**DAX Commands**

1) In the DATA view, create the following calculated columns:

a.) In the AW\_Customer\_Lookup table, add a new column named "Customer Priority" that equals "Priority" for customers who are under 50 years old and have an annual income of greater than $100,000, and "Standard" otherwise

b.) In the AW\_Product\_Lookup table, add a new column named "Price Point", based on the following criteria

If the product price is greater than $500, Price Point = "High"

If the product price is between $100 and $500, Price Point = "Mid-Range"

If the product price is less than or equal to $100, Price Point = "Low"

c.) In the AW\_Calendar\_Lookup table, add a new column named "Short Day" to extract and capitalize the first three letters from the Day Name column

d.) In the AW\_Product\_Lookup table, add a column named "SKU Category" to extract the first two characters from the ProductSKU field

2) In the REPORT view, create the following measures

a.) Create a measure named "Product Models" to calculate the number of unique product model names

b.) Create a measure named "ALL Returns" to calculate the grand total number of returns (not the number of items returned), regardless of the filter context (07:07 mark)

c.) Create a measure to calculate "% of All Returns"

3) Save a separate backup copy of the .pbix file (i.e. "AdventureWorks\_Report\_Backup")

Using the Adventure Works report file, complete the following:

**Dashboard**

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
* Sort the matrix by Total Revenue (*descending*) to show the top revenue-generating customers
* 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*

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

* Select the matrix, and update the report interaction mode to *filter* the combo chart (*vs. highlighting*)

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*)

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

*Report screenshot (for reference):*

