



Practice

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

Level 1

7. 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 |
| NPRES | 1 | 0.74 | 115 | 85.19 |
| NS | 10 | 7.41 | 125 | 92.59 |
| PRES | 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 |
| NPRES, PRES, 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

8. Processing Statements Conditionally with DO Groups







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

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

9. 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.

- Use SAS Help or online documentation to read about using SELECT and WHEN statements in the DATA step.
- Repeat Practice 8 using SELECT groups and WHEN statements.

End of Practices