

A: SAS software allows you to combine data in many ways - you are using a many-to-many match-merge. I'll explain how it works, then I'll show how it affected your output data set.

When doing a many-to-many match-merge, SAS software reads the first observation from each data set of the merge in the same order as they appear in the MERGE statement. This means that like-named variables from data sets at the end of the merge statement will overwrite values from other like-named variables. In your case, values of B are taken from data set Y rather than X.

Values from data sets being merged are retained while still processing a BY group. So if you run out of variables from a data set, then MERGE retains the last values of that data set's variables.

A	B	C	
1	6	9	B is 6, not 2 - comes from 2nd data set
1	7	10	B is 7, not 3
1	4	10	C is 10 again - its value was retained
5	8	11	B is 8, not 99
5	6	16	B and C both come from Y

From two data sets, each with 4 observations, we get a data set with 5 observations. This is because of the largest number of ones and fives in each data set: X has three ones (Y only has two) and Y has two fives (X only has one).

With many-to-many merges PROC SQL can often provide a more suitable result.

Andrew Ratcliffe

Did You Know?

If you have a useful hint or tip, send it to the Editor and share it with the VIEWS membership.

Sectioned Reports

PROC REPORT is far more flexible than PROC PRINT when it comes to producing printed listings and tables. However, PROC PRINT has at

least one feature that PROC REPORT does not explicitly support. That is, using a BY statement with PROC PRINT places a neat section header across the page. PROC REPORT starts a new page for each new BY value, PROC PRINT does not do this. For small BY groups, it may not be desirable to skip to a new page.

This functionality can be reproduced in PROC REPORT using the following code.

```
proc report data=sasuser.class nowd;
  column sex age height weight name;
  define sex / order noprint;
  define age / order;
  break before sex / skip;
  break after sex / skip;
  compute before sex;
    line @43 'Sex: ' sex $1.;
  endcomp;
run;
```

Age in years	Height in inches	Weight in pounds	First name
Sex: F			
11	51.3	50.5	Sandy
12	56.3	77	Karen
	59.8	84.5	Kathy
Sex: M			
11	57.5	85	Thomas
12	57.3	83	James
	59	99.5	John
	64.8	128	Robert

Andrew Ratcliffe

Personalise Your SAS® Session

You can suppress the output of a page break between procedure printout by using: options formdlm='';

If you're a Windows users, why not put the options you always favour, for instance nocenter, in the command line associated with the icon that starts SAS software. For example: c:\sas\sas.exe -nocenter. The only problem with this is that some system options cannot be attached to the command line so...

An American BBU In London

The most unique and rewarding experience that I have had as a SAS Institute Books By Users (BBU) author came on May 6th, 1998. That was the date on which I gave a full day's worth of SAS technical presentations before a subgroup of VIEWS in Marlow.

The backgrounds of the attendees included insurance, telecommunications, express mail carrier, and consulting firms. The one commonality amongst us was a desire to make SAS System software run as efficiently as possible on mainframe computers running the IBM MVS operating system. To that end, I offered four one-hour presentations, based on my book Tuning SAS Applications in the MVS Environment. They were 1) Sources of SAS System Performance Information in the MVS Environment, 2) Power Techniques for Processing Large Tape Data Sets Using the SAS System in the MVS Environment, 3) Summarising Impossibly Large SAS Data Sets For the Warehouse Server Using Horizontal Summarisation, and 4) Ferreting Out Year 2000 Compliance Problems with PROC SOURCE. I was happy to find a number of insightful questions waiting for me at the end of each topic. Two persons raised questions with a particular slant that I never would have taken. Great!

Here is a little trick that I sometimes use when I have to search an input line for a match of a number of possible character constants:

```
proc format;
  value yrvars
    1 = 'curr-year'
    2 = 'fiscal-year'
    3 = 'year-month-day'
    4 = 'calendar-year'
    5 = 'salesyear'
  ;
run;
```

```
data coboline(keep=yearvar linenum);
  length yearvar $15;
  infile cobolprg;
  input @1 string $char80.;
  do i = 1 to 5;
    if index(string,(trim(put(i,yrvars)))) > 0 then do;
      yearvar = trim(put(i,yrvars.));
      linenum = _n_;
    end;
  end;
  output;
end;
run;
```

In the code excerpt above, each line of a COBOL flat-file source program is input. Then, the DO LOOP is executed. The counter of the DO LOOP is set to the number of entries in the YRVARs format. The IF statement within the DO LOOP "bounces" variable "I" against the YRVARs format to return a value, for instance: "curr-year". That value is then trimmed, and used by the INDEX function to determine if it exists in the 80-byte character variable, STRING. If so, then the line number, LINENUM, and character constant, YEARVAR, are output to data set COBOLINE.

This SAS code was the basis for one of my Year 2000 search programs. I hope that you will find it helpful when you need to search for a host of character constants within a single character string.

Mike Raithe

Why not put any options you frequently use for your SAS session in a file and use it as your SAS autoexec file. To do this, create a file with as many valid SAS statements as you need; change your command line to read c:\sas\sas.exe -autoexec d:\my_sas\myprefs.sas, where d:\my_sas\myprefs.sas is the file you just created.

These examples and syntax are for MS-Windows, but the techniques are equally appropriate to most other platforms.

Andrew Davey

Clipboard Copy Text From SAS/AF® Software

Programmatically copying text from a SAS/AF extended text entry widget to the clipboard can be tricky. You can use the widget class's _COPY_TO_CLIPBOARD_ method but this copies a graphic image, not the text.

The code shown below will do the trick. It assumes your extended text entry widget is named ETE and that you have a push button named PB_COPY.

```
length text $200;

pb_copy:
  tlist=makelist();
  call notify('ETE','_GET_VALUE_',tlist);
  control asis;
  do i=1 to listlen(tlist);
    text=getitemc(tlist,i);
    submit;
    &text
  endsubmit;
```

```

end;
call execcmd('curpos 1 1; mark; curpos max max; mark; store;
clear;end;');
control noasis;
call wregion(99,99,1,1,'');
rc=preview('edit');
cursor ete;
return;

```

Type some text into the ETE widget and then click the PB_COPY push button. All of the widget's text is copied to the submit buffer, then Display Manager commands are used to copy it to the clipboard. The Preview window is flicked onto the screen for a fraction of a second, so we added the WREGION to minimise the visibility of this and we think it's acceptable.

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News

Newsletter is Online

As briefly reported in the last issue, the VIEWS newsletter is now available online. Each issue is browsable online, or can be downloaded for printing and reading at your leisure.

Observations® Comes To You

Following-on from the last issue's comment regarding SAS Institute's technical journal Observations, are you reading the journal online? Its URL is <http://www.sas.com/obs>.

You can keep abreast of the periodic postings of new features by subscribing to the NEWDOCNEWS listserv. If you are not already receiving this monthly message from Publications, you may send electronic mail to listserv@vm.sas.com. Leave the subject line blank and include this text:

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Subscribe NEWDOCNEWS-L Your Name
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You will receive a confirmation as well as instructions on how to unsubscribe.

Enterprise Miner™ Software Surfaces

SAS Institute's long awaited data mining product (Enterprise Miner) was announced as a production product on April 30th (too late for inclusion in the Spring edition of VIEWS News). More details at <http://www.sas.com/new/preleases/043098/news2.html>.

SAS/IntrNet™ Software For The Mainframe

SAS Institute announced in July the general availability of SAS/IntrNet software for the mainframe, a substantial expansion of the Institute's Web offering. SAS/IntrNet software is a critical component of the Institute's open, end-to-end information-delivery strategy, delivering thin-client access across the organisation. More details at: <http://www.sas.com/new/preleases/070798/news1.html>.

SAS/GRAPH® Software Goes Interactive

Experimental multidimensional data visualisation tools are available for the SAS/GRAPH product. Available as a web download, the package includes versions of the Chart, Pie and Histogram objects that will work with Release 6.12 of the SAS System. These objects are specifically designed for interactive data exploration. They support SAS Data sets, multidimensional and multivariate data, interactive view manipulation, data subsetting, picking and many other features. Sample applications are also included to demonstrate their functionality. More details at the Demos/Downloads page on the SAS Institute web site.

In Brief

- Since the advent of version 6.11 we've been able to advance dates to the midpoint or to the endpoint of intervals with the intnx() function. The intnx() function now has an optional fourth parameter that may be specified as 'beginning,' 'middle,' or 'end'
- SAS Institute has welcomed Amadeus Software as its sixth UK Quality Partner

- The launch of version 7 of SAS software draws ever closer. If you won't be upgrading to V7 straightaway you may be worrying about your V6 documentation requirements. Fear not, SAS Institute has assured VIEWS that stocks of V6 documentation will be retained for at least one year after the launch of V7
- If you have a SAS/AF extended text entry widget that you'd like users to click-on but not be able to modify its data, try protecting it at run-time with the PROTECT method. For the extended text entry widget, the PROTECT method accepts a parameter of 'CLICKABLE'. The widget's labelled-section will run, but users can't edit the text. You can also use 'PROTECT_','SCROLLABLE'. These features are not documented - use them with caution
- If you'd like the Program Editor (and other editing windows) to be more like Microsoft Word, take a look at the AUTOSPLIT command. The AUTOSPLIT command splits the text and repositions the cursor to the next line whenever a carriage return is entered within the text area
- If you want a blank column heading in PROC REPORT or PRINT set the variable's label to '*', where '*' is the split character
- If you want PROC REPORT to order your rows in their unformatted order (the same as PROC PRINT does), use ORDER=INTERNAL on your ORDER variable's DEFINE statement
- "Data Set" is two words - not one!
- A quick and simple means of writing-out a data set as a comma-separated variable (CSV) file is to insert the following PUT statement into your data step: put (_all_) (',');

Diary

Are you organising an event that would be of interest of the VIEWS readership? Let us know, we are interested in all non profit making events related to SAS software.

November 1998

We are planning a VIEWS subgroup meeting on the subject of 'Application Development' for November. Indications from VIEWS 4 evaluation forms are that interest is such that it may need to be a mini-conference.

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