Practice

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

Level 1

4. Restructuring a Table Using PROC TRANSPOSE: Wide to Narrow

The **pg2.np_2017Camping** table contains public use statistics for camping in 2017 from the National Park Service. Convert the data from a wide table to a narrow table.

a. Open the **p207p04.sas** program in the **practices** folder. Highlight the PROC PRINT step and run the selected code. Notice that the table contains three columns (**Tent**, **RV**, and **Backcountry**) with visitor counts for each value of **ParkName**. In addition, notice that the table is sorted by **ParkName**.

Obs	ParkName	Tent	RV	Backcountry
1	Acadia NP	152,586	55,812	1,597
2	Amistad NRA	0	11,019	0
3	Aniakchak NM & PRES	0	0	235
4	Apostle Islands NL	0	0	11,550
5	Arches NP	1,426	826	65

b. Add the OUT= option in the PROC TRANSPOSE statement to create a table named **work.camping2017_t**.

c. Add the BY statement to group the data by **ParkName**. This creates one row in the output table for each unique value of **ParkName**.

d. Add the VAR statement to transpose the **Tent** and **RV** columns. Highlight the PROC TRANSPOSE step and run the selected code.

e. Use the NAME= option to specify **Location** as the name for the column that contains the names of the columns from the input table.

f. Use the RENAME= data set option after the output table to rename **COL1** as **Count**. Highlight the PROC TRANSPOSE step and run the selected code.

	ParkName	Location	Count
1	Acadia NP	Tent	152,586
2	Acadia NP	RV	55,812
3	Amistad NRA	Tent	0
4	Amistad NRA	RV	11,019
5	Aniakchak NM...	Tent	0
6	Aniakchak NM...	RV	0
7	Apostle Islands...	Tent	0

Level 2

5. Restructuring a Table Using PROC TRANSPOSE: Narrow to Wide

The **pg2.np_2016Camping** table contains public use statistics for camping in 2016 from the National Park Service. Convert the data from a narrow to a wide table.

a. Examine the **np_2016Camping** table. Notice that the table contains one row for each location type (**Tent**, **RV**, and **Backcountry**) by **ParkName**. In addition, notice that the table is sorted alphabetically by **ParkName**.

b. Write a PROC TRANSPOSE step to create a wide table named **work.camping2016_t**. Include only the **ParkName** column and individual columns for the values of **CampType**.

	ParkName	Tent	RV	Backcountry
1	Acadia NP	152,811	46,629	1,324
2	Amistad NRA	38	8,265	0
3	Aniakchak NM...	0	0	235
4	Apostle Islands...	0	0	11,220
5	Arches NP	28,046	18,658	1,174
6	Assateague Isl...	40,826	20,735	973
7	Badlands NP	7,934	1,500	1,410
8	Bandelier NM	5,704	4,164	665

Challenge

6. Naming Transposed Columns when the ID Column Has Duplicate Values

The **pg2.weather_highlow** table contains weather data for four locations. The high and low temperatures are recorded for the months of June, July, and August.

a. Open **p207p06.sas** from the **practices** folder. Run the program and examine the output table. Notice that table contains two rows for each value of **Location** and **Month**. The first row represents the high temperature and the second row is the low temperature.

b. Write a PROC TRANSPOSE step to create a table, **work.lows**, that contains the low temperatures for each reporting location. Use the LET option to transpose only the last row for each BY group. Use the values of **Month** as the names for the transposed columns.

Note: The LET option transposes only the last row for each BY group. Be sure your data is sorted in the order that you require. For more information about the LET option, view SAS Help.

c. Examine the output table and confirm that three columns (**Jun**, **Jul**, and **Aug**) exist for each value of **Location**. The values of the month columns should be the low temperatures.

Note: Warning messages will still appear in the log indicating that the **Month** values are duplicated within each value of **Location**.

	Location	_NAME_	Jun	Jul	Aug
1	Black Canyon Of The Gunnison, CO	Temp	30	47	42
2	Moose, WY	Temp	27	34	26
3	Panther Junction, TX	Temp	66	66	66
4	Port Alsworth, AK	Temp	36	42	.

End of Practices