



Don't Be a SAS® Dinosaur: Modernize Your SAS Programs

by Warren Repole

Listing Reports: Display Sequential Ranks

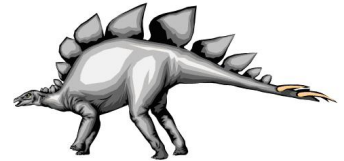
Scenario:

After sorting a data set, you want to display the position of each observation, that is, its rank among the observations, in a simple listing report. The corresponding column heading should be "Rank".

The observation number column in PROC PRINT output provides the correct value, but the column header is "Obs". The LABEL statement and LABEL option have no effect on this column header.

The old way: Create a New Variable after Sorting

The original approach is to create a new variable whose value equals the observation number after sorting. If necessary, a label can be applied to the new variable.



```
proc sort data=sashelp.class out=sorted_class;
  by descending Height ;
run;
data sorted_class;
  Rank+1;
  set sorted_class;
run;
proc print data=sorted_class noobs;
  title "Ranked observations when sorted by Height";
run;
```

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The new way: Change the Header of the OBS Column (available in SAS Version 8)

An alternate approach is to use the OBS= option in the PROC PRINT statement to customize the header for the observation number column.

```
proc sort data=sashelp.class out=sorted_class;  
  by descending Height ;  
run;  
proc print data=sorted_class obs="Rank";  
  title1 "Ranked observations when sorted by Height";  
run;
```

Advantages of the alternate approach:

- Only the PROC SORT and PROC PRINT steps are required.
- No additional passes of the data occur.

Disadvantages of the alternate approach:

- The observation ranks always are displayed from 1 to n in ascending order. Descending rank values are incompatible with this method.
- You cannot display additional variables as ID variables in conjunction with the rank variable because the ID statement suppresses the observation number column in the PROC PRINT report.

Additional documentation for this technique can be found in *Base SAS® 9.2 Procedures Guide*. Cary, NC: SAS Institute Inc.

Visit <http://support.sas.com/documentation/onlinedoc/sas9doc.html> for SAS 9 documentation.

Go to <http://www.repole.com/dinosaur/obslabel.html> for the sample code and output for this topic.

These techniques are mentioned in other SAS references and publications:

Introduction to SAS (Example 7.15); Mike Zdeb,

http://www.albany.edu/~msz03/epi514/notes/p061_082.pdf.