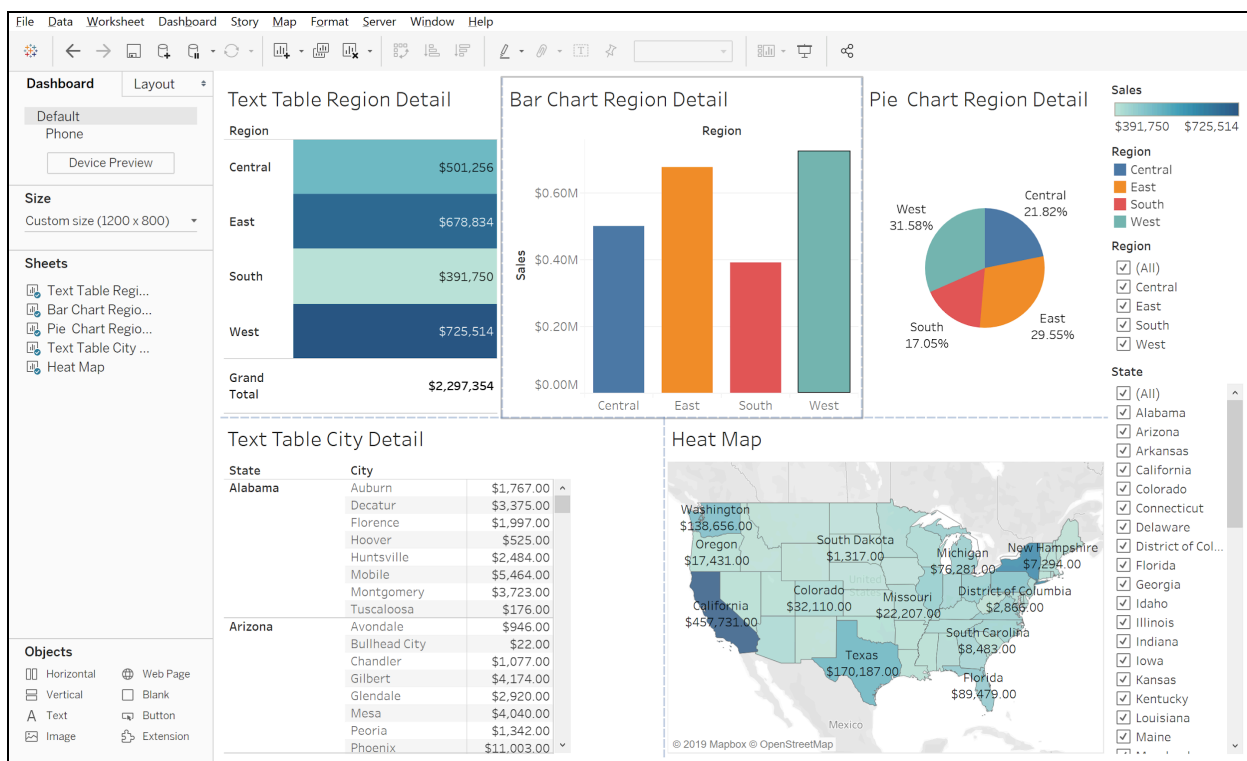


Tableau Intermediate Students

- Files: [Tableau Basic Dashboard](#)
- Review on Tableau Basics



Quick Calculations

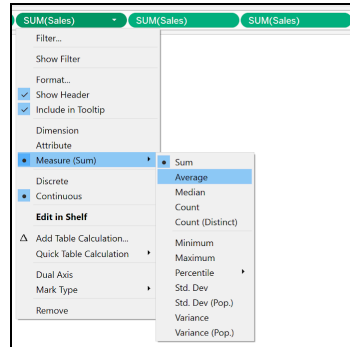
1. Create a new worksheet
2. Drag region pill to the rows shelf
3. Drag sales pill to the rows shelf

Columns	
Rows	Region SUM(Sales)

4. Hover over the SUM(Sales) pill on your rows shelf, click on it and do cmd + c (or ctrl + c for windows users) and drag that pill next to SUM(Sales). Do this 4 times

Columns	
Rows	Region SUM(Sales) SUM(Sales) SUM(Sales) SUM(Sales)

5. Hover over the second Sum(Sales), click on the small arrow within the pill to look for the option measure, and select average.



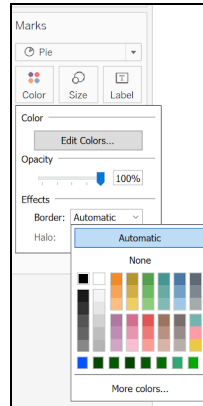
6. Apply this same step with the other two pills, one for calculating the median and the other one with count (i.e. the number of instances for sales within this region)
7. Go to Show me and change the data visualization to a Text Table and drag the **Measure Name** pill located in columns to the rows shelf.
8. Format each pill as the default currency.

Region		
Central	Sales	501,256
	Avg. Sales	\$215.78
	Median Sales	\$46.00
	Count of Sales	2,323
East	Sales	678,834
	Avg. Sales	\$238.35
	Median Sales	\$55.00
	Count of Sales	2,848
South	Sales	391,750
	Avg. Sales	\$241.82
	Median Sales	\$55.00
	Count of Sales	1,620
West	Sales	725,514
	Avg. Sales	\$226.51
	Median Sales	\$61.00
	Count of Sales	3,203

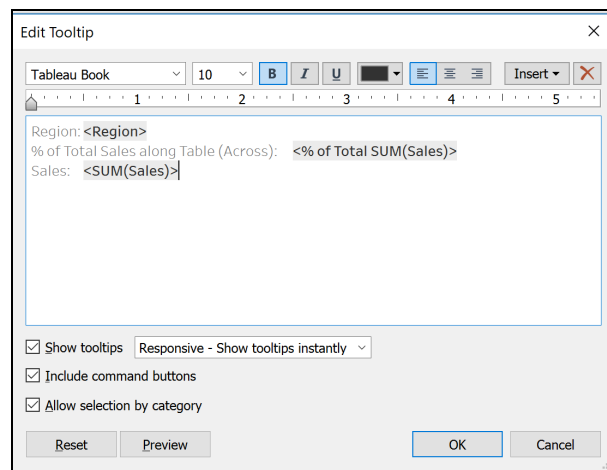
9. Name this worksheet **Region Stats**

- **Marks - Aesthetics and Tooltip settings**

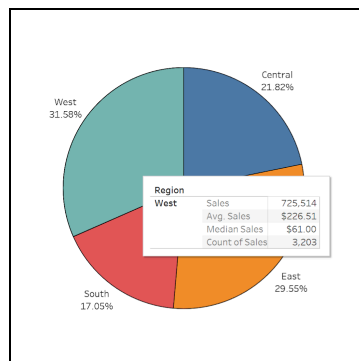
1. Go to the Pie Chart Region Detail
2. Hover over your marks, specifically the color mark and change the border to black.



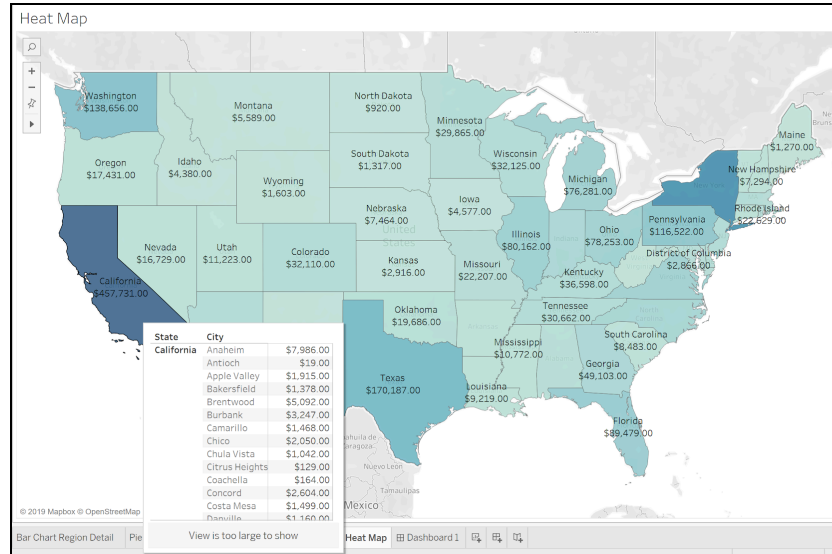
3. Go to your tooltip mark and click it, the following window should be displayed



4. Delete the content within it, hover over the upper corner where it says insert. A menu will dropdown, select sheets that is the first option and select Region Stats and click ok. Whichever region of the pie chart we hover over, this will reference the stats for the particular region we previously created.

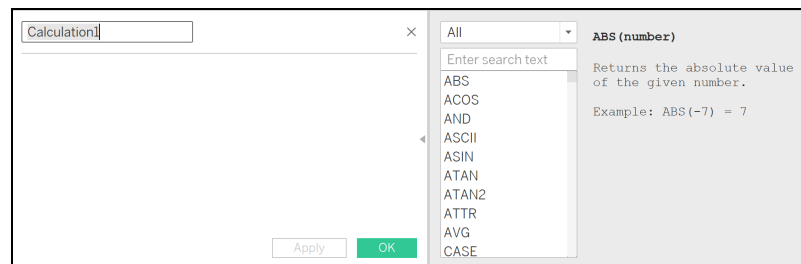


5. Now go to the Heat Map worksheet and follow the same process in order to use the Tooltip and insert **Text Table City Detail**. As you can see on the image below it works well but some states have many cities.

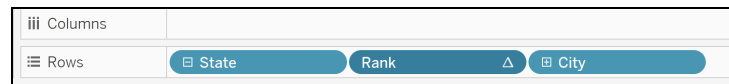


- **Create calculation field**

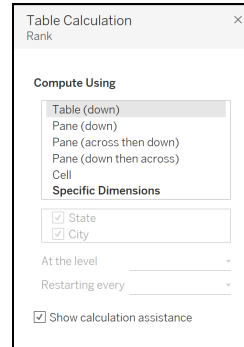
- Create a new worksheet.
- What we will implement is a ranking calculated field that will return the top 5 cities with the largest amount of sales.
 - Hover over to the data pane and select create a calculated field



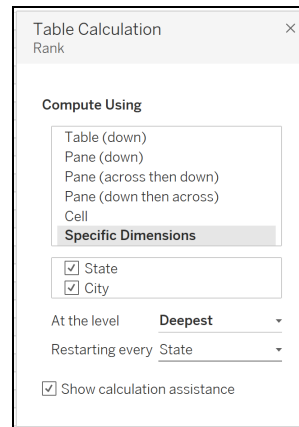
- Rename calculation 1 to Rank, and type below **Rank(Sum([Sales]))** and click ok.
- Hover over Rank located on your data pane and right-click on it and look for the option convert to discrete.
- Drag and drop Rank pill between State and City



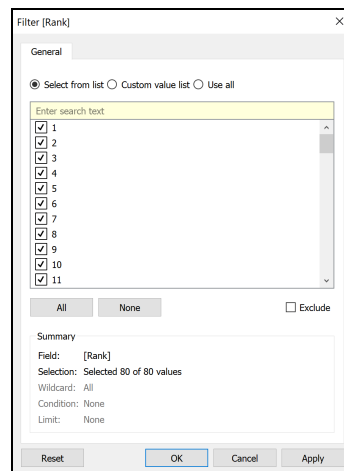
- Right-click on this Rank pill and look for the option Edit Table Calculation. This window will pop out



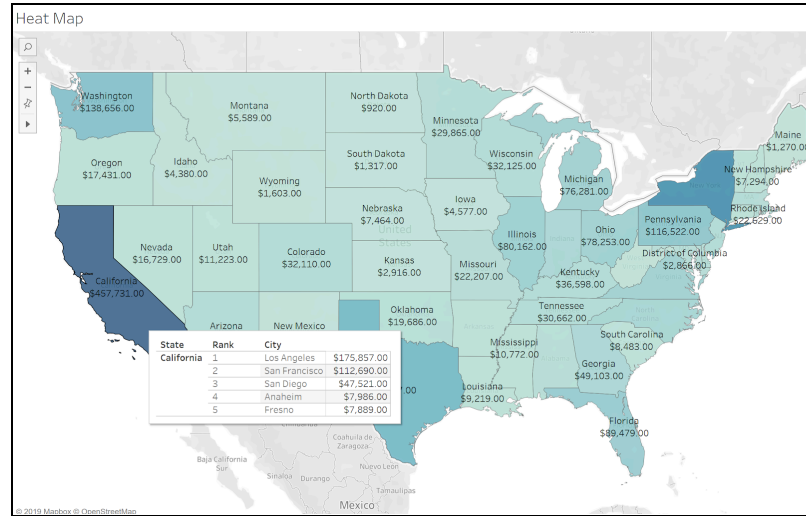
6. Select **specific dimensions**, and restarting every **state**



7. Right-click on the rank pill located on the rows shelf, select filter

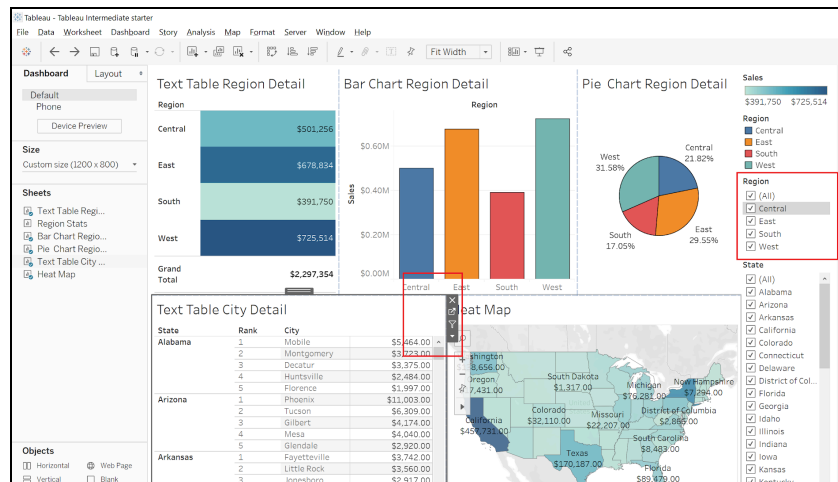


8. First click none, then check 1-5 boxes and click ok. Now we have our top 5 cities per state. By doing this we have more visibility on the Heat map tooltip we previously implemented.

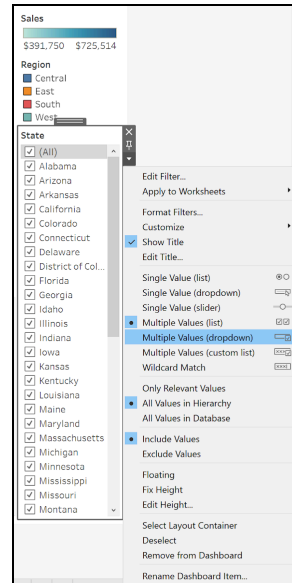


- **Making Dashboard Dynamic & Informative**

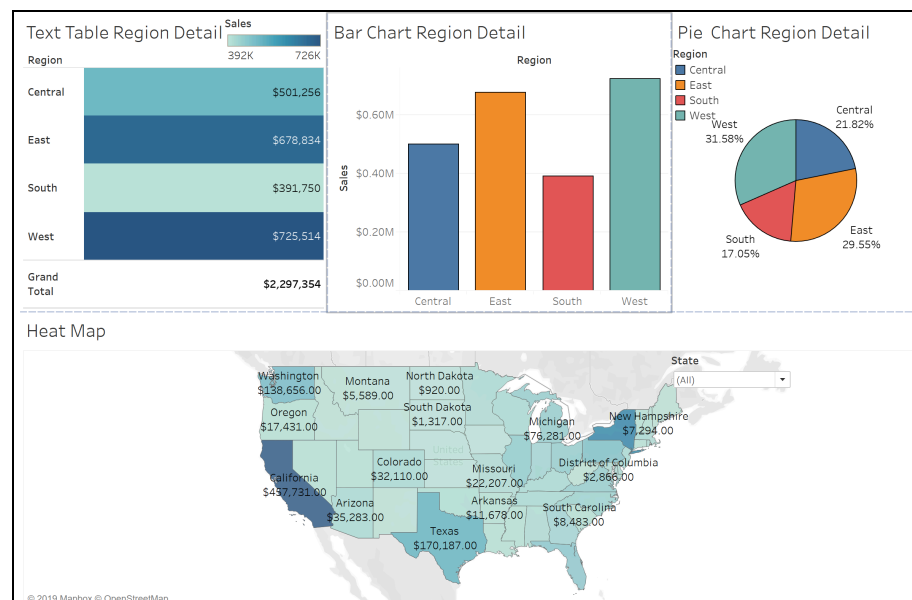
1. Go to dashboard 1 and duplicate it.
2. Delete **Text Table City Detail** from this dashboard



3. Change the filter menu format to Multiple values dropdown



4. Go back again to that menu and select the option **floating**, when using floating this enables us to free some space in our dashboard by having the freedom to move around the legends and filter menus on any location within our dashboard. Do this for the states filter menu, Region and Sales legend in order to order them in this image displayed below.

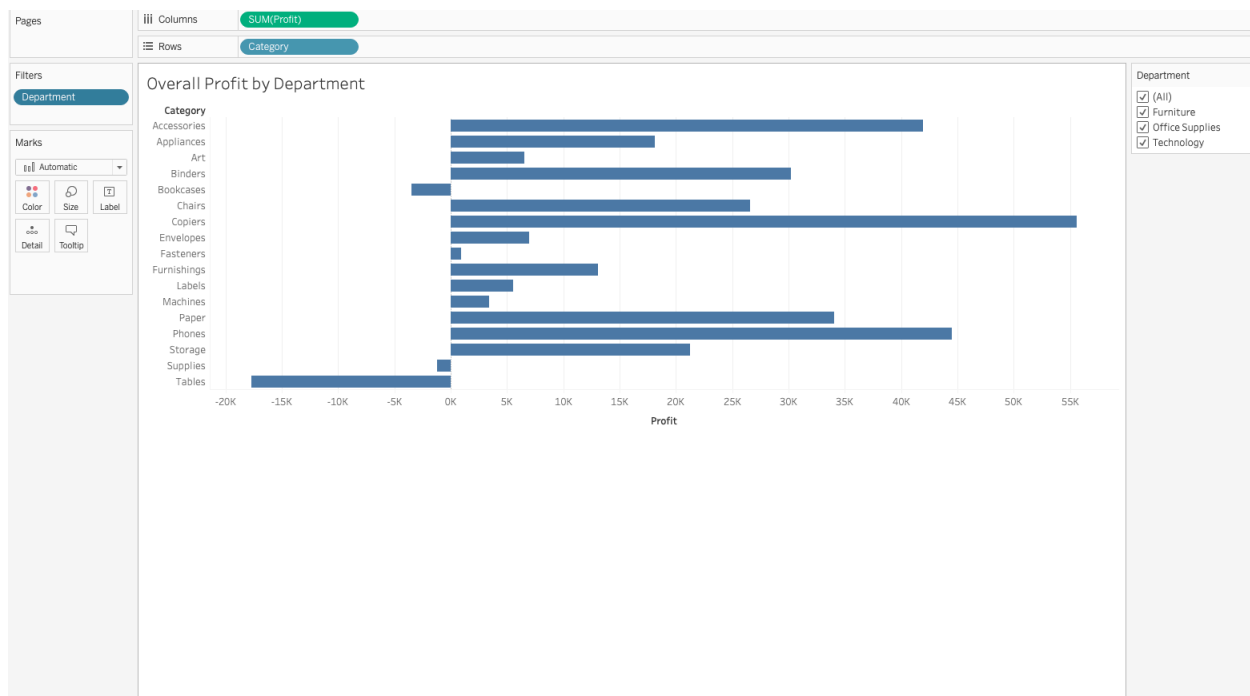


5. Rename this dashboard **Region dashboard**

Overall Profit by Category

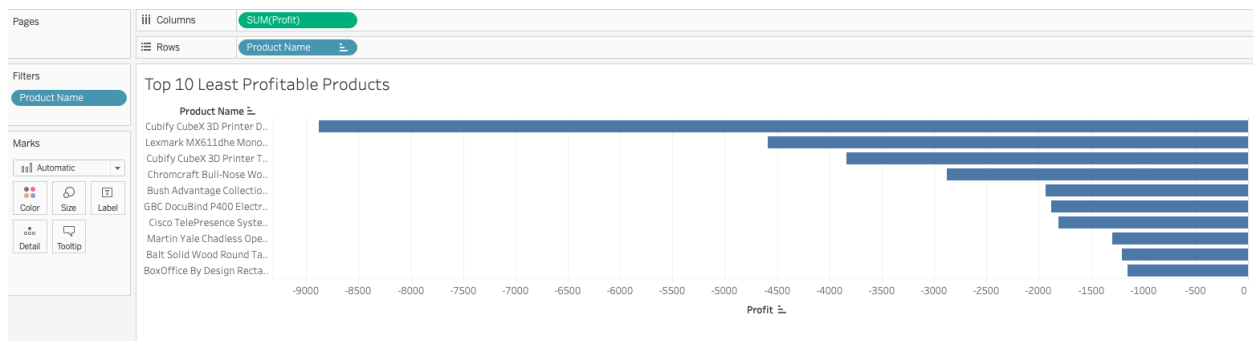
Use the Superstore Sales dataset to form the basis of the dashboard:

1. Create a bar chart showing profit by **Category**. Sort the Category in descending order by the sum of profit.
2. Add the **Department** field to **Filters** and make the filter visible in the view. 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**.

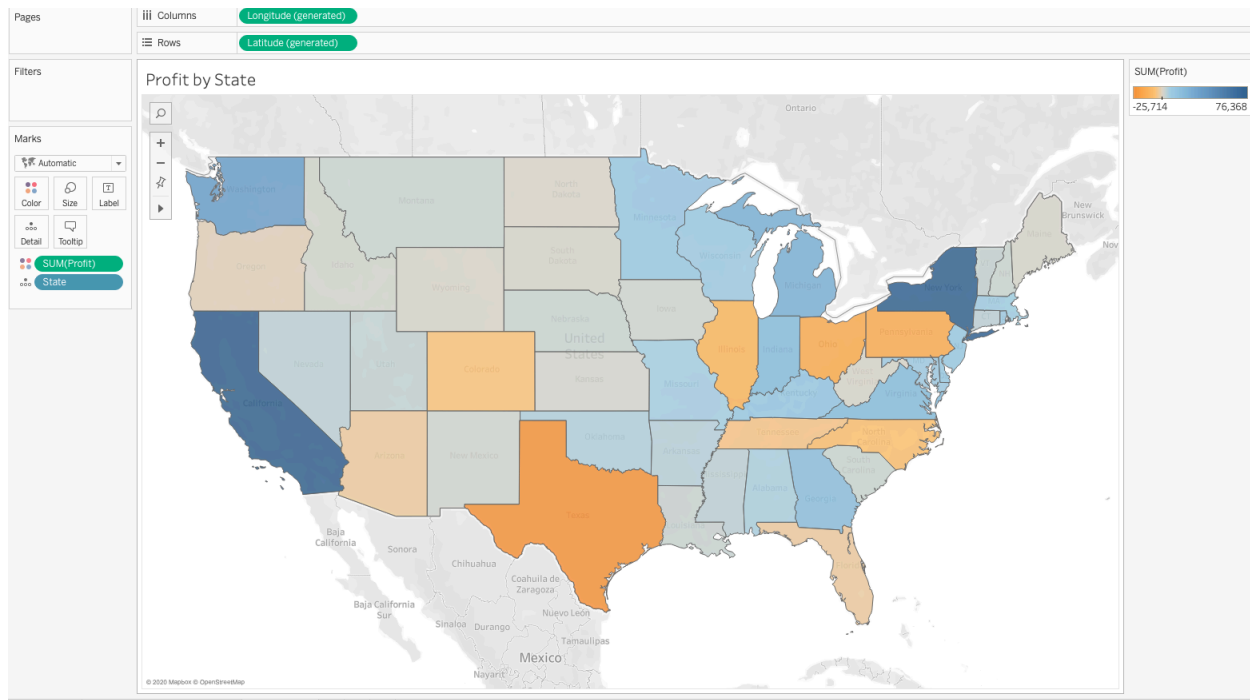


Least Profitable Products

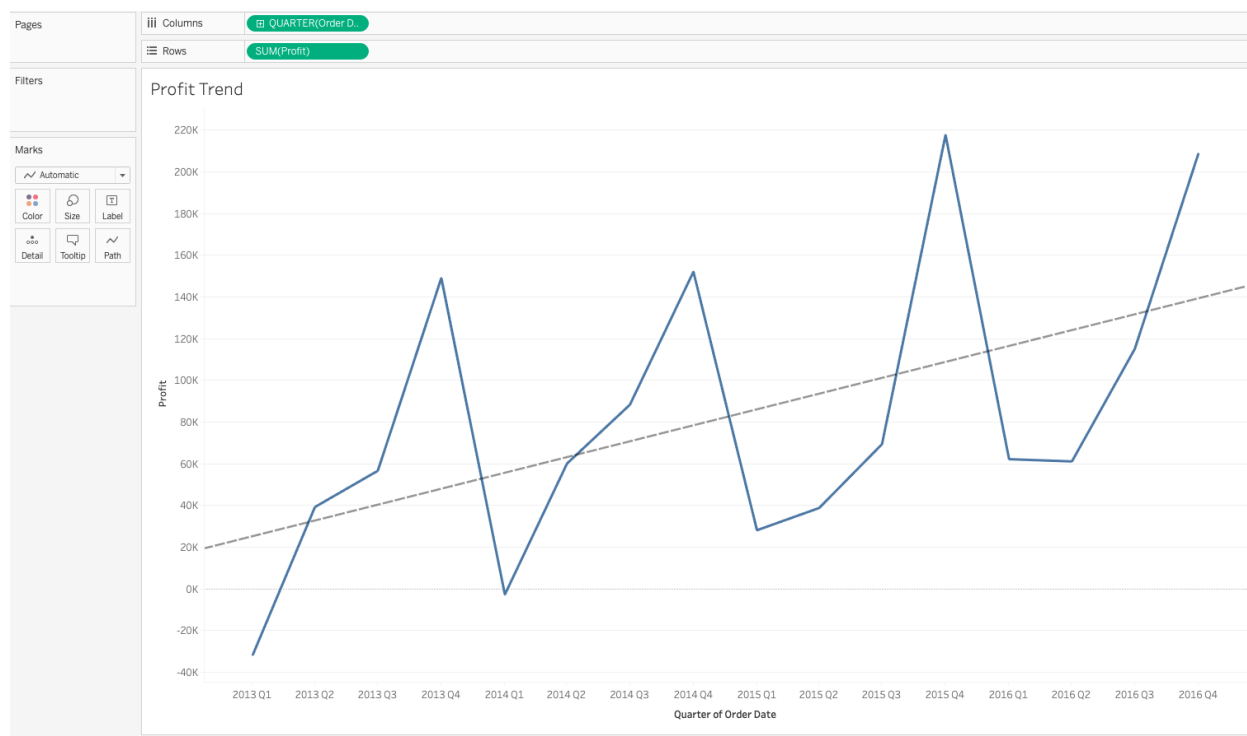
1. Create another, similar view showing profit by **Product Name**. Sort the items in descending order by the sum of profit.
2. You'll notice that there are too many items to see at one time. You can limit the items to only the top 10 least profitable. Add the **Product Name** field to the filters shelf, select the **Top** tab, and adjust the settings to filter By field. Specify the Bottom 10 by Sum (Profit):
3. Name the sheet as **Top 10 Least Profitable Products**:



7. Create a new (blank) 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** Marks shelf.
8. Change the **State** mark from **Detail** to **Text** (Label)
9. Rename the sheet to **Profit by State**:



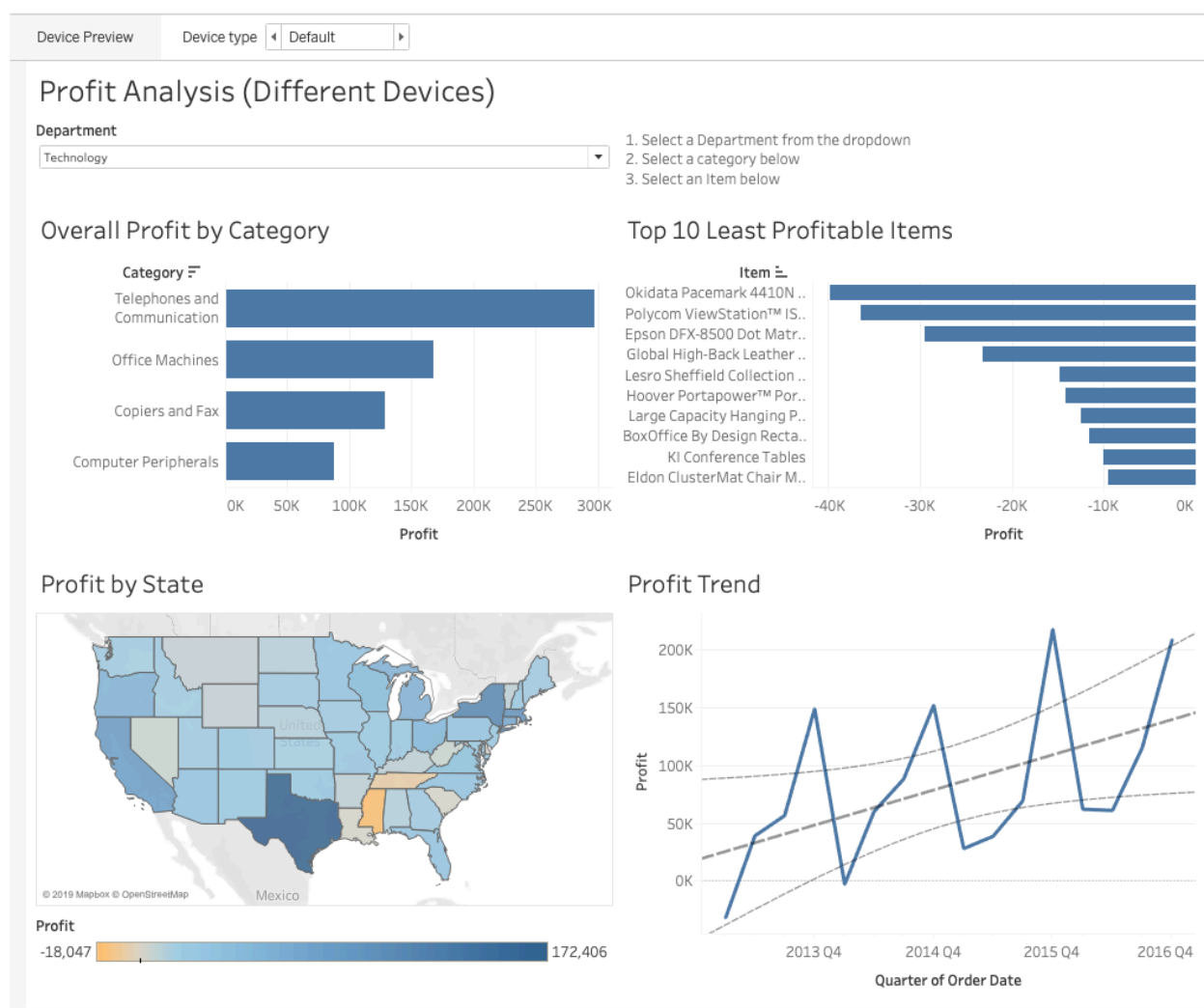
9. Create one final sheet to show when profits were made or lost. Ensure that the **Order Date** field has been added as the **Quarter** date value and that it is continuous (green).
10. Add **Profit** to the **Row** shelf.
11. Add a linear trend line. To do this, switch to the **Analytics** tab of the 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**:



Creating the dashboard framework

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. Name the new dashboard as: **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 of the left sidebar and dropping them into the dashboard canvas. Arrange them as follows: (dropping the sheets in left to right order or try double clicking on each in the following order)
 - Overall Profit by Category
 - Top 10 Least Profitable Products
 - Profit by State
 - Profit Trend
5. After adding views to the dashboard, you'll want to take some time to reposition and resize various elements and views.
6. Use the drop-down menu on the **Department** filter and change the control to a **Single Value (dropdown)**.

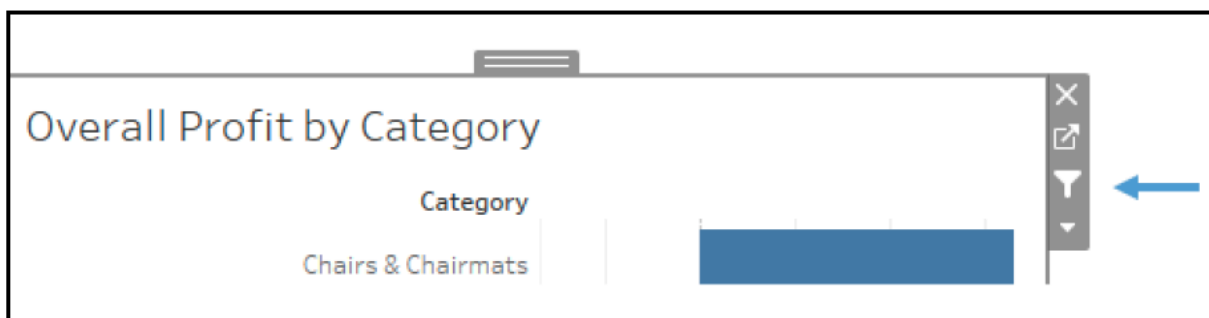
7. You'll notice that changing the value of the filter only changes the **Overall Profit by Category** view. You can adjust which views the filter applies to by using the drop-down menu. Using the drop-down menu, select **Apply to Worksheets | All Using This Data Source**.
8. From the left sidebar, drag and drop a **Text** object above **Overall Profit by Category** and enter the following instructions:
 1. Select a **Department** from the dropdown
 2. Select a **Category** below
 3. Select a **Item** below
9. Using the grip, move the **Department** filter immediately above the **Top 10 Least Profitable Items** view.
10. Size the text object to align the **Top 10 view with the Overall** view.
11. Move the **Profit** color legend below the **Profit by State** view.
12. 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.
13. Additionally, fit the **Top 10 Least Profitable Items** to **Entire View**.



You now have a framework that will support the telling of the data story. Your audience will be able to locate the least profitable items within the context of a selected category. Then, the selection of an item will answer the question as to whether it has always been unprofitable in every location. To enable this flow and meet your objectives, you'll often need to enable interactivity.

Adding Interactivity

1. Click the **Use as Filter** button on the **Overall Profit by Category** view. This will cause the view to be used as an interactive filter for the entire dashboard. That is, when the user selects a bar, all other views will be filtered based on the selection:



2. From the main menu, select **Dashboard | Actions**. You'll see a list containing one action named Filter 1 (generated). This is the action that was created when you selected **Use as Filter** previously:

Name:

Source Sheets

☒ Is Least Profitable Always Unpr... Run action on:

☒ Overall Profit by Category
☐ Profit by State
☐ Profit Trend
☐ Top 10 Least Profitable Items

☐ Run on single select only

Target Sheets

☒ Is Least Profitable Always Unpr... Clearing the selection will:

☒ Overall Profit by Category
☒ Profit by State
☒ Profit Trend
☒ Top 10 Least Profitable Items

☐ Leave the filter
☒ Show all values
☐ Exclude all values

Target Filters

☐ Selected Fields ☒ All Fields

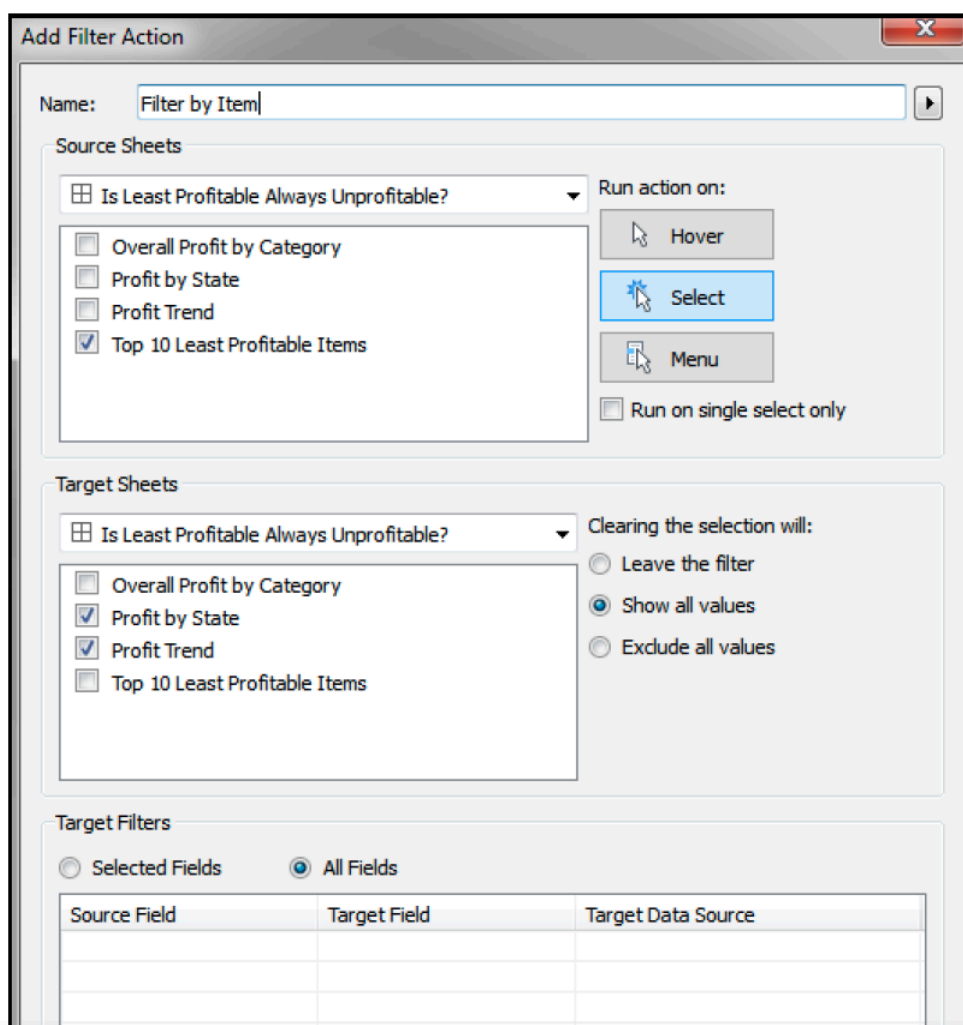
Source Field	Target Field	Target Data Source

3. Click the **Add Action** > button and select **Filter**. The resulting dialog gives you options for selecting the source and target, as well as additional options for the action.

4. Here, we want an action that filters everything except the **Overall Profit by Category** view when the user selects

an item. In the **Add Filter Action** dialog, set **Source Sheets** to **Top 10 Least Profitable Items**, and **Target Sheets** to **Profit by State and Profit Trend**. Make sure that the action is set to run on Select.

Name the filter: **Filter by Item**, and then click OK on this dialog.



You now have three filters (two are actions) that drive the dashboard:

- Selecting a Department from the drop-down will filter the entire dashboard (and actually all views in the workbook as you set it to filter every view using the data source)
- Selecting a Category (clicking a bar or header) will filter the entire dashboard to that selection
- Selecting an Item (clicking a bar or header) will filter the Profit by State and Profit Trend dashboards

You can clear a selection in a view by clicking a blank area or by clicking the selected mark one more time. For example, if you clicked the bar for Bookcases to select it (and thus filter the rest of the dashboard), you may click the bar one more time to deselect it. Experiment with the filters and actions to see how your dashboard functions.

Hide all Sheets is available if you right click over the Dashboard tab. Hiding all sheets allows you to focus on the Dashboard view only.