



Using Expressions to Create New Columns

Scenario

Read an existing SAS table, and create temporary and permanent copies.

Files

- **p104d02.sas**
- **storm_summary** – a SAS table that contains one row per storm for the 1980 through 2016 storm seasons

Syntax

```
DATA output-table;  
  SET input-table;  
  new-column = expression;  
RUN;
```

Notes

- The name of the column to be created or updated is listed on the left side of the equal sign.
- Provide an expression on the right side of the equal sign.
- SAS automatically defines the required attributes (name, type, and length) if the column is new.
- A new numeric column has a length of 8.
- The length of a new character column is determined based on the length of the assigned string.
- Character strings must be enclosed in quotation marks and are case sensitive.

Demo

1. Open **p104d02.sas** from the **demos** folder and find the **Demo** section of the program. Add an assignment statement to create a numeric column named **MaxWindKM** by multiplying **MaxWindMPH** by 1.60934.
2. Add a **FORMAT** statement to round **MaxWindKM** to the nearest whole number.
3. Add an assignment statement to create a new character column named **StormType** that is equal to *Tropical Storm*. Highlight the **DATA** step and run the selected code.

```
data tropical_storm;  
  set pgl.storm_summary;  
  drop Hem_EW Hem_NS Lat Lon;  
  where Type="TS";  
  *Add assignment and FORMAT statements;  
  MaxWindKM=MaxWindMPH*1.60934;  
  format MaxWindKM 3.;  
  StormType="Tropical Storm";  
run;
```

Season	Name	Basin	Type	MaxWindMPH	MinPressure	StartDate	EndDate	MaxWindKM	StormType
1980		na	TS	35	.	17JUL1980	18NOV1980	56	Tropical Storm
1980	AGATHA	EP	TS	115	.	09JUN1980	15JUN1980	185	Tropical Storm
1980	ALEX	WP	TS	40	998	09OCT1980	14OCT1980	64	Tropical Storm
1980	ALLEN	NA	TS	190	899	31JUL1980	11AUG1980	306	Tropical Storm
1980	BERENICE	SI	TS	.	.	15DEC1979	21DEC1979	.	Tropical Storm
1980	BLAS	EP	TS	58	.	16JUN1980	19JUN1980	93	Tropical Storm
1980	CARMEN	WP	TS	69	985	05APR1980	07APR1980	111	Tropical Storm
1980	CARY	WP	TS	52	986	28OCT1980	02NOV1980	84	Tropical Storm

End of Demonstration

