

Comments and Special Characters

Deb Cassidy
Cardinal Health, Inc.

The idea for this paper came about because a coworker added macro comments to a macro and it stopped working. No one could see anything wrong with the comments and she thought the only unusual thing she added was an underscore. She inserted `/*` before the first comment and `*/` after the last comment so the entire set of macro comments was treated as one large comment. This solved the problem. A few days later, the same thing happened to someone else. The second time the problem was more obvious. A single quote was within the macro comment. However, it was being used as an apostrophe. Quotes and apostrophes are different in the English language but not in the SAS® language. The preferred solution in this case was to simply drop the apostrophe. Two single quotes could have been used or the `/* */` could have been left in the comments.

The apostrophe does not cause a problem in base SAS but it does when using the macro language. The difference is that everything is treated as text in the macro language so SAS actually “looks” at the comments. In base SAS, any text found between the beginning and the end of the comment is “ignored”. However, even if you are not using macros you might have problems when the “end” of your comment isn’t where you think it is.

The next page shows what happens when you put certain types of text into a comment. I’ve included sample error messages when it doesn’t work. In base SAS, you can write comments in the forms:

```
* comment;
```

```
/* comment */ (Caution to MVS batch users: don’t put the /* in columns 1-2.)
```

The first form is a separate statement while the latter form can be used like a blank.

In the macro language, you write comments in the form:

```
%* comment;
```

Please note the following cautions:

- Only the macro comment was tested within a macro. Anyone who moves ‘regular’ code into a macro or uses the SKIP macro presented at SUGI 19 to temporarily bypass a section of code might encounter problems.
- Even though I list an item as ‘works’, you might come up with a variation that doesn’t. For example, %TEXT works fine except when the TEXT happens to be a macro function. It may or may not work depending on the function and how you write the comment.
 %* Use %STR when setting the parameter; - Does not work.
 %* Use %STR() when setting the parameter; - Does work.
 I discovered this when I used the SKIP macro!
- You may get different error messages depending on what else is in your code. I’ve included two different messages for the “comments within a statement” example.
- Sometimes adding a RUN statement may appear to correct the problem. Since this isn’t a foolproof method, it is better to find the real problem.
- Your program may have a condition code or return code of 0 indicating it ran but you may still have an error.
- Errors in macro code may not show up until you actually call the macro.

In general, comments are essential but make them easy for someone else to read. Whenever possible, try to use blocks of comments. Try to avoid special characters such as quotes, semi-colons or percent signs.

SAS is a registered trademark of SAS Institute Inc. in the USA and other countries. ® indicates USA registration.

Contact:(Home) Deb Cassidy
3809 Secretariat Court.
Columbus, OH 43221
(614) 771-7861 (answering machine)

(Work) Cardinal Health, Inc.
655 Metro Place South, Suite 460
Dublin, OH 43017
(614) 799-6015

COMMENT FORM			
TYPE OF TEXT	/* comment */	* comment;	%* comment ;
single quotes such as: Joe's request	works	works	WARNING: The current word or quoted string has become more than 200 characters long. You may have unbalanced quotation marks. WARNING: Missing %MEND statement.
imbedded semi-colon	works	ERROR 180-322: Statement is not valid or it is used out of proper order	ERROR 180-322: Statement is not valid or it is used out of proper order
%	works	works	works
%text	works	works	works (see cautions on first page)
/* */ (a comment within a comment)	ERROR 180-322: Statement is not valid or it is used out of proper order	works	works
* ; (a comment within a comment)	works	ERROR 180-322: Statement is not valid or it is used out of proper order	ERROR 180-322: Statement is not valid or it is used out of proper order
LOCATION OF COMMENT			
Within code such as: IF X=1 THEN Z=Y*3; /* THIS IS LOW GROUP*/ ELSE IF X=2 THEN Z=Y*5; /* THIS IS HIGH GROUP*/	works	works	not tested
Within a statement such as: PROC PRINT; VAR X /*Y*/ Z;; ----- INPUT @1 X \$3. /* THIS IS CHARACTER */ @5 Y 2.;	works	ERROR 200-322: The symbol is not recognized. ----- ERROR: The variable named CHARACTER contains more than 8 characters.	not tested