EXERCISE 01: A dashboard to understand profitability

Let's say you've been tasked with helping management find which items are the least profitable. Management feels that most of the least profitable items should be eliminated from their inventory. However, since you've done your analysis, you've discovered that certain items, while not profitable overall, have made a profit at times in various locations. Your primary objective is to give management the ability to quickly see an analysis of the least profitable items to identify whether an item has always been unprofitable, answering the question, "Is the least profitable item always unprofitable?" This example will combine aspects of a guided analytics dashboard and an exploratory tool.

Building the views

Use the Superstore Sales dataset and follow these steps to build the individual views that will form the basis of the dashboard:

1. Create a bar chart showing profit by category. Sort the categories in descending order by the sum of profit.
2. Add the **Department** field to **Filters** and show a filter. To accomplish this, use the drop-down menu of the **Department** field in the data pane and select **Show Filter**.
3. Name the sheet Overall Profit by Category:

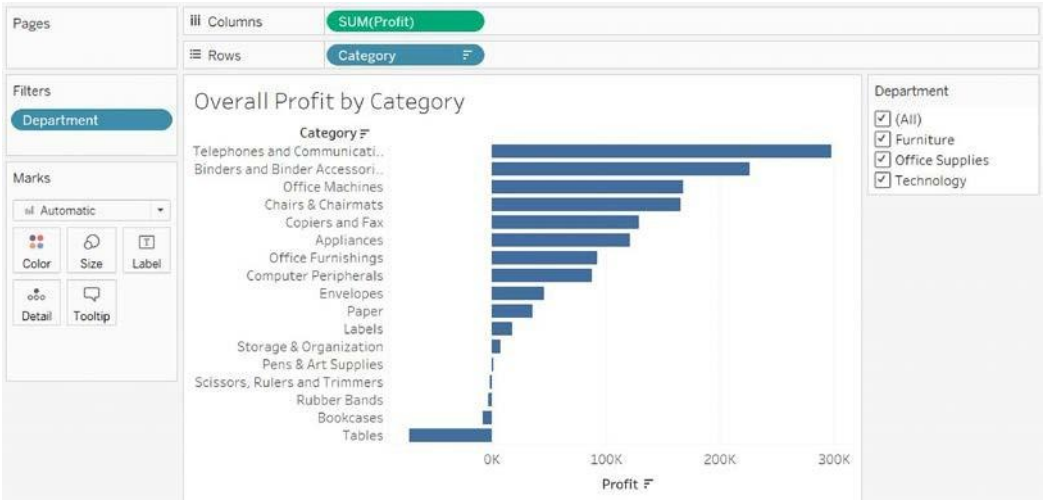

Figure 1: A bar chart showing the sum of profit by category with Department as a filter

4. Create another similar view showing profit by item. Sort the items in descending order by the sum of profit.
5. You'll notice that there are too many items to see at once. For your objectives on this dashboard, you can limit the items to only the top 10 least profitable ones. Add the **Item** field to the **Filters** shelf, select the **Top** tab, and adjust the settings to filter by field. Specify **Bottom 10** by Sum(Profit):

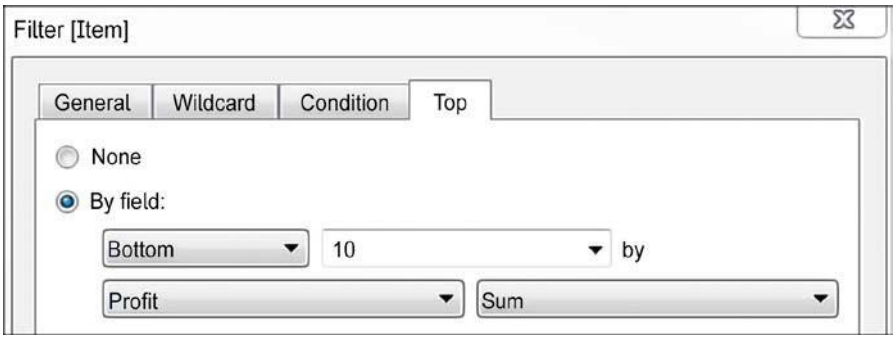

Figure 2: Use the Top tab to set the number of items to display

6. Rename the sheet Top 10 Least Profitable Items:

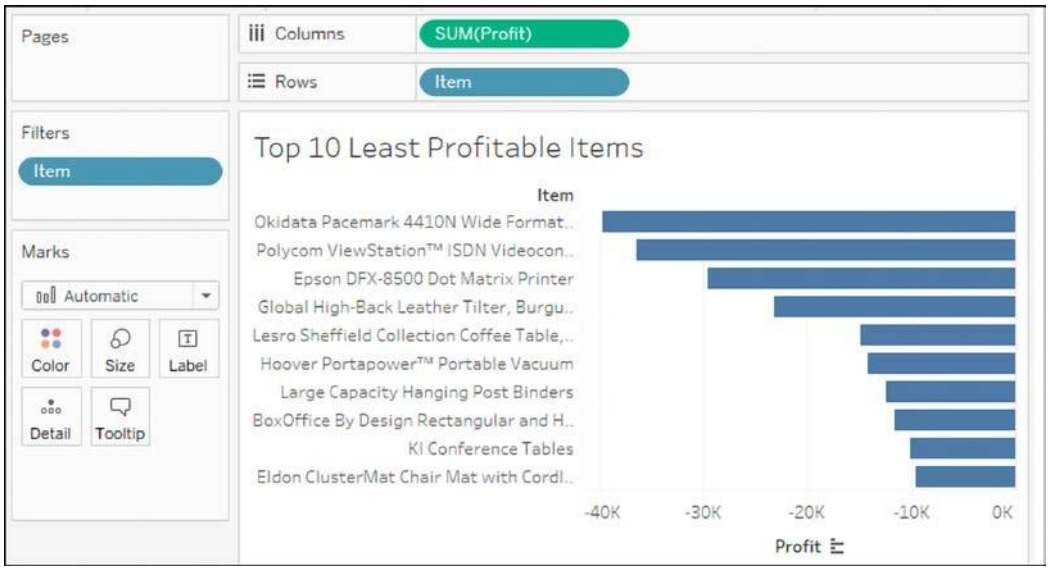

Figure 3: The resulting bar chart shows the top 10 least profitable items

7. Create another sheet that displays a filled map of profit by state. You can accomplish this rather quickly by double-clicking the **State** field in the data window and then dropping **Profit** on the **Color** shelf.
8. Rename the sheet to Profit by State:

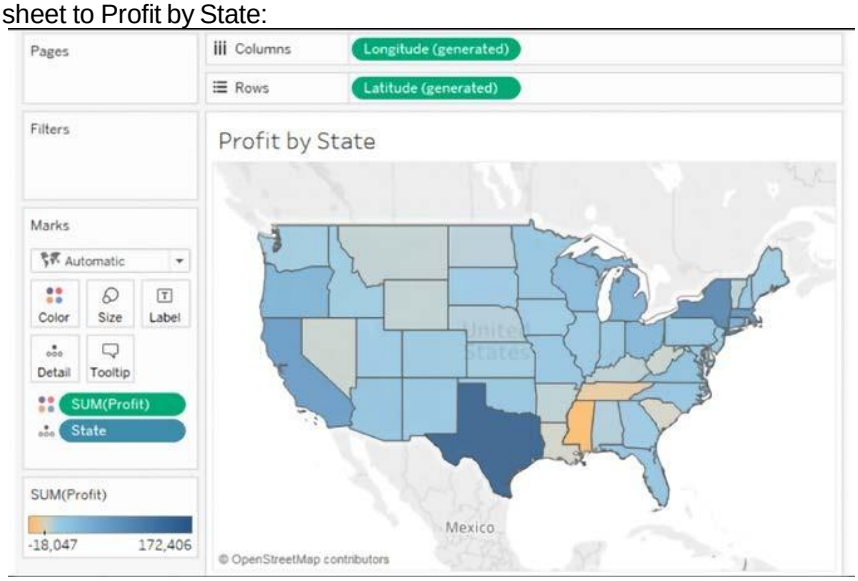

Figure 4: A filled map showing profit by state

9. Create one final sheet to show when profits were made or lost. Ensure that the **Order Date** field has been added as the **Quarter** date value and that it is continuous (green).
10. Add a linear trend line. To do this, switch to the **Analytics** tab of the left sidebar and drag **Trend Line** from **Model** to the view. Alternatively, right-click a blank area of the canvas of the view and select **Trend Lines** | **Show Trend Lines**.
11. Rename the sheet to Profit Trend:

Figure 5: A line chart showing the trend of profit by quarter

Now that you've created the views that will make up the dashboard, let's start to put the dashboard together!

Creating the dashboard framework

At this point, you have all the necessary views to achieve the objectives for your dashboard. Now, all that remains is to arrange them and enable the interactivity that's required to effectively tell the story:

1. Create a new dashboard by clicking the **New Dashboard** tab to the right of all existing worksheet tabs or by selecting **Dashboard** | **New Dashboard** from the menu.
2. Rename the new dashboard Is Least Profitable Always Unprofitable?.
3. At the bottom of the left sidebar, check **Show dashboard title**.
4. Add the views to the dashboard by dragging them from the **Dashboard** pane in the left sidebar and dropping them into the dashboard canvas. Arrange them as follows:

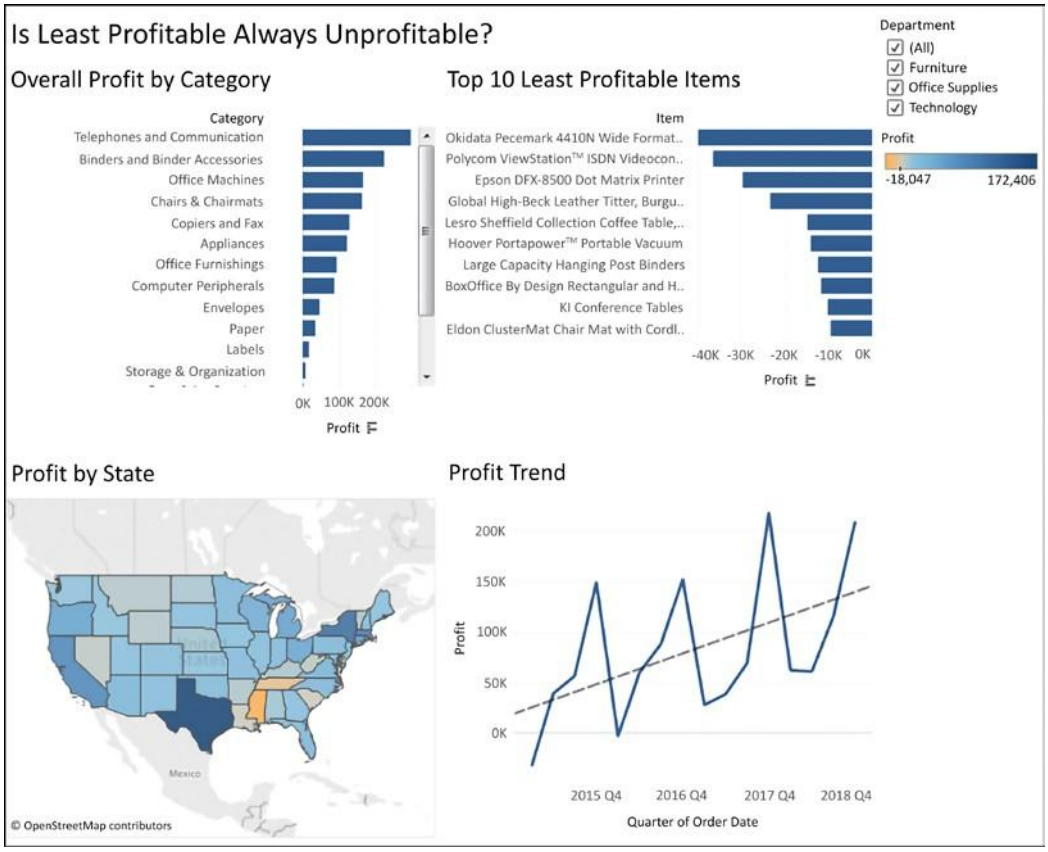

Figure 6: All views are placed on the dashboard

After adding views to the dashboard, you'll want to take some time to reposition and resize various elements and views.

5. Use the drop-down menu on the **Department** filter and change the control to **Single Value** (drop- down).
6. You'll notice that changing the value of the filter only changes the **Overall Profit by Category** view. You can adjust which views the filter applies to by using the drop-down menu. Using the drop-down menu, select **Apply to Worksheets | All Using This Data Source**.
7. Options for applying filters may be set using the drop-down on the filter control or on the field on the **Filters** shelf in the view. The options include the following:

   - **All Using Related Data Sources**: The filter will be applied to all data sources where the field used for filtering is related between data sources. Relationships may be edited from **Data | Edit Relationships** on the main menu.
   - **All Using This Data Source**: The filter will be applied to any view using the data source as the primary data source.
   - **Selected Worksheets...**: The filter will be applied to the worksheets you select.
   - **Only This Worksheet**: The filter will be applied only to the current

worksheet. Now, let's get back to creating our dashboard framework.

From the left sidebar, drag and drop a **Text** object above **Overall Profit by Category** and enter the following instructions:

1. Select a Department from the drop-down
2. Select a category below
3. Select an Item below

8. Using the grip, move the **Department** filter immediately above the **Top 10 Least Profitable Items** view.
9. Size the text object to align the **Top 10** view with the overall view.
10. Move the **Profit** color legend below the **Profit by State** view.
11. Use the drop-down menu of **Overall Profit by Category** to **Fit** | **Entire View**. This will ensure that all of the categories are visible without the need for a scrollbar.
12. Additionally, fit **Top 10 Least Profitable Items** to **Entire View**.

At this point, your dashboard should look similar to the following:

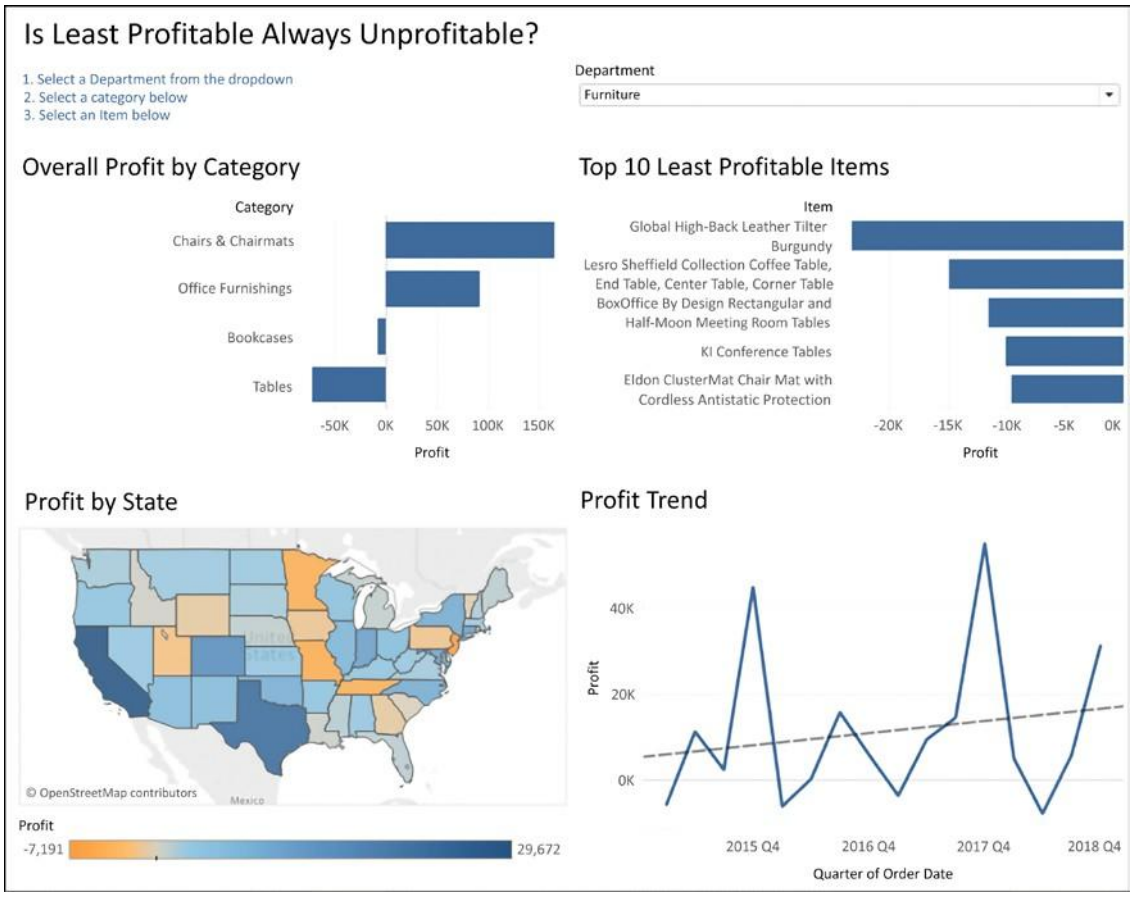

Figure 7: The polished dashboard with rearranged and resized objects

We now have a dashboard with all the views we want to include. As you've seen, it's easy to add views and objects and rearrange them as desired.