Using Character Functions

Scenario

Use character functions to manipulate existing character values.

Files

- **p104d03.sas**
- **storm_summary** – a SAS table that contains one row per storm for the 1980 through 2016 storm seasons

Syntax

> **UPCASE(**_char_**)**
>
> **PROPCASE(**_char, <delimiters>_**)**
>
> **CATS(**_char1, char2, ..._**)**
>
> **SUBSTR(**_char, position, <length>_**)**

Notes

- The UPCASE function converts character values to uppercase.
- The PROPCASE function changes the first letter of each word to uppercase and other letters to lowercase.
- The CATS function concatenates character values and removes any leading or trailing blanks.
- The SUBSTR function extracts a string from a character value.

Demo

1. Open **p104d03.sas** from the **demos** folder and find the **Demo** section of the program.
   Add an assignment statement to convert **Basin** to all uppercase letters using the UPCASE function.

2. Add an assignment statement to convert **Name** to proper case using the PROPCASE function.

3. Add an assignment statement to create **Hemisphere**, which concatenates **Hem_NS** and **Hem_EW** using the CATS function.

4. Add an assignment statement to create **Ocean**, which extracts the second letter of **Basin** using the SUBSTR function. Highlight the DATA step and run the selected code.

```
data storm_new;
    set pg1.storm_summary;
    drop Type Hem_EW Hem_NS MinPressure Lat Lon;
    *Add assignment statements;
    Basin=upcase(Basin);
    Name=propcase(Name);
    Hemisphere=cats(Hem_NS, Hem_EW);
    Ocean=substr(Basin,2,1);
run;
```

	Season	Name	Basin	MaxWindMPH	StartDate	EndDate	Hemisphere	Ocean
1	1980		NA	35	17JUL1980	18NOV1980	NW	A
2	1980		SP	.	27MAR1980	30MAR1980	SE	P
3	1980	Agatha	EP	115	09JUN1980	15JUN1980	NW	P
4	1980	Albine	SI	.	27NOV1979	06DEC1979	SE	I
5	1980	Alex	WP	40	09OCT1980	14OCT1980	NE	P
6	1980	Allen	NA	190	31JUL1980	11AUG1980	NW	A
7	1980	Amy	SI	132	04JAN1980	12JAN1980	SE	I
8	1980	Berenice	SI		15DEC1979	21DEC1979	SE	I

End of Demonstration