

SAS® Abbreviations are your friends, use a template method to code!

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ABSTRACT

Often, coders find themselves using the same procedures or sequence of procedures over and over again. It would be very useful to create a "shell" of a procedure or program that can be used to cut down on repetitive typing. (For example, to submit the generic code "proc print;run;"). This quick demonstration will show how to create/edit/use SAS® Abbreviations to quickly interject code into the Enhanced Editor window in SAS for Windows.

INTRODUCTION

Is there a proc or function that usually causes you to look up its syntax? Is there a block of code that you use quite frequently? Do you have to add a large comment block at the top of your programs, and want to insert the template?

If you answered yes to any of these questions and you use the Enhanced Editor on the Windows platform, you can take advantage of SAS Abbreviations. Using them can help reduce the amount of time spent programming redundant tasks.

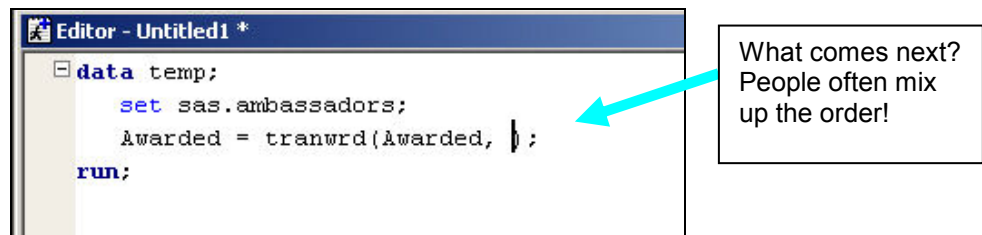
WHAT ARE SAS ABBREVIATIONS?

A SAS Abbreviation is simply a character string you define so that when you type the string in the Enhanced Editor window, the string is substituted with a longer text string. This longer text string becomes very useful when it is SAS code!

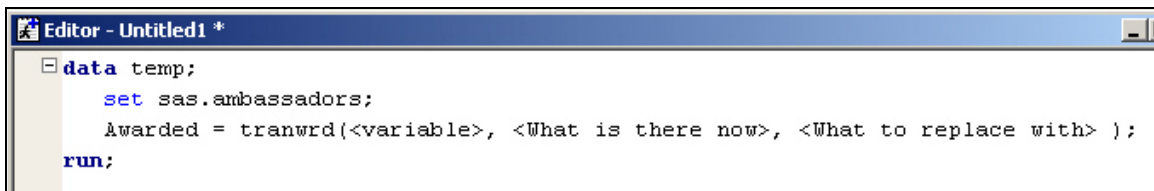
There are two parts of the abbreviation. The first part is the code you wish to be able to quickly automate. The second part is a nickname, so when you type it into the Enhanced Editor window, SAS will prompt you to use the abbreviation.

AN EXAMPLE SCENARIO

One of the common difficulties that some SAS programmers have is remembering the syntax for infrequently used procedures or functions. This is why many SAS programmers continue to utilize SAS reference manuals and SAS OnlineDoc for simple syntax questions. An example of this is the syntax of the tranwrd function. The tranwrd function requires three parameters. Any mistake in the order of the parameters can ultimately alter or invalidate the results.



After you look up the function, you see that it really should be written as:

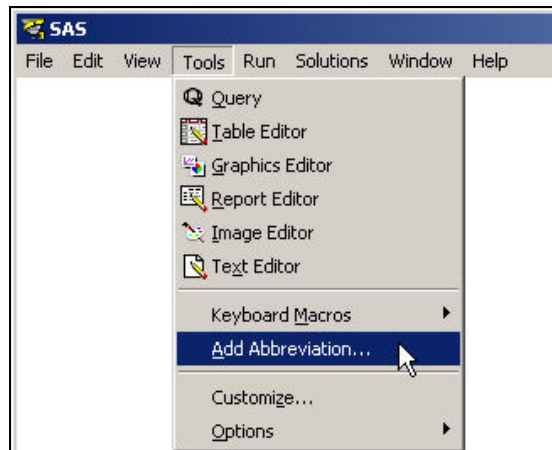


Looking the syntax up each time can be time consuming. You may choose to write it down, but it could get lost under all those papers on your desk. It would be nice if you had a way to remind yourself of the syntax electronically with little effort! Here is where a SAS Abbreviation is your friend.

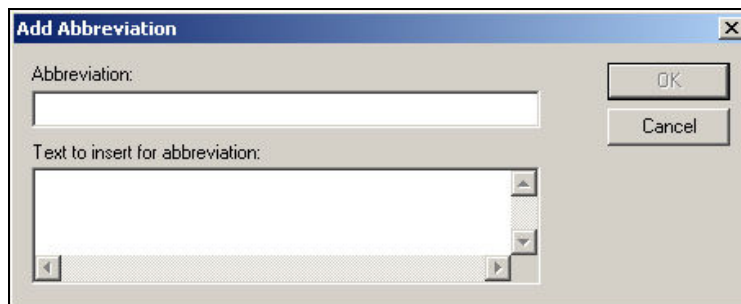
CREATING AN ABBREVIATION

Copy the code from your editor window. (You will be able to type it, but it is easier to paste code that is verified from the editor window.)

Place the cursor in the Enhanced Editor window.
Select the **Tools** menu and then **Abbreviations**.



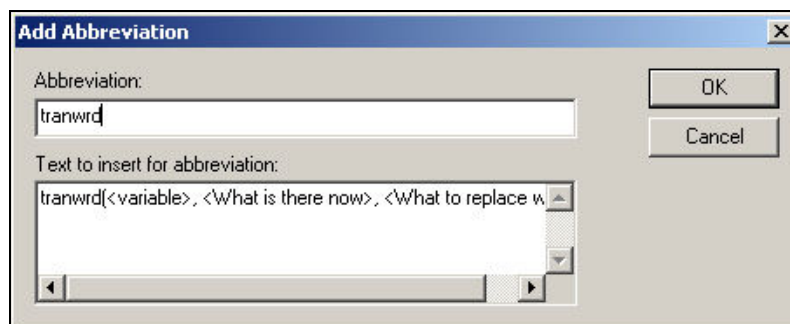
A window opens where you will specify how you want to create the abbreviation. You need to supply the name for the abbreviation, as well as the text that SAS should insert into the editor when you use the abbreviation.



Paste the code into the bottom area labeled “*Text to insert for abbreviation*”.
Select an abbreviation that will be easy to remember and place it in the area under the label “*Abbreviation*”.

In this example, it is extremely easy to accidentally switch the order of the last two parameters in the tranwrd function. The SAS abbreviation can be used to remind the user of the exact syntax. The next time the abbreviation is typed in the editor window, the user will be given a visual reminder that can be inserted into the code.

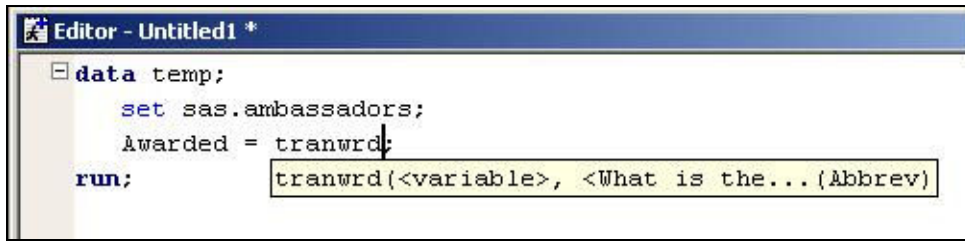
Any character string can be used for the name of the abbreviation, including blanks. However, care should be taken when selecting the abbreviation name. It is a good idea to choose a name that you do not use often. You would not want to use the letter “T” alone as the abbreviation name, since the letter “T” usually appears throughout programs. A best practice is to utilize the name of the SAS function as the name of the abbreviation.



Click **OK**. Your abbreviation has been created!

USING YOUR ABBREVIATION

In your Enhanced Editor window, place the cursor where you want to insert your code. Type the name you assigned when creating the abbreviation.



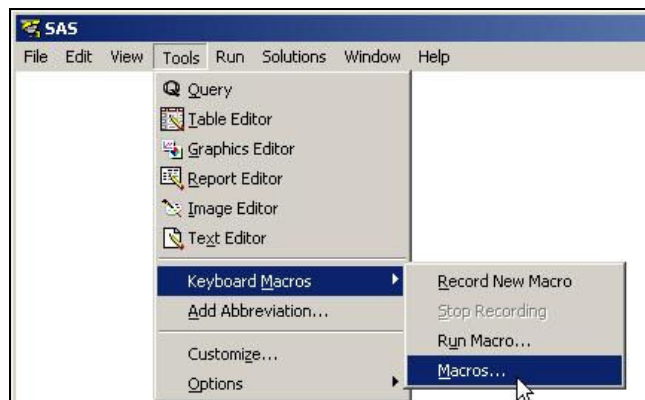
A small box will appear with some of the code from the abbreviation. You have two choices.

1. You want to use the abbreviation. Simply hit the **ENTER** key or the **TAB** key. SAS will insert the code for the abbreviation into the editor window, where the cursor is and will remove the abbreviation name. Replace the remainder code with the actual values or variable names.
2. You do not want to use the abbreviation. Simply keep typing, and the box will go away. SAS will assume you do not wish to use the abbreviation.

CHANGING OR DELETING YOUR ABBREVIATION

Place the cursor in the Enhanced Editor window.

Select the **Tools** menu and then **Keyboard Macros**, followed by **Macro**.



A window opens. Click on the abbreviation you wish to change or delete so it is highlighted.

- If you wish to delete the abbreviation, click on **DELETE**.
- If you wish to change the abbreviation, click on **EDIT**.

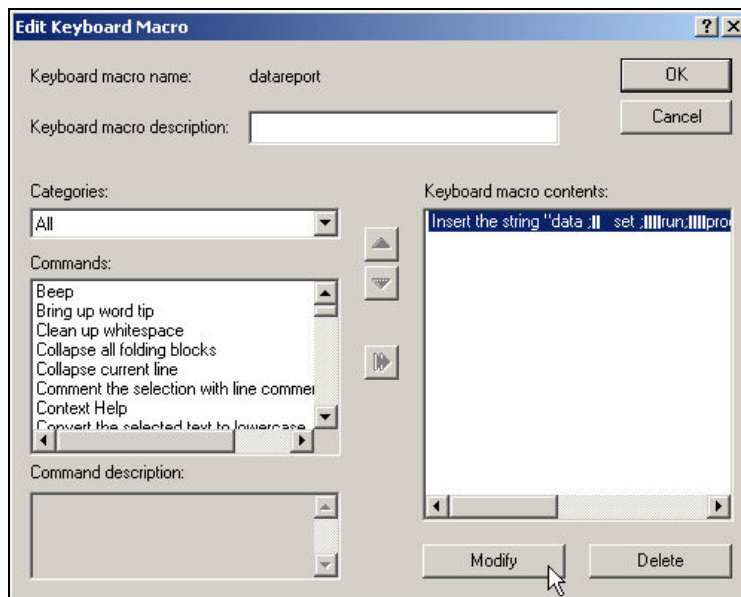
When you choose to edit the abbreviation, a new window opens and your code will appear on the bottom right side. Click on the code to select it.

AN EXAMPLE SCENARIO

The abbreviation *DataReport* contains a template for a basic data step and proc report step, as shown below. The proc report step contains only a single column statement. It might be desirable to add a DEFINE statement to the step, to be reminded of its syntax.

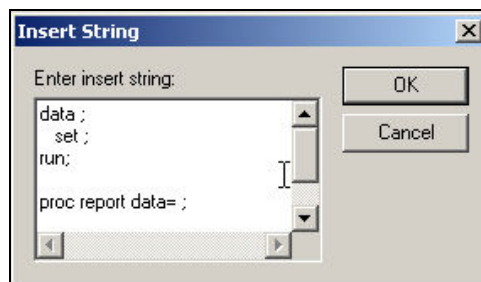
```
data ;  
  set ;  
run;  
  
proc report data= ;  
  columns ;  
run;
```

In this example, the abbreviation called *DataReport* needs to be edited to add the DEFINE statement.



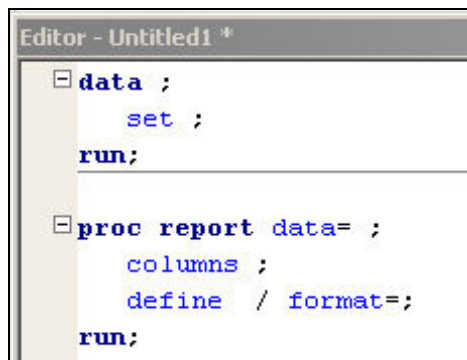
Notice that the two buttons at the bottom of the window labeled **MODIFY** and **DELETE** are no longer grayed out. Click on **MODIFY**.

A second window will open where the code can be modified, either by typing directly or by pasting directly. In this example, a DEFINE statement is added to the proc report step.



When you are finished, click **OK** to close the small window labeled “*Insert String*”. Click **OK** to close the “Edit Keyboard Macro” window. Click **CLOSE** to return to the editor window.

When the abbreviation name *DataReport* is typed into the editor and the **ENTER** key is hit to use the abbreviation, the newly updated code is added.



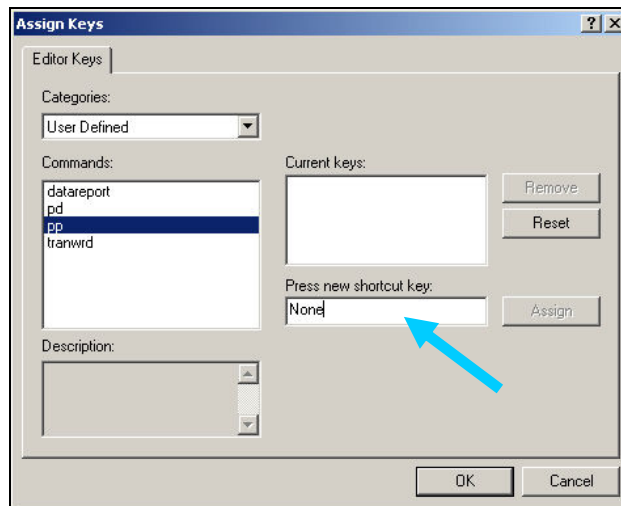
ASSIGNING KEYSTROKES TO YOUR ABBREVIATION

While abbreviations are great solutions for infrequently used or hard to remember syntax for functions, they can also greatly simplify the life of a coder who performs repetitive tasks. Similar to SAS keys functionality, abbreviations can be assigned a keystroke(s) that can be used instead of the abbreviation name. Once the keystrokes are triggered, SAS will inject the abbreviation code into the editor window.

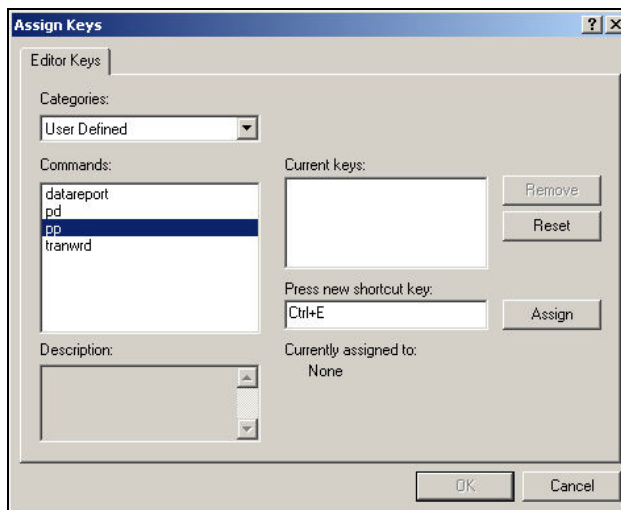
First, decide what keystroke or keystroke combination you want to assign to the abbreviation. Select the **Tools** menu and then **Keyboard Macros**, followed by **Macro**.

A window opens. Click on the abbreviation you wish to add a keystroke for so it is highlighted. Click on the button "**Assign Keys**".

Place your cursor in the area marked "*Press new shortcut key*".



Enter the keystroke(s) you have decided upon for the abbreviation. For example, hold down the ALT key and the E key at the same time to assign ALT-E as your keystroke.

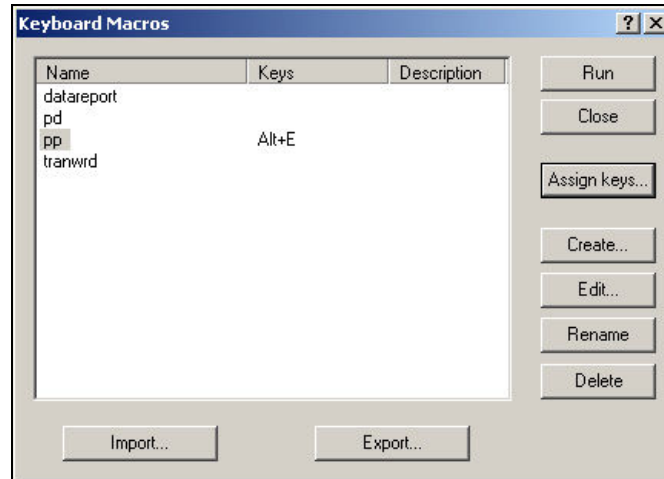


When you are happy with your selection, click on **ASSIGN**. The shortcut will be added to the area marked "**Current Keys**".

(Note, you may assign keys for other abbreviations you created by selecting them one at a time. You do not need to exit each time.)

Click **OK**.

Notice that in the Keys column, next to your abbreviation name, is the newly entered keystroke(s).



Close the window. Test the key by applying the designated keystrokes. The assigned code should appear in the editor window. *Please note that the abbreviation keystrokes will supersede any SAS Keys you have set when it is used in the Enhanced Editor window.*

CONCLUSION

Using SAS Abbreviations can help reduce coding time. They can also reduce effort in looking up syntax for functions, statements or procedures you may forget. Further, many people are required to add a comment header block to their programs to document what they do. Not shown in this paper is how you can also use SAS abbreviations to add code comment blocks. This is useful in helping you to create readable code without typing in a template each time or pasting from another program.

REFERENCES

For more information on SAS Abbreviations and Keyboard Macros for the Enhanced Editor, please refer to the SAS OnlineDoc in the "SAS Companion for Microsoft Windows". The direct link for SAS 9.13 is:
http://support.sas.com/onlinedoc/913/getDoc/en/hostwin.hlp/editor_enhanced.htm#eeabrief .

ACKNOWLEDGMENTS

Richard Bell, a SAS Instructor based in Cary, first introduced me to the concepts of SAS Abbreviations several years ago. Thank you Rick!

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