**Assignment: Data Vizualization Fundamentals - Tableau (100 points)**

Read the brief case below. Using Tableau Desktop Profession Edition, complete the questions.

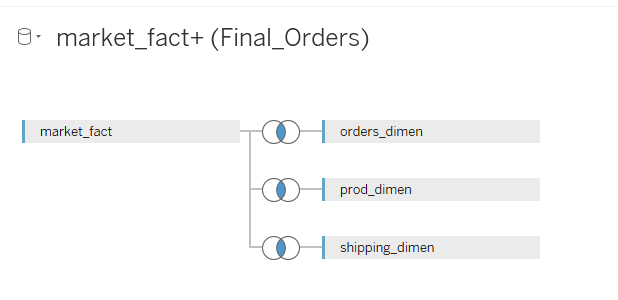
**Downtown Office Supply**

Downtown Office supply is a small family owned store in a small suburb. In order to maintain and grow the business the owners want to do some analysis to see how their sales are doing. Management wants to see how the company did last year and make some decisions about what products to keep along with staffing for busy times of the year.

**Instructions:** Use the Excel workbook provided and import the data to Tableau. Complete the tasks below. Upon completion you will submit your Tableau file (.twbx) to eLearning.

Note that some tasks ask additional questions and observations (eg task 1 asks about outliers). Include your brief responses to each page as part of task number 6.

1. Open Tableau.
2. Import the Excel file – Final\_Orders\_Clean.xlsx.
3. Create an innerjoin between market\_fact table and the rest of the tables as shown below[ Hint: Drag and Drop the tables in the Data Source space]



1. Double check your join statements to make sure the correct primary key and foreign keys are in place. [HINT: order\_id and ord\_id]
2. Click on “Goto Worksheet” at the bottom to insert a blank worksheet for your questions For each question, take a screen shot of your visualization. Be sure to save your Tableau file and upload the Tableau file (twbx).

**Exercise Tasks:** Follow the directions for each task below and submit your Tableau file (.twbx) to eLearning to receive credit for the assignment. Note that your responses to each task will be added as notes, as described in task 6 below.

1. (16 Points) Management wants to see how much is spent in Shipping Costs across the different Product Categories and Sub Categories for each Ship Mode. Add a new sheet titled Q1. Required Components: 1) A table with the Product Categories and Sub Categories listed. 2) Shipping Costs for each Ship Mode. 3) Color the Shipping Costs based on the Product Subcategory. Using the same data, create a **circle views** chart. Do you see any outliers? What are they?
2. (16 Points) Management is eager to know the Average Sales and Average Discount across the Product Categories and Sub Categories, using a Bar Chart. Add a new sheet titled Q2. **Required Components:** 1) A bar chart to represent the Average Sales. 2) Color the bar chart using Average Discount 3) Add labels to the bar chart representing average sales for each sub category. Choose another visualization to display the data. What is the difference? Is one preferred over another?
3. (16 Points) Historically the company has provided discounts to their Top 10 customers in terms of Profit. Using Packed Bubbles, find the Top 10 customers. Add a new sheet titled Q3. **Required Components:** 1.) Use packed bubbles to display your results. 2.) Cust id is represented by color. 3.) Add a filter to filter out the Top 10 customers based on Sum of Profit 4). Display the Cust id, sum of profit (in $) in the circle.
4. (16 Points) Management wants to see the proportion of the Product Base Margin across the 3 Product Categories. Use a Pie Chart, display the split of the sum of Product Base Margin across the Categories. Add a new sheet titled Q4. **Required Components:** 1.) Use a Pie to display your results. 2.) The angle of the pie chart is dependent on the sum of Product base Margin. 3.) Label the sections of the Pie Chart with the Product Category and Sum of Product Base Margin. 4.) Change the font of the Product Base Margin as Bold and Red.
5. (16 Points) Management wants to compare product profit and sales by quarter. They want a quick view by each product sub category. Choose the data visualization to best represent this. **Required Components:** 1.) Use a visualization of your choice. 2.) Add labels for profit, sales, and product sub category. 3.) Add colors.
6. (20 Points) To make the presentation more appealing, put together your visualizations as a storyboard. **Required Components:** 1.) Create a storyboard. 2.) Insert a cover page to highlight what the report is about. 3.) On each page add text to explain the visualization/findings.