

How can the LENGTH statement be utilized in SAS?

Authored by
stats writer

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The LENGTH statement in SAS is a useful tool for defining the length of character variables in a data set. It allows users to specify the maximum number of characters that can be stored in a variable, ensuring that the data is accurately represented and preventing truncation. This statement can be utilized in data step programming to create new variables or modify existing ones, and can also be used in PROC SQL to define column lengths in tables. Additionally, the LENGTH statement can be used in conjunction with other SAS functions and statements to manipulate and analyze data effectively. Overall, the LENGTH statement is a crucial component of SAS programming and plays a vital role in data management and analysis.

Use the LENGTH Statement in SAS

You can use the LENGTH statement in SAS to specify the maximum length for the values of a variable.

The following example shows how to use this statement in practice.

Example: Using the LENGTH Statement in SAS

Suppose we create the following dataset in SAS that contains information about various basketball teams:

```
/*create dataset*/  
data my_data;  
input team $ conference $ points;  
datalines;  
Mavericks Southwest 22  
Pacers Central 19  
Cavs Central 34
```

```
Lakers Pacific 20  
Heat Southeast 39  
Warriors Pacific 22  
Grizzlies Southwest 25  
Magic Southeast 29
```

```
;  
run;
```

```
/*view dataset*/  
proc printdata=my_data;
```

Obs	team	conference	points
1	Maverick	Southwes	22
2	Pacers	Central	19
3	Cavs	Central	34
4	Lakers	Pacific	20
5	Heat	Southeas	39
6	Warriors	Pacific	22
7	Grizzlie	Southwes	25
8	Magic	Southeas	29

Notice that some values in both the team and conference columns are cut off.

This is because the default length for character variables in SAS is 8 and some of the values in the team

and conference columns exceed this length.

Fortunately, we can use the LENGTH statement to specify the maximum length for both the team and conference columns:

```
/*create dataset*/  
data my_data;  
length team $9 conference $9;  
input team $ conference $ points;  
datalines;  
Mavericks Southwest 22  
Pacers Central 19  
Cavs Central 34  
Lakers Pacific 20  
Heat Southeast 39  
Warriors Pacific 22  
Grizzlies Southwest 25  
Magic Southeast 29  
;  
run;  
  
/*view dataset*/  
proc printdata=my_data;
```

Obs	team	conference	points
1	Mavericks	Southwest	22
2	Pacers	Central	19
3	Cavs	Central	34
4	Lakers	Pacific	20
5	Heat	Southeast	39
6	Warriors	Pacific	22
7	Grizzlies	Southwest	25
8	Magic	Southease	29

Notice that none of the values in the team or conference columns are cut off this time since we specified a max length of 9 for each of those columns.

We can also use the function to view the length of each variable in our dataset:

```
proc contents data=my_data;
```

Alphabetic List of Variables and Attributes			
#	Variable	Type	Len
2	conference	Char	9
3	points	Num	8
1	team	Char	9

From the output we can see the max length for each variable:

**Max length of conference: 9
Max length of points: 8
Max length of team: 9**

The following tutorials explain how to perform other common tasks in SAS:

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