Find and Plot country wise popular product b. Find and Plot bottom 10 products based on total sale c. Find and Plot top 5 purchase order d. Find and Plot most popular products based on sales e. Find and Plot half yearly sales for the year 2011

To achieve the specified data visualization tasks using Tableau with a retail dataset, here’s a step-by-step guide to create each visualization effectively. This will help you derive insights from your data through visual analysis. Again, I'll assume that your dataset includes typical retail data fields like Country, Product Name, Sales, Order Date, and possibly Order ID.

**a. Country Wise Popular Product**

1. **Prepare your dataset** by loading it into Tableau and ensuring the data types are correctly identified.
2. **Drag "Country"** to the Rows shelf.
3. **Drag "Product Name"** to the Columns shelf.
4. **Create a calculated field** named "Max Sales by Product" using a calculation such as **{ FIXED [Country], [Product Name] : SUM([Sales]) }**. This calculation will give you the sum of sales for each product in each country.
5. **Drag "Max Sales by Product"** to the Color shelf on the Marks card and sort it to identify the highest values.
6. **Create another calculated field** to identify the most popular product per country, using a calculation like **WINDOW\_MAX([Max Sales by Product])**.
7. **Filter the visualization** to only show the maximum or use a Rank calculation to display only the top product per country.
8. **Choose an appropriate chart type**, such as a bar chart, and make sure to adjust colors and labels for clarity.

**b. Bottom 10 Products Based on Total Sale**

1. **Drag "Product Name"** to the Rows shelf.
2. **Drag "Sales"** to the Columns shelf.
3. **Sort the Sales** in ascending order.
4. **Limit the view** to the bottom 10 by setting a filter on the index or directly filtering by the "Bottom N" option in the filter pane for Product Name.
5. **Choose a bar chart** to visualize this data, which will clearly show the products with the lowest sales volumes.

**c. Top 5 Purchase Order**

1. **Drag "Order ID"** or equivalent to the Rows shelf.
2. **Drag "Sales"** to the Columns shelf.
3. **Sort the data** in descending order based on the total sales value.
4. **Apply a filter** to keep only the top 5 orders visible.
5. **Use a bar chart** to display these top orders, facilitating an easy comparison of their sales values.

**d. Most Popular Products Based on Sales**

1. **Drag "Product Name"** to the Rows shelf.
2. **Drag "Sales"** to the Columns shelf.
3. **Sort the sales data** in descending order.
4. **Optionally, apply a filter** to select a specific number of top products, like top 10 or 20, based on your interest.
5. **Visualize with a bar chart**, which is ideal for comparing individual items' performance.

**e. Half Yearly Sales for the Year 2011**

1. **Create a calculated field** named "Half Year" that will divide the year into two halves. The calculation might look like: **IF MONTH([Order Date]) <= 6 THEN "H1" ELSE "H2" END**.
2. **Drag "Half Year"** and "Year" from your Order Date to the Columns shelf.
3. **Drag "Sales"** to the Rows shelf.
4. **Add a year filter** for 2011.
5. **Choose a bar chart or line chart** to display the sales data, which will help in visualizing the sales trend across the two halves of the year.

For each visualization, ensure you adjust tool tips, formatting, and labels to make your charts informative and visually appealing. This helps stakeholders quickly understand the data insights without needing to delve deep into the raw data. These operations will empower decision-makers in your organization with actionable insights derived from your retail data.

**1. Connect to Your Data**

* **Open Tableau** and connect to your data source. Tableau supports a wide range of sources like Excel, SQL databases, text files, and more.
* **Load your data** into Tableau by dragging the relevant tables or sheets into the workspace.

**2. Data Inspection**

* **Review your data**: Immediately after loading, inspect your data in the data source tab to identify obvious issues like missing values, incorrect data types, or irrelevant columns.

**3. Handling Missing Values**

* **Identify missing values**: Check for nulls or missing data points. Tableau displays nulls clearly in the data grid.
* **Decide on an approach**: Depending on your analysis, decide whether to fill in missing values, filter them out, or leave them as is. For filling, you can use calculated fields to replace nulls with a default value, average, median, etc.

**4. Filtering Irrelevant Data**

* **Exclude irrelevant data**: If certain rows or columns are not needed for your analysis, you can exclude them directly in the data source tab by using the filter options.

**5. Cleaning Text and Dates**

* **Standardize text**: Use calculated fields to trim spaces, convert text to upper or lower case, or perform other text cleaning operations.
* **Parse dates**: If your dates are not recognized, use calculated fields to convert string fields into date fields using functions like **DATEPARSE()** or **MAKEDATE()**.

**6. Splitting Columns**

* **Split complex columns**: For columns that contain multiple pieces of information, like an address, use the split option to divide the data into separate columns based on a delimiter.

**7. Data Types**

* **Correct data types**: Ensure that each field has the correct data type (e.g., numerical, string, date). Change the data type by clicking on the icon to the left of the column name in the data source tab.

**8. Creating Calculated Fields**

* **Add new metrics**: Create calculated fields to add new metrics that are derived from existing data, such as ratios or year-over-year growth calculations.

**9. Merging and Joining Data**

* **Combine multiple sources**: If your analysis requires data from multiple tables or sources, use joins or blends to combine the data appropriately within Tableau.

**10. Grouping**

* **Group similar values**: Create groups to combine similar values under a single category, which can be particularly useful for categorical data with slight variations in naming.

**11. Aliases**

* **Set aliases for values**: If certain values are not reader-friendly or too long, you can create aliases to make them more understandable.

**12. Saving the Cleaned Data**

* **Extract the data**: Once cleaning is complete, you might want to create an extract of your data for faster performance. This also allows you to use Tableau’s data engine capabilities, which can handle data more efficiently.

Top of Form