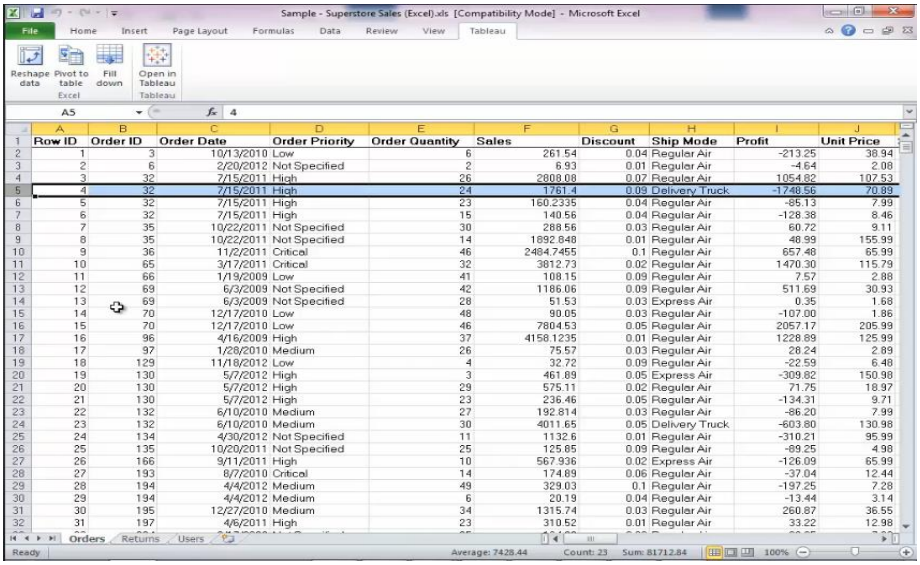
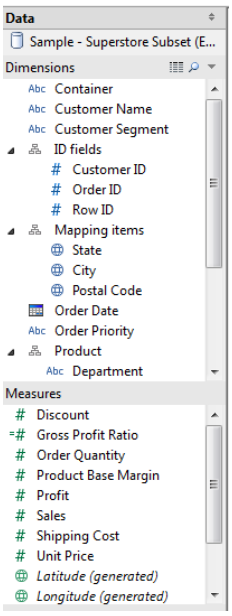
Tableau 8 Tutorial: Creating Dashboards

Connecting to Data

- In this tutorial, we will be using the Superstore Subset, which is an Excel file containing retail stores sales data. The data contains different measures formatted in terms rows and columns, as shown below

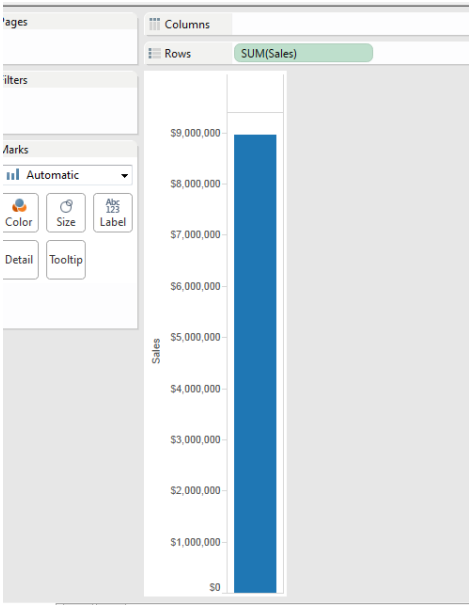


- To connect to the Superstore Subset, on the Home Screen, click "Connect to Data"
- Here you see the different files and programs you can use to analyze data. Tableau can import from data sources such as Excel, CSV, and text file, as well as SQL Server, Oracle, MySQL, Hadoop, Microsoft PowerPivot, and Salesforce. To import data, simply click on "Connect to Data" and select the file type our source from which you wish to import. In this tutorial, however, we will be using the Superstore Subset sample data provided by Tableau.
- Under the Saved Data Sources, select Sample – Superstore Subset
- If prompted, click "Connect Live"
- Now, notice that we can see the Dimensions and measures that are important straight from the Excel sheet. You Should now see Dimensions and Measures

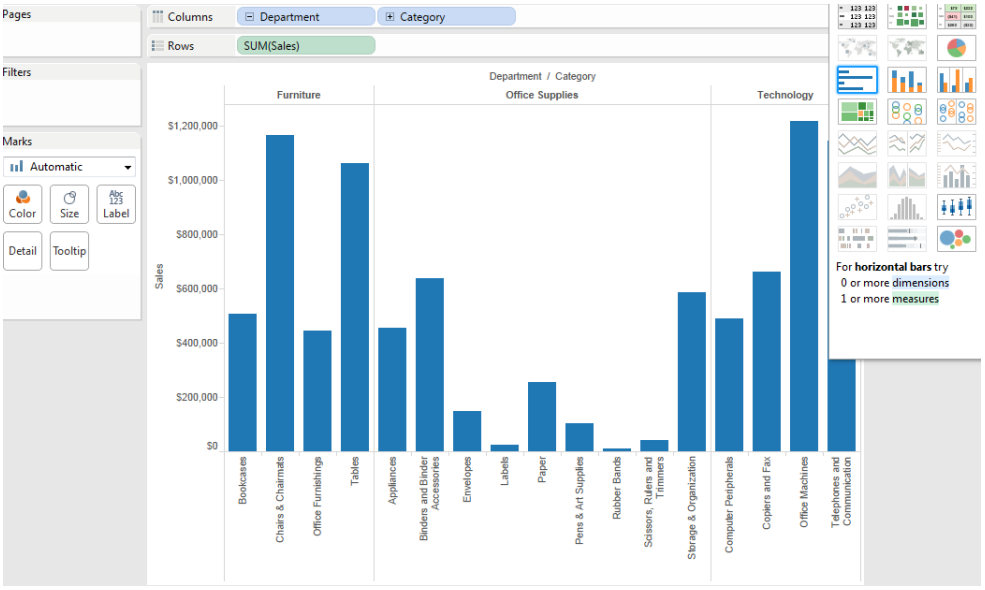
- 

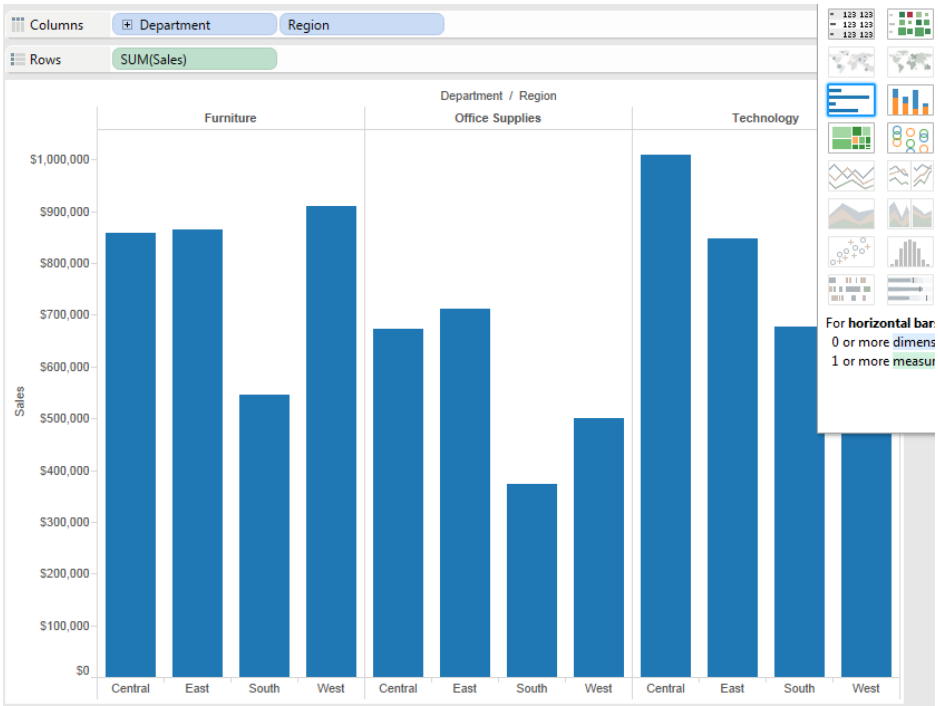
    - Dimensions are the categories that we will use to slice our data
    - Measures are the numbers we want to view, or measure

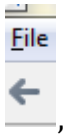
Creating a Bar Chart

- Drag the "Sales" measure into the bottom left hand field box that says "Drop Field Here"
- Your screen should now look like this:
- 

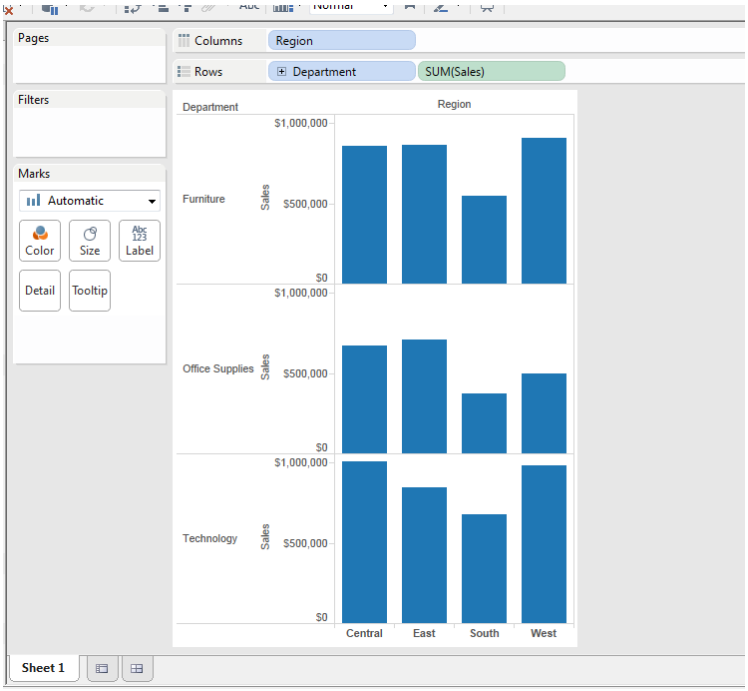
- Tableau gives us the aggregate sales in our data set. Now that we have a measure, we can now slice this measure by a Dimension. Let's start with Product Category.
- Drag Departments into the box above the Sales graph.

- Our Sales data is now broken up by three Departments: Furniture, Office Supplies, Technology
- When you hover over the bars, you can plainly see the Department and the exact sales figure corresponding to it.
- Now, let's break down this even further by dragging Product Category over
- 

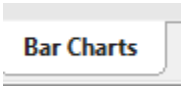
- Now our data is sliced not only by Department, but by product category
- Now replace Category with the Region Dimension. Notice how easy it is to slice the data many different ways.
- 

- Also notice that you can click the back button 

, and switch back and forth.
- Now, drag Department down to Rows. Notice that you again have a different view of the data. Your screen should look like this:



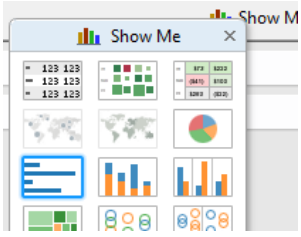
- Let's save this Worksheet
- At the bottom of the page, Right click on "Sheet 1" and Rename it to "Bar Charts"



- Now right click on the Sheet Tab again and click "Duplicate Worksheet." This creates another Sheet that we can use the data we've already created to create another graph

Iterating Worksheets: Using "Show Me"

- We will now use the Show Me feature of Tableau. Show Me is an easy way to change the chart types using just a single click.

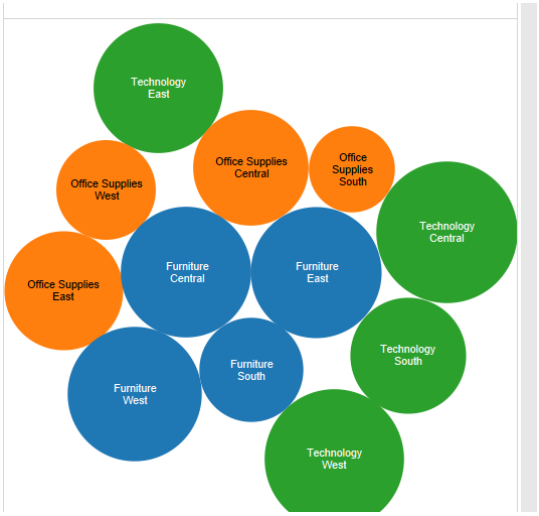


- Using Sheet 2, let's play around with the Show Me feature

- Let's first change our bar chart to a highlight table. Simply select the Highlight Table option, and there you have it!

	Region			
Department	Central	East	South	West
Furniture	$859,218	$864,063	$546,261	$909,082
Office Supplies	$672,769	$711,439	$373,951	$500,168
Technology	$1,008,355	$847,303	$677,135	$982,189

- Let's quickly change this to some bubbles (yay, bubbles!). Simply click on the Packed Bubbles option of Show Me, and Tableau is *bursting* with bubbles.



- Or maybe you want a Tree Map. Now, click Tree Map.
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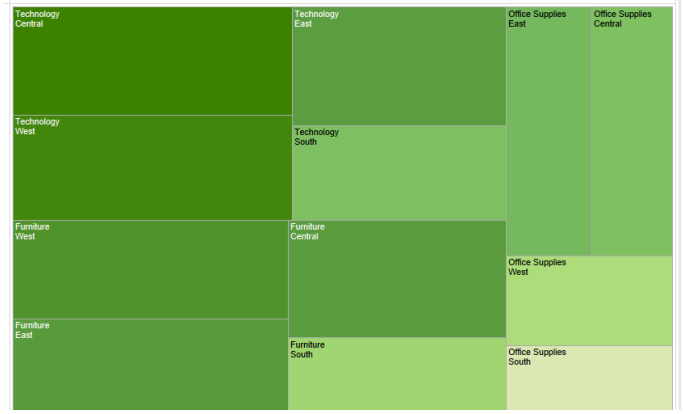
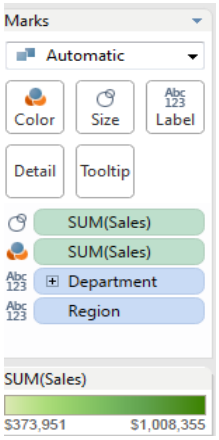
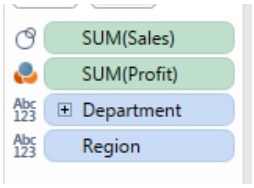


- Let's take a minute to notice how Tableau is breaking down the Tree Map, and all of the other visualizations for that matter.
- To do so, take a look at the "Marks Card" which tells us exactly how Tableau is plotting each dimension and measure. Look at the icons at the bottom of the Marks Card with the dimensions and measures necessary to build the chart. We have the SUM(Sales) measure, which is breaking out the tree map by size. The Color button is also by SUM(Sales). Further notice that the color scale goes from a light green shade to dark green based on an increase in sales. The ABC123 portion of the Marks Card denotes the labels on the Tree Map (e.g., by Department and by Region). This is the actual text displayed on the Tree Map.

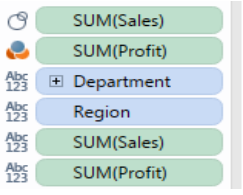


- Now, let's manipulate our Tree Map by allowing it to visualize another Measure by color. Let's make the Tree Map show the SUM of Profit by Color, instead of the Sum of Sales.
- To do so, drag the Profit Measure into the Color button. 

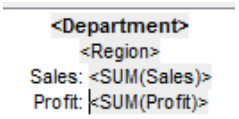
- Notice in the Marks Card that the Tree Map now shows the colors by the SUM(Profit) 

- Now let's cuztomize how the Tree Map is colored.
- To do this, click on the Color Button 

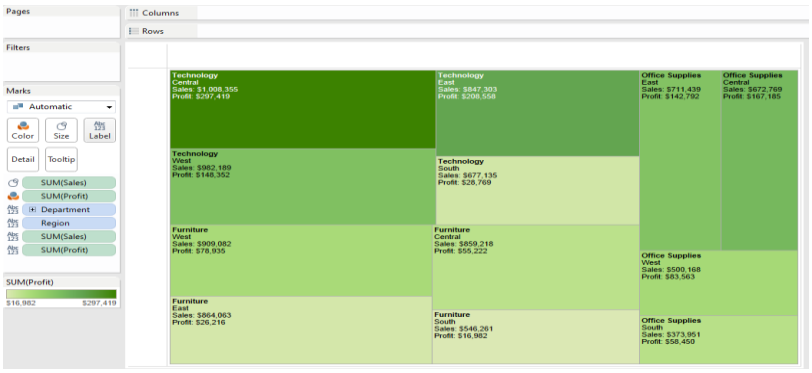
- Click on Edit Colors. Play around with the colors you want to use. I still think the Automatic Green colors do the best job portraying the sum of profit, but it's up to you.
- Now let's change the labels so that our Profit and Sales numbers are included, along with the existing Department and Region.
- To change the labels, drag the Sales and Profit measures onto the label button. Notice the change again to the Marks Card



- But, if you look at the Tree Map, notice that there are only numbers, without any indication of what the numbers mean. Let's edit the Labels so that we have a better idea of which number represents profit.
- Click on the label button and click on the button next to text
- A window pops-up that allows us to edit the text. Edit your text so that it looks like this:



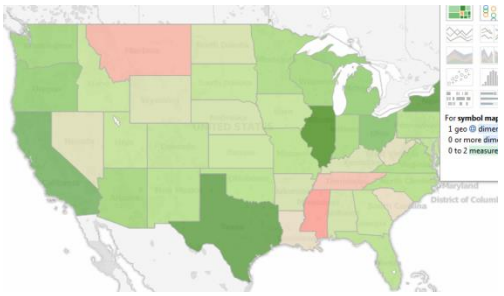
- Your Tree Map should look like this:



- Save this Tree Map by renaming the Worksheet to Tree Map
- Now let's create a Map

Creating a Filled Map

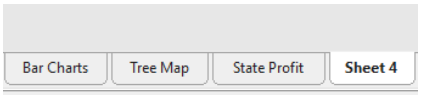
- Open a New Worksheet and Name it Sheet 3
- In Show Me, notice that there are two different types of Maps: Field Maps and Symbol Maps
- Notice when you hover over the maps that Show Me gives you the minimum requirements needs to make one of these maps.
- So, we need some dimensions and measures.
- Let's make a Profit by State map.
- First, Select the State Dimension (under the Mappings Tree). Hold the CTRL key and Select Profit as well. Both options should be selected.
- Once the State Dimension and Profit Measure is selected, notice that the Maps now illuminate. Let's select a Filled Map to gain a better understanding about how each state's profit is doing.



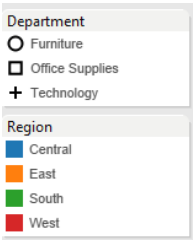
- Now you have a view of profit by state.
- Notice that you can hover over each state to see the exact profit.
- Now that we have seen each state in terms of overall profit, let's filter the profit by a dimension. In this case, let's try Department
- To do this, right click on the Department dimension and select "Show Quick Filter", noticing that the filter shows up on the right hand side of the screen. You can also accomplish this by dragging the Department Dimension into the Filters box, right clicking that, and selecting "Show Quick Filter"
- Now we can filter this easily by Department. We can change the book of the filter by hovering over the list and clicking the down arrow. Change it to Single Value List.
- Let's add the State Name to the Labels, along with the Profit Numbers by dragging the Profit and State into the labels box.

- Wow! This graph looks pretty good. Let's name it "State Profit Map" and create another graph.

Creating a Scatter Plot

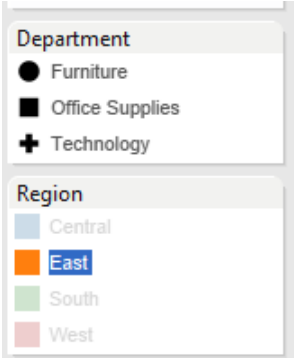
- Create another Worksheet 

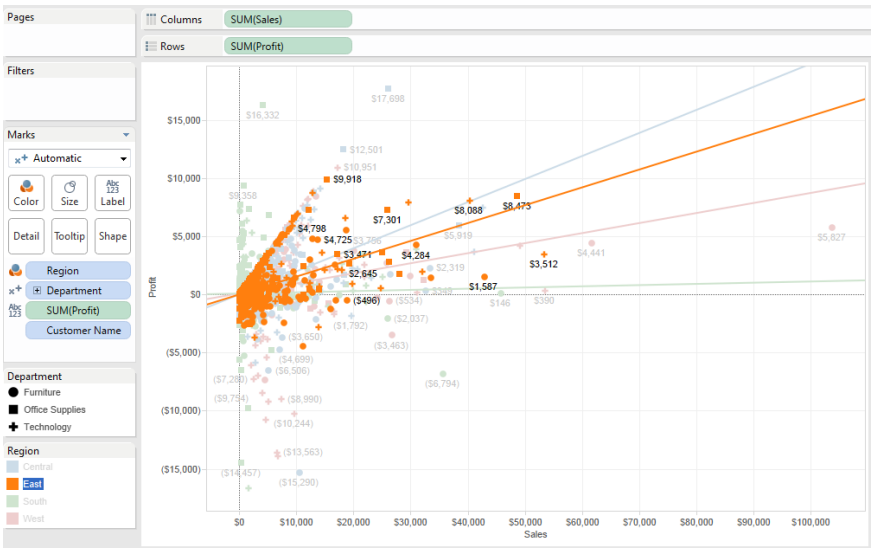
- Let's make a Scatterplot.
- Drag "Profit" to Rows and "Sales" to Columns; Drag Region to the Color Button; Drag Department to the Shape Button



- Notice in the Marks Card that we now have different shapes for Department, and different colors for Region
- Let's change the Shape by clicking on the Shape button 

- Tableau has many different shapes. Select the shapes you want. Don't forget to Assign the Palette to the Department categories. I chose filled shapes because they look BOLD. Click Apply and click OK
- Let's make the filled shapes a bit bigger. Click the Size button and make the shapes the size you wish. Not too big now!
- Now let's use the Detail button to add some detail to this scatterplot. Let's view the scatterplot by customer names so that we can get a nice view of our customers.
- Drag the Customer Name dimension into the Detail button. Splat! This should give you a seemingly messy, but useful view of customers by name, and show you where most of them lie in terms of sales and profit. You may need to resize your shapes again.
- Now, let's make the scatterplot a little bit cleaner by adding Profit to the Labels. So drag the Profit Measure into the Labels button.
- Let's go a little further by adding trend lines to our view. To do this, right click on the plot itself, select trend lines, and select add trend lines.
- Now we have a really easy way to highlight each different region and tell exactly how Sales and Profit are trending. Notice that you can filer the scatterplot by simply clicking on the Dimensions in the Marks Card. Click on the East region, just to try it out.
- Your graph should now look like this:





- Rename this sheet “Scatter Plot”
- Now we will use the 4 graphs to create a Dashboard

Creating a Dashboard

- It’s time to combine the previous charts into a Dashboard
- In the Area where you create a new sheet, right click and select New Dashboard
- At the top left hand corner of the screen, you will notice the labels for the graphs we just made.
- Now we just have to drag the graphs into the new sheet. One-by-one, drag the maps onto the sheets so that they look presentable.
- Notice that the filters we created are displayed at the right hand of the screen, You can use these filters to filter the data by those dimensions by just clicking on one.
- Rename the Dashboard “Final Report”
- Save your file

Other Tableau Resources

To access web resources and to learn more about Tableau Software, visit the links below:

- http://www.tableausoftware.com/support/training
- https://www.youtube.com/user/tableausoftware
- http://cb-ot-devst13.ad.wsu.edu/featherman/TMC/Training.aspx