



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

by Warren Repole

Listing Reports: Filter Observations

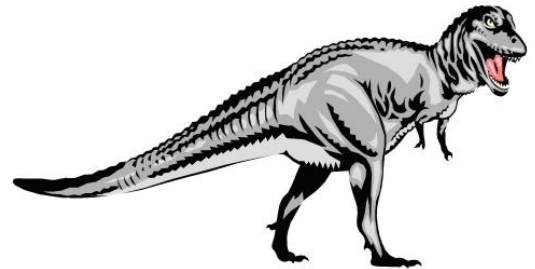
Scenario:

You need to create a simple listing report limited to selected observations in an existing SAS data set.

The filtering can be accomplished using simple comparison criteria.

The old way: Subset observations prior to PROC PRINT

The original approach is to create a subset of the observations through a DATA step using the subsetting IF statement. The resulting data set will be used immediately in a PROC PRINT step.



```
data teens;
  set sashelp.class;
  if age ge 13 and age le 19;
run;
proc print data=teens n;
  title1 "Teenage students";
run;
```

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The new way: WHERE Statement in PROC PRINT (available in SAS Version 6)

An alternate approach is to apply the filter through a WHERE statement in the PROC PRINT step.

```
proc print data=sashelp.class n;  
  where age between 13 and 19;  
  title1 "Teenage students";  
run;
```

Advantages of the alternate approach:

- No additional passes of the data occur.
- Only a single PROC PRINT step is required.

Disadvantages of the alternate approach:

- Filter criteria cannot be applied if they require DATA step programming techniques such as arrays or loops.
- The physical observation number of each selected observation is displayed, not a sequential list of numbers. However, the N= option still shows the correct total number of observations.

Additional documentation for this technique can be found in *SAS® 9.2 Language Reference: Dictionary*. 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/whereproc.html> for the sample code and output for this topic.

These techniques are mentioned in other SAS references and publications:

SAS Sample 24814 (<http://support.sas.com/kb/24/814.html>)

SAS Usage Note 24286 (<http://support.sas.com/kb/24/286.html>)

SAS Program Efficiency for Beginners; Bruce Gilson,

<http://www2.sas.com/proceedings/sugi24/Begtutor/p72-24.pdf>.