Practice

If you restarted your SAS session, open and submit the **libname.sas** program in the course files.

Level 1

1. Using the DATA Step Debugger to Examine Execution Steps

Examine the National Park data that is used in most practices. Use the DATA step debugger to follow the steps of execution in a DATA step that reads the **np_final** table.

Note: This practice must be performed in SAS Enterprise Guide to use the interactive DATA step debugger. If you did not do the first activities in Enterprise Guide, first open and run the **libname.sas** program.

a. In Enterprise Guide, use the Servers list to expand **Servers** ⇨ **Local** ⇨ **Libraries** ⇨ **PG2**. Double-click **np_final** to open the table. The table includes one row per US national park. Note that the first row in the table is *Cape Krusenstern National Monument*.

b. Become familiar with the following columns in the **np_final** table:

- **Region** (*Alaska*, *Intermountain*, *Midwest*, *National Capital*, *Northeast*, *Pacific West*, and *Southeast*)
- **Type** (*Monument, Park*, *Preserve*, *River*, *Seashore*)
- **ParkName** (full name of national park)
- **DayVisits** (number of daily visitors in 2017)
- **Campers** (number of campers in 2017)
- **OtherLodging** (number of people in other lodging, including cabins and hotels, in 2017)
- **Acres** (total park size in acres)

c. Open **p201p01.sas** in the **practices** folder of the course files. Click the **Toggle DATA Step Debugger** toolbar button to enable debugging in the program. Click the **Debugger** icon next to the DATA statement. The DATA Step Debugger window appears.

d. How many variables are in the PDV? What are the initial values?

e. Click the **Step execution to next line** toolbar button to execute the highlighted SET statement. Recall that the first row of the **np_final** table is *Cape Krusenstern National Monument*. Why was the first row not read into the PDV in the first iteration of the DATA step?

f. Click **Step execution to next line** to step through the remaining statements in the DATA step. Which statements are executable? Which statements are compile-time only?

g. Exit the debugger and run the program to view the output table.

Note: The DATA step debugger is available by default in other programs. To suppress the debugger icon in the editor, click the **Toggle DATA Step Debugger** toolbar button .

Level 2

2. Using PUTLOG Statements to Examine Execution Steps

a. Open **p201p02.sas** in the **practices** folder of the course files. Examine the program and answer the following questions:

1) Which statements are compile-time only?

2) What will be assigned for the length of **Size**?

b. Run the program and examine the results.

c. Modify the program to resolve the truncation of **Size**. Read the first five rows from the input table.

d. Add PUTLOG statements to provide the following information in the log:

1) Immediately after the SET statement, write **START DATA STEP ITERATION** to the log as a color-coded note.

2) After the **Type=** assignment statement, write the value of **Type** to the log.

3) At the end of the DATA step, write the contents of the PDV to the log.

e. Run the program and read the log to examine the messages written during execution.

End of Practices