of super store.twb in Tableau Desktop or Tableau Public.
* ○ **Analyze Calculated Fields and Parameters**: Check for any calculated fields or parameters used in the visualizations and understand their role in enhancing the data insights.
* ○ **Evaluate Interactivity**: Assess the interactivity of the dashboards, such as filters, actions, and tooltips.
* ○ **Identify Key Visualizations**: Highlight the most important visualizations that provide valuable insights and consider creating new visualizations if there are gaps in the analysis.

**1.Bar graph of country and year wise total sales**

1. **Total Sales by Country**: Identify the most and least profitable markets by comparing total sales across countries.
2. **Sales Distribution Across Order IDs**: Determine if sales are concentrated among a few large orders or spread across many smaller ones within each country.
3. **Sales Trends Over Years**: Recognize trends or patterns in sales over time if order IDs correspond to specific years.
4. **Sales Performance Comparison**: Spot anomalies where certain order IDs outperform or underperform.

For detailed insights, access to the visualization or data is necessary.

**2.HISTOGRAM OF REGION WISE SHIPPING CHARGE**

The Tableau histogram reveals the distribution of shipping charges across four regions: Central, East, South, and West. Key insights include:

1. **Distribution of Shipping Charges**:
   * The histogram is divided into bins of shipping charges ranging from 0 to 420, with intervals of 35.
2. **Regional Sales Distribution**:
   * **West Region**: Predominantly contributes the highest count of Item IDs across all shipping charge bins, indicating it is the most active region in terms of item shipments.
   * **Central Region**: Shows significant counts but is less consistent compared to the West. It has a noticeable presence in the middle range of shipping charges.
   * **East Region**: Has a moderate count of Item IDs, with a relatively consistent distribution across different shipping charge bins.
   * **South Region**: Displays a lesser count of Item IDs in lower shipping charge bins, but it increases in higher shipping charge bins.
3. **Trend Analysis**:
   * As shipping charges increase, the West region maintains a high count of Item IDs, while the Central, East, and South regions show more variability.
   * The higher shipping charge bins (350-420) still see a substantial number of shipments from all regions, indicating that higher shipping charges do not significantly deter shipments.
4. **Region Comparison**:
   * The West region consistently outperforms other regions in the number of items shipped, suggesting it is a key market.
   * The Central region has fluctuating counts, indicating varying shipment volumes across different shipping charges.
   * The East and South regions have a lower but consistent shipment volume.

**Specific Observations:**

* **West Region**: High shipment volume across all bins suggests strong market activity regardless of shipping cost.
* **Central Region**: Strong in mid-range shipping costs but less consistent overall.
* **East Region**: Moderate activity, showing steadiness across different bins.
* **South Region**: Lower activity in lower shipping bins but increases in higher bins, indicating higher value or longer-distance shipments.

These insights can guide strategic decisions on regional focus, shipping cost management, and market segmentation.

**3.SCATTER PLOT REGION WISE SALES AND PROFIT**

1. **Sales vs. Profit Relationship**:
   * There's a positive correlation between sales and profit, indicating that higher sales generally lead to higher profits.
2. **Regional Distribution**:
   * **Central Region**: Exhibits a wide range of sales and profits, with several points showing negative profits even at higher sales levels, indicating some unprofitable transactions.
   * **East Region**: Shows a concentration of points with moderate sales and profits, with some outliers indicating significant profits at higher sales levels.
   * **South Region**: Displays a mix of points with both positive and negative profits. There are instances of high negative profits, suggesting some high-cost or low-revenue transactions.
   * **West Region**: Most points are clustered with positive profits, indicating overall profitable sales. There are a few points with high sales and profits, suggesting a few high-value transactions.
3. **Outliers**:
   * Several outliers are noticeable across regions. These include points with extremely high sales and profits, particularly in the West and East regions, suggesting successful high-value transactions.
   * Negative profit outliers are seen in all regions, especially in Central and South, indicating losses on certain sales.
4. **Performance Comparison**:
   * The West region stands out with consistently positive profits, indicating strong performance.
   * The Central region shows variability with both high profits and significant losses, indicating potential areas for improvement.
   * The East and South regions have a mix of profitable and unprofitable transactions, suggesting a need for targeted strategies to improve profitability.

**Specific Observations:**

* **Central Region**: Needs attention to reduce losses and improve profitability.
* **East Region**: Shows potential with high-profit outliers but needs to address variability.
* **South Region**: Has instances of high negative profits, requiring cost control or pricing strategies.
* **West Region**: Performs well with consistent profits, indicating effective sales strategies.

These insights can help in making strategic decisions to enhance profitability and manage regional performance effectively.

**4.DUAL CHARTS FOR SUB CATEGORY WISE TOTAL SALES AND PROFIT**

1. **Sales and Profit Distribution by Sub-Category**:
   * **Phones**: This sub-category has high sales across all regions, especially in the West and Central regions. Despite high sales, the profit margins are relatively low, indicating possible high costs or low pricing strategies.
   * **Chairs**: Sales are also substantial in this sub-category, with significant contributions from the West and Central regions. Profits for chairs appear more consistent and higher compared to phones, indicating better profitability.
   * **Storage**: This sub-category shows lower sales across all regions. Profits are also minimal, with the East and South regions showing very low or negative profits, suggesting that storage items might not be a strong product line in these regions.
2. **Regional Performance**:
   * **West Region**: Consistently contributes significantly to both sales and profits across all sub-categories. It stands out as a key market for both phones and chairs.
   * **Central Region**: Also shows strong performance in terms of sales, particularly for phones and chairs. However, profit margins for phones are lower compared to the West, indicating potential for cost optimization or pricing strategies.
   * **East and South Regions**: Show moderate sales across all sub-categories but struggle with lower profit margins, particularly in the storage category, suggesting a need for strategic improvement.
3. **Product Performance**:
   * **Phones and Chairs**: These are the top-performing sub-categories in terms of sales, but their profitability varies. Phones have high sales but lower profit margins, while chairs maintain better profitability.
   * **Storage**: This sub-category has low sales and profits across all regions, highlighting it as a potential area for reevaluation or discontinuation. The low or negative profits in some regions suggest that the storage category may not be a viable product line without strategic changes.

These insights suggest focusing on improving profitability in high-sales categories like phones and chairs, while reevaluating the strategy for lower-performing sub-categories like storage. Additionally, regional strategies could be tailored to boost profitability in the East and South regions.

**5.TOP 10 CUSTOMERS PACKED BUBBLE ON THE BASIS OF TOTAL QUANTITY**

* **Top Customer**: John Lee stands out as the top customer with the largest bubble, indicating the highest total quantity purchased.
* **High-Value Customers**: Arthur Prichep, Chloris Kastensmidt, and Edward Hooks also have sizable bubbles, showing they are significant contributors to total quantity purchased.
* **Customer Distribution**: The packed bubbles indicate a mix of customers with varying quantities. While some, like Emily Phan and Jonathan.

**At last, we created a dashboard to make analysis easy in one view.**