4.3 - Practice

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

Level 1

1. Processing Statements Conditionally with IF-THEN/ELSE

The **pg1.np_summary** table contains public use statistics from the National Park Service. The values of the **Type** column represent park type as a code. Create a new column, **ParkType**, that contains full descriptive values.

a. Open **p104p07.sas** from the **practices** folder. Submit the program and view the generated output.

Type	Frequency	Percent	Cumulative Frequency	Cumulative Percent
NM	63	46.67	63	46.67
NP	51	37.78	114	84.44
NPRE	1	0.74	115	85.19
NS	10	7.41	125	92.59
PRE	3	2.22	128	94.81
PRESERVE	4	2.96	132	97.78
RIVERWAYS	1	0.74	133	98.52
RVR	2	1.48	135	100.00

b. In the DATA step, use IF-THEN/ELSE statements to create a new column, **ParkType**, based on the value of **Type**.

Type	ParkType
NM	Monument
NP	Park
NPRE, PRE, or PRESERVE	Preserve
NS	Seashore
RVR or RIVERWAYS	River

c. Modify the PROC FREQ step to generate a frequency report for **ParkType**.

ParkType	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Monument	63	46.67	63	46.67
Park	51	37.78	114	84.44
Preserve	8	5.93	122	90.37
River	3	2.22	125	92.59
Seashore	10	7.41	135	100.00

Level 2

2. Processing Statements Conditionally with DO Groups

Use conditional processing to split **pg1.np_summary** into two tables: **parks** and **monuments**.

a. Create a new program. Write a DATA step to create two temporary tables named **parks** and **monuments** based on the **pg1.np_summary** table. Read only national parks or monuments from the input table. (**Type** is either *NP* or *NM*.)

b. Create a new column named **Campers** that is the sum of all columns containing counts of campers. Format the column to include commas.

c. When **Type** is *NP*, create a new column named **ParkType** that is equal to **Park**, and write the row to the **parks** table. When **Type** is *NM*, assign **ParkType** as **Monument** and write the row to the **monuments** table.

d. Keep **Reg**, **ParkName**, **DayVisits**, **OtherLodging**, **Campers**, and **ParkType** in both output tables.

parks Table

	Reg	ParkName	DayVisits	OtherLodging	Campers	ParkType
1	A	Kenai Fjords National Park	346,534	0	2,162	Park
2	A	Kobuk Valley National Park	15,500	0	7,050	Park
3	IM	Arches National Park	1,585,718	0	47,878	Park
4	IM	Big Bend National Park	388,290	48,280	145,425	Park
5	IM	Black Canyon of the Gunnison National Park	238,018	0	32,884	Park

monuments Table

	Reg	ParkName	DayVisits	OtherLodging	Campers	ParkType
1	A	Cape Krusenstern National Monument	15,000	0	6,375	Monument
2	IM	Alibates Flint Quarries National Monument	8,153	0	0	Monument
3	IM	Aztec Ruins National Monument	57,692	0	0	Monument
4	IM	Bandelier National Monument	198,478	0	10,533	Monument
5	IM	Canyon De Chelly National Monument	821,406	23,259	11,918	Monument

Challenge

3. Processing Statements Conditionally with SELECT-WHEN Groups

SELECT and WHEN statements can be used in a DATA step as an alternative to IF-THEN statements to process code conditionally.

a. Use SAS Help or online documentation to read about using SELECT and WHEN statements in the DATA step.

b. Repeat Practice 2 above using SELECT groups and WHEN statements.

End of Practices