

How can variables be reordered in SAS and what are some examples of this process?

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SAS (Statistical Analysis System) is a software used for data analysis and manipulation. In SAS, variables refer to the columns or fields in a dataset that contain information or data. Reordering variables in SAS refers to the process of changing the order in which these variables appear in a dataset.

There are various ways in which variables can be reordered in SAS. One way is by using the PROC SORT statement, which allows the user to specify the order of variables in the dataset. Another method is by using the PUT and KEEP statements, which allow the user to select and rearrange specific variables in a dataset.

For example, if a dataset contains variables such as age, gender, income, and education, the user may want to reorder them in the order of income, age, education, and gender. This can be achieved by using the PROC SORT statement and specifying the desired order of variables.

Another example would be reordering variables based on their data types. This can be useful when performing statistical analysis, as it allows for better organization and understanding of the data. For instance, all numeric variables can be placed together followed by character variables, date variables, and so on.

In conclusion, reordering variables in SAS is a simple and efficient process that allows for better data management and analysis. It can be done using various methods and can be tailored to suit the specific needs of the user.

Reorder Variables in SAS (With Examples)

You can use the RETAIN function in SAS to quickly reorder the variables in a dataset.

Here are the three most common ways to use this function:

Method 1: Reorder All Variables

```
data new_data;
```

```
retain var4 var5 var1 var3 var2;  
set original_data;  
run;
```

Method 2: Move One Variable to Front

```
data new_data;  
retain var4;  
set original_data;  
run;
```

Method 3: Move Several Variables to Front

```
data new_data;  
retain var4 var5;  
set original_data;  
run;
```

The following examples show how to use each method with the following dataset in SAS:

```
/*create dataset*/  
data original_data;  
input team $ points rebounds assists steals;
```

datalines;

A 18 10 4 5

B 24 11 6 7

C 26 14 6 8

D 34 22 5 3

E 38 3 7 7

F 45 12 4 4

G 23 7 9 1

;

run;

/*view dataset*/

proc printdata=original_data;

Obs	team	points	rebounds	assists	steals
1	A	18	10	4	5
2	B	24	11	6	7
3	C	26	14	6	8
4	D	34	22	5	3
5	E	38	3	7	7
6	F	45	12	4	4
7	G	23	7	9	1

Example 1: Reorder All Variables

The following code shows how to reorder the variables in the following order: team, rebounds, assists steals,

then points.

```
/*create new dataset with variables reordered*/  
data new_data;  
retain team rebounds assists steals points;  
set original_data;  
run; /*view new dataset*/proc printdata=new_data;
```

Obs	team	rebounds	assists	steals	points
1	A	10	4	5	18
2	B	11	6	7	24
3	C	14	6	8	26
4	D	22	5	3	34
5	E	3	7	7	38
6	F	12	4	4	45
7	G	7	9	1	23

Notice that the variables are reordered in the exact order that we specified in the RETAIN function.

Example 2: Move One Variable to Front

```
/*create new dataset with variables reordered*/  
data new_data;  
retain assists;  
set original_data;
```

```
run;
```

```
/*view new dataset*/
```

```
proc printdata=new_data;
```

Obs	assists	team	points	rebounds	steals
1	4	A	18	10	5
2	6	B	24	11	7
3	6	C	26	14	8
4	5	D	34	22	3
5	7	E	38	3	7
6	4	F	45	12	4
7	9	G	23	7	1

We can see that the assists variable is now in the first position while all of the other variables remained in the same order.

Example 3: Move Several Variables to Front

The following code shows how to move the assists and rebounds variables to the front while leaving all other variables in the same order:

```
/*create new dataset with variables reordered*/
```

```
data new_data;
```

```
retain assists;
```

```
set original_data;
```

```
run;
```

```
/*view new dataset*/
```

```
proc printdata=new_data;
```

Obs	assists	rebounds	team	points	steals
1	4	10	A	18	5
2	6	11	B	24	7
3	6	14	C	26	8
4	5	22	D	34	3
5	7	3	E	38	7
6	4	12	F	45	4
7	9	7	G	23	1

We can see that the assists and rebounds variables are now in the first and second positions while all of the other variables remained in the same order.

Additional Resources

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