Practice Challenge: Modifying the Summary Statistics Task Code to Include an Additional Statistic

The default placement of the overall summary (_TYPE_=0) is the first row of the output data set. The DESCENDTYPES option orders row in the output data set by descending _TYPE_ value. This places the overall summary value in the last row of the output data set.

In this practice, you insert custom code into the SAS program generated by the Summary Statistics task to reorder the rows in the output data set, placing the overall summary row last.

1. If necessary, in the **Lesson5** project, create a new process flow named **Practices** and add the **employee_master** table.

    - If necessary, select **File > New > Process flow**.
    - Right-click the process flow in the Project pane and select **Rename**.
    - Enter **Practices** as the new name.
    - Select **File > Open** and navigate to the course data location.
    - Select **employee_master > Open**. The data appears on a new tab in the work area.

2. Use the Summary Statistics task to create an output data set that contains the mean salary by **Country**. Use the following task settings:
    - Summarize **Salary** by **Country**.
    - Include only the mean statistic, and round values to two decimal places.
    - Create an output data set named **mean_country_salaries**.
    - From the drop-down list for the **Combinations of classifications variable** option, select **Specify ways**. Do not modify the default value for the Specify ways field.
    - Suppress all displayed output.
    - Rename the task as **Salary by Country Summary**.

    - Highlight the **employee_master** table in the Project pane or process flow.
    - In the Tasks pane, expand **Describe**, and double-click **Summary Statistics**.
    - Summarize **Salary** by **Country**.
        - Drag **Salary** to the **Analysis variables** role.
        - Drag **Country** to the **Classification variables** role.
    - Include only the mean statistic, and round values to two decimal places.
        - Select **Statistics - Basic** in the selection pane.
        - Clear the **Standard deviation**, **Minimum**, **Maximum**, and **Number of observations** check boxes.
        - Select **2** for the maximum decimal positions.
    - Create an output data set named **mean_country_salaries**.
        - Select **Results** in the selection pane.
        - Select the **Save statistics to data set** check box and click **Browse**.
        - Enter **mean_country_salaries** in the File name field and click **Save**.
    - In the Results panel, use the drop-down list for the **Combinations of classifications variable option** to select **Specify ways**.
    - In the Results panel, select the **Suppress all displayed output** check box.
    - Rename the task **Salary by Country Summary**.
        - Select **Properties** in the selection pane.
        - Click **Edit**.
        - Delete the text in the Label field and enter **Salary by Country Summary**.
        - Click **OK**.

3. Run the task. Notice that the overall summary row is first in the output data set.

    Click **Run** to run the task. A new tab appears in the work area displaying the results. Notice that the overall total (_TYPE_=0) appears as the first row.

4. Modify the task's underlying code to add the DESCENDTYPES option to the PROC MEANS statement. Add the option directly after the listed statistics in the **InProcMeans** insertion point.

- Click the **Modify task** icon from the task toolbar to reopen the Summary Statistics task.
- Click **Preview code** to customize the task code.
- Click the **Show custom code insertion points** check box and scroll down until you locate the **InProcMeans** insertion point at the end of the PROC MEANS statement and before the semicolon.
- Enter the DESCENDTYPES option:
  ```
  /* Start of custom user code (InProcMeans) */
  DESCENDTYPES
  /* End of custom user code (InProcMeans) */
  ```
- Close the Code Preview for Task window.

5. Run the task and verify that the overall summary row is last in the output data set.

Click **Run** to run the task. The results are updated on the Output Data tab. Notice that the overall total appears as the last row.

6. Close all tabs except for the process flow, and save the **Lesson5** project.

Hide Solution