HOMEWORK: Visualizing Data with Power BI Reports

Using your Adventure Works report file, complete the following:

**1)**Add a new report page named "**Customer Detail**", and complete the following steps (***Note:****Screenshot provided for reference below*):

* Add a matrix visual to show **Total Orders** and **Total Revenue** by customer full name for the top 100 customers by revenue
  + *What happens when you try to pull in****Total Returns****as well? Why?*
* Sort the matrix by **Total Revenue**(*descending*) to show the top revenue-generating customers
* ***Spot check****: You should****Mr. Maurice Shan****as the top customer, with****$12,407.96****in Total Revenue*
* Add conditional formatting to show data bars on the **Total Orders** column and a background color scale on the **Total Revenue**column, and customize the style however you'd like

**2)** Add a *Donut Chart* to show **Total Orders** by **Gender** (*on the Legend*)

* Title the chart "*Orders by Gender*", and adjust formatting to match the gauge charts on the **Customer Detail** tab (*centered, gray background, light gray font*)
* Copy the chart and paste two more versions: one to visualize orders by **IncomeLevel**, and a second to visualize orders by **Occupation** (*remember to update the chart titles!*)
* Update the report interactions so that *each* donut chart (as well as the matrix) ***filters*** the other two donuts, instead of highlighting
* ***Spot check:*** If you select "*Mr. Maurice Shan*" form the matrix visual, you should see the charts filter to only show *Gender =****M***, *Income Level =****Average***, and *Occupation =****Professional***
* Hold CTRL to select all three donuts, and use the formatting tools to align the top of each chart and distribute horizontally

**3)** Add a *Line & Clustered Column* chart to show **Total Orders** (*as columns*) and **Total Revenue** (*as a line*), with **Start of Month** on the shared X-axis

* Update the chart title to "*Orders & Revenue by Month*", and format the chart style however you choose
* ***Spot check:****You should see that "****Mr. Marco Lopez****" drove the most orders (****3****) in June 2017*
* Select the matrix, and update the report interaction mode to ***filter***the combo chart (*vs. highlighting*)
* ***Spot check:****You should see that "Mr. Marco Lopez" placed orders in****June 2016****,****August 2016****,****March 2017****and****June 2017***

**4)** Add a *Treemap* visual to show **Total Orders** (*values*) grouped by **Current Age**

* Update the chart title to "*Orders by Age*", and format the chart style however you choose
* Select the matrix, and update the report interaction mode to ***filter***the treemap (*vs. highlighting*)
* ***Spot check:****Ages will change over time since they based on the TODAY() function, but you should see the most orders for age****50****and****49***

**5)** Add a card to show **FullName**, and make the following updates:

* Turn off the Category Label, update the card title to "*Top Customer*", and adjust formatting to match the donut charts
* Format with a light yellow background fill (*to match the product cards on the exec summary page*)
* Add a Top N visual-level filter to show the #1 customer based on **Total Revenue**
* ***Spot check:****You should see "Mr Maurice Shan" when the view is unfiltered, and "Mrs. Janet Munoz" when filtering on Female customers only*
* Copy and paste to create two new cards: one showing **Total Orders**, and the other showing **Total Revenue**, and update card titles to "*Customer Orders*" and "*Customer Revenue*", respectively
* ***Spot check:****Among high income customers, you should see "****Mrs. Lisa Cai****" as the top customer, with****7****orders and****$11.33K****in revenue*

**6)** Add a text box that says "*Executive Summary*", and insert an arrow button next to it

* Return to the "**Exec Summary**" page, activate the bookmark tab, and add a **bookmark** named "*Exec Summary*"
* Return to the "**Customer Detail**" page, and link the arrow button to the bookmark you just created using the object "Action" properties
* ***Spot check:****CTRL-click the arrow to confirm that the link works as expected*

**7)** Make any formatting tweaks that you see fit (*alignment, chart styles, separation lines, etc*), and save a (*completed!*) copy of the report

*Report screenshot (for reference):*

