Week 13 Meeting Agenda

I.   Download the Week 13 Partial Demo file that is posted on Canvas.

II. Creating Summarized Output

1. Generating Summary Statistics

   Demonstration 1: Use Summary Statistics Task

   Using the **orion_profit** table, display the mean, std dev, min, max, and median Profit by
   Product_Line and Product_Category. Modify task results to:
   - Show Profit summary statistics by Product_Category and Product_Line *separately*.
   - Show Profit summary statistics by Product_Category and Product_Line *in the same table*.
   - Show overall summary statistics for Profit.

   i)   Creating a Summary Table Report

   **Activity 1.01 - Summary Tables Wizard to create a table showing the total profit by customer
   age group and product category.**
   What is the profit for clothes sold to the 15-30 years age group?

   Demonstration 2: Creating a Tabular Summary Report and Formatting It

   Using the **orion_profit** table, create a tabular summary report to display the sum of profit for
   each product category and customer age group. In the final report, group Product_Category by
   Product_Line and report product line subtotals. Apply the currency format dollar12.2. to all
   values in the table. Format the table area to highlight the product line subtotals as well as the
   overall total.

2. Using Prompts in Tasks and Queries

   i)   Prompting in Projects

   **Activity 2.01 - In the 'Using Prompts in Tasks and Queries' process flow, run the Select Orders
   Query.**

   When prompted: From the customer age group menu, select 31-45 years and in the Include
   orders with profits exceeding field, enter 100.

How many rows were returned in the query result? Choose a different combination and observe the results.

ii)   Creating and Using Prompts in Tasks

Demonstration 3: Prompting in Tasks

Create a variable prompt for the Summary Table Task. This prompt enables managers at Orion Star to demonstrate the distribution of profit based on different selections.

Begin by creating the prompt that lists the variables that can be used as the classification variable in the Summary Table Task. Click the Prompt Manager in the navigation area, then click Add.

- Name: ProfitCategories
- Displayed text: Select a variable to segment the Profit
- Select the Requires a non-blank value check box.
- Variable type value is Character
- Click Load Values and select the **orion_profit** table.
- Delete Product_Name, Supplier_Name, and Customer_Name from the list. We won't use these variables to segment the profit.
- Assign a default value.

Select the orion_profit dataset, and browse Summary Table Task. If the newly created prompt does not appear under the variables to assign section, then go to Properties > Edit > Prompts > Add > add the ProfitCategories prompt.

- Analysis Variable: Profit
- Classification Variable: ProfitCategories prompt
- Change the title to **Profit by &ProfitCategories**

iii)   Creating and Using Prompts in Queries

Demonstration 4: Prompting in Queries

Create a text prompt named ChooseSupplier and use it in a query to extract orders for a specific supplier. Generate a report for the orders and include the supplier's name in the title. Use the orion_profit table and create the asked query. When prompted, select Mayday Inc and display Orders for Mayday Inc Report.

III.   **Customizing and Organizing Project Results**

i)   **Combining Results**

Activity 3.01 – Go to Customizing and Organizing Project Results process flow:

- Run from Create Format ($CntryFmt - Local) Task.
- Open Days to Deliver Report and Click Design.

Which actions can you perform?

Demonstration 5: Combining Task Results into a Single File

Analysts at Orion Star want to combine the results from the Profit Analysis tasks into a single page. They want to save the report as an HTML file to publish it on the intranet.

To begin creating a customized report, select **File > New > Report**.
- Insert Image: OrionStarBanner.png
- Drag **Profit by Cust Age Group** to row 2, column 1 position.
- Drag **Profit by Product Category Summary** to row 2, column 2 position.
- Drag **Profit by Cust Cntry/Type** to row 3, column 1 position. Expand the Profit by Cust Cntry/Type results to span two squares.

Make the following design changes in the Header and Footer, and Page Setup options:
- Clear all footnotes from the Titles & Footnotes tab.
- Enter *All information is company confidential* in the Footer tab.
- Add a blue line above the footer.
- Change the orientation to Landscape.
- Change the left and right margins to 0.75 (inches).

Click Page to preview the result.

To export the results as HTML, right-click on Report > Share > Export as a step in the project.

i)   **Updating and Organizing Projects**

Activity 3.02 – Link Assign Project Library Task to Customers table

Demo 6: Using Multiple Process Flows

Analysts need to report on both profit and shipping data. Currently, a project has all reports created on one process flow. Users of this project want to organize it so that they can easily update the queries, tasks, and reports related to each analysis.

- Notice that a single process flow, named Process Flow, creates all reports.
- Rename the existing process flow to Profit Analysis.
- Create a new process flow and rename it as Shipping Analysis.
- Select all objects associated with the orion_profit_details table and move them to the Shipping Analysis process flow.
- Confirm that the orderdata table does not exist in the work library. Change the source dataset of Retail Profit by Country to orderdetail data.

Activity 3.03 – Create an Autoexec process flow for assigning the Orion library.

IV. **Q&A**

Note: The difference between CLASS statements and BY statements in SAS

- The **BY** statement **repeats** an analysis on every subgroup. The subgroups are treated as independent samples. If a BY variable defines k groups, the output will contain k copies of every table and graph, one copy for the first group, one copy for the second group, and so on.
- The **CLASS** statement includes a categorical variable as part of an analysis. Often the CLASS variable is used to **compare** the groups, such as in a t-test or an ANOVA analysis. Another use of a CLASS variable is to define categories for a classification task, such as discriminant analysis.
- https://blogs.sas.com/content/iml/2018/02/14/difference-class-and-by-statements-sas.html