

A Tale of Two Editors

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Topics

- Using Notepad (a basic editor)
- A reasonably good Windows editor...
- The SAS® Program Editor
- Why use the SAS® Enhanced Editor?
- Live Demonstration

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Notepad

A rudimentary editor

Has:

- CTRL+C, CTRL+V, CTRL+X (copy, paste, cut)
- CTRL+A, CTRL+G (select all, goto line)
- Find and Replace
- Type font and size selection

If you are using a rudimentary editor, you are wasting valuable time.
Find a good editor, learn it very well, and stick with it!

IHMO, the most productive IDE is Windows.

A reasonably good Windows editor

Will likely have the following (and more):

- Syntax highlighting (colorization)
- Undo/Redo capability
- Find and Replace windows
- Drag and Drop editing
- Macro recording
- Searchable Help directory
- ALT+LMB (columnar text select)
- FTP / SFTP capability
- Open multiple files at the same time

The SAS Program Editor

- Available since SAS V6
- Uses either line-commands or pmenus in interactive display manager mode
- Has Syntax highlighting (V8 and above)
- Available on all platforms, including Windows

Note: the SAS Enhanced Editor is only available in the Windows environment.

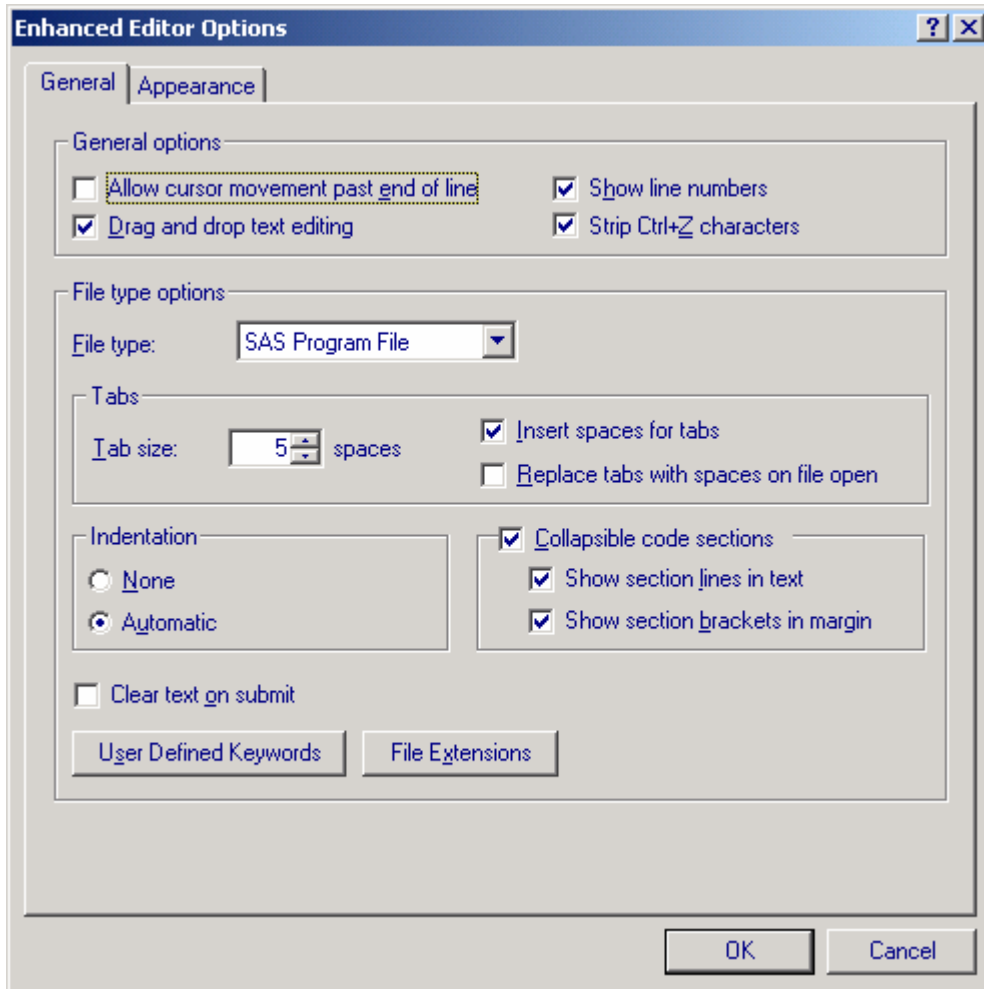
Why Use the Enhanced Editor?

- allows you to create and format your own keywords.
- automatically indents the next line when you press the Enter key.
- highlights the flow of your SAS program by expanding or contracting sections of SAS procedures, DATA steps, and macros.
- allows you to create macros that record and play back program editing commands by using the keyboard macro recorder.
- allows you to create shortcuts for typing in text using abbreviations.
- bookmarks lines of code for easy access to different sections of your program or document.
- permits customized keyboard shortcuts for most Enhanced Editor commands.
- permits multiple opens of a file.
- automatically reloads modified disk files.
- accesses Help for SAS procedures when placing the cursor within the procedure name and pressing F1.

How about being able to go home, on time, with all your work done?

Editor Options Window

Tools -->Options -->Enhanced Editor



Editor Line Commands

SAS Text Editor Line Commands

These commands can be executed by typing in the numbered part (sequential numbers) of the display and pressing ENTER. Follow line commands that have a numeric argument with a space before issuing them.

C,CC	-- Copy
CL, CU, CCL, CCU	-- Case L (U)
COLS	-- Show columns
D,DD	-- Delete
I,IA,IB	-- Insert
JC, JL, JR,	
JJC, J JL, JJR	-- Justify
M,MM	-- Move
MCL,MCU	-- Case L (U) Marked
MASK	-- Define initial contents of a line
R,RR	-- Repeat
TC,TF,TS	-- Text Connect (Flow) (Split)
TABS	-- Show Tabs
>, >>,),))	-- Shift right
<, <<, (, ((-- Shift left

SAS Enhanced Editor Line Commands

These commands can be executed by selecting a line number (CTRL-G, for example) and typing the command in the command bar.

:In, IAn – Insert n lines *after* the current line.

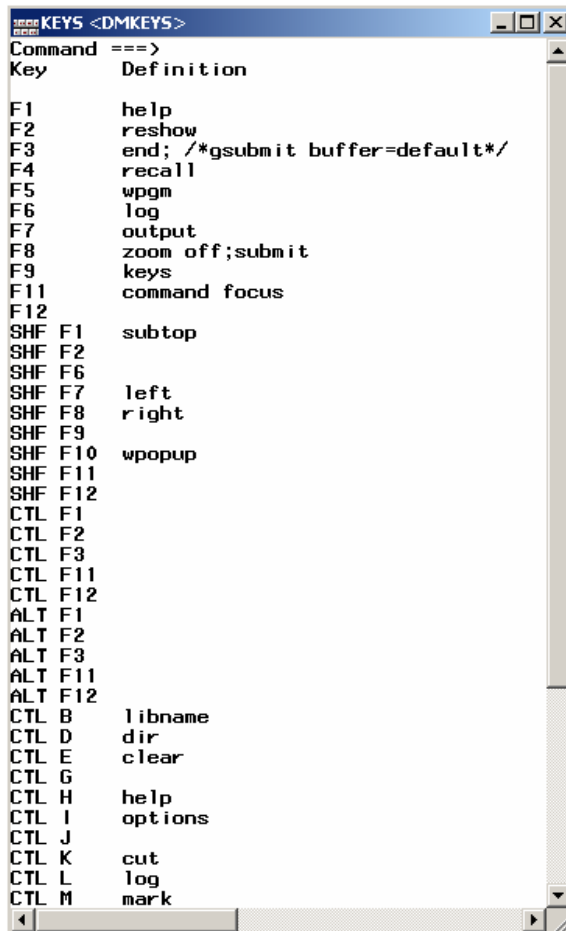
:IBn – Insert n lines *before* the current line.

:Dn – Delete n lines starting at the current line.

:Rn m – Repeat the block of m lines,
starting with the current line, n times.

A space is required between n and m .

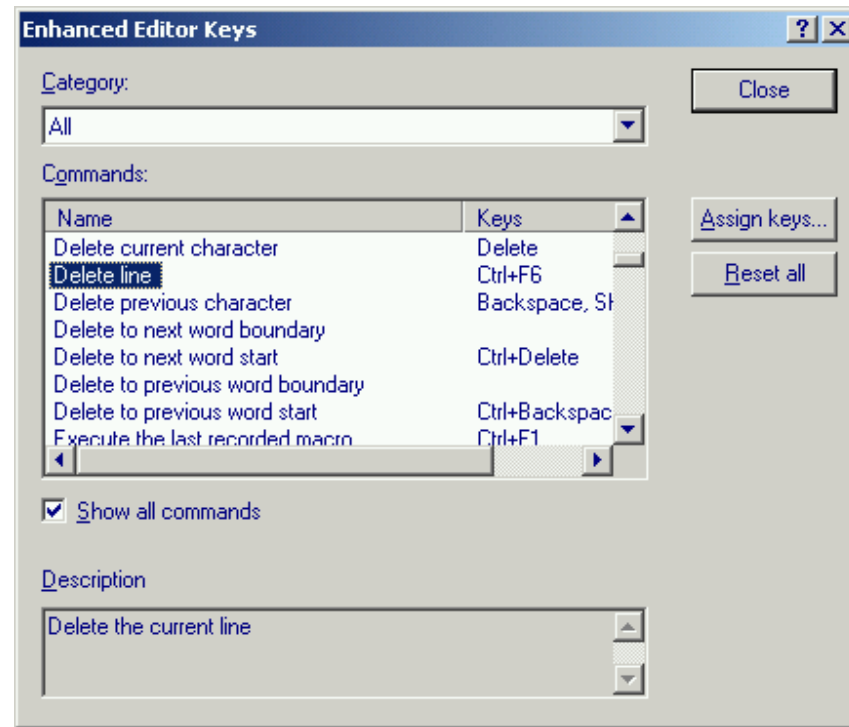
Two Sets of Keys



Command ===>

Key	Definition
F1	help
F2	reshow
F3	end; /*gsubmit buffer=default*/
F4	recall
F5	wpgm
F6	log
F7	output
F8	zoom off;submit
F9	keys
F11	command focus
F12	
SHF F1	subtop
SHF F2	
SHF F6	
SHF F7	left
SHF F8	right
SHF F9	
SHF F10	wpopup
SHF F11	
SHF F12	
CTL F1	
CTL F2	
CTL F3	
CTL F11	
CTL F12	
ALT F1	
ALT F2	
ALT F3	
ALT F11	
ALT F12	
CTL B	libname
CTL D	dir
CTL E	clear
CTL G	
CTL H	help
CTL I	options
CTL J	
CTL K	cut
CTL L	log
CTL M	mark

Tools --> Options --> Enhanced Editor Keys



Enhanced Editor Keys

Category: All

Commands:

Name	Keys
Delete current character	Delete
Delete line	Ctrl+F6
Delete previous character	Backspace, St
Delete to next word boundary	
Delete to next word start	Ctrl+Delete
Delete to previous word boundary	
Delete to previous word start	Ctrl+Backspac
Execute the last recorded macro	Ctrl+F1

Show all commands

Description: Delete the current line

Buttons: Close, Assign keys..., Reset all

Some Keyboard Shortcuts

Alt + [, Alt +]

Alt + Down

Alt + F8

Alt + Shift + R

Alt + Up

Ctrl + /

Ctrl + A

Ctrl + Backspace

Ctrl + C

Ctrl + Delete

Ctrl + Down

Ctrl + F

Ctrl + F2

Ctrl + G

Ctrl + H

Ctrl + Page Down

Ctrl + Page Up

Ctrl + Shift + /

Ctrl + Shift + A

Ctrl + Shift + L

Ctrl + Shift + M

Ctrl + Shift + U

Ctrl + Shift + W

Ctrl + V

Ctrl + X

Ctrl + Y

Ctrl + Z

Move cursor to matching DO/END keyword

Move cursor to the last visible line

Play a command/macro

Start/Complete macro

Move cursor to the first visible line

Comment the selection with line comments

Select all

Delete to previous word start

Copy selection

Delete to next word start

Scroll screen up

Find (interactive)

Toggle marker on the current line (bookmark)

Go to line (interactive)

Replace (interactive)

Move cursor to the bottom of the file

Move cursor to the top of the file

Undo the Comment

Add a new abbreviation

Convert the selected text to lowercase

Add or change macros

Convert the selected text to uppercase

Clean up whitespace

Paste from clipboard

Cut selection

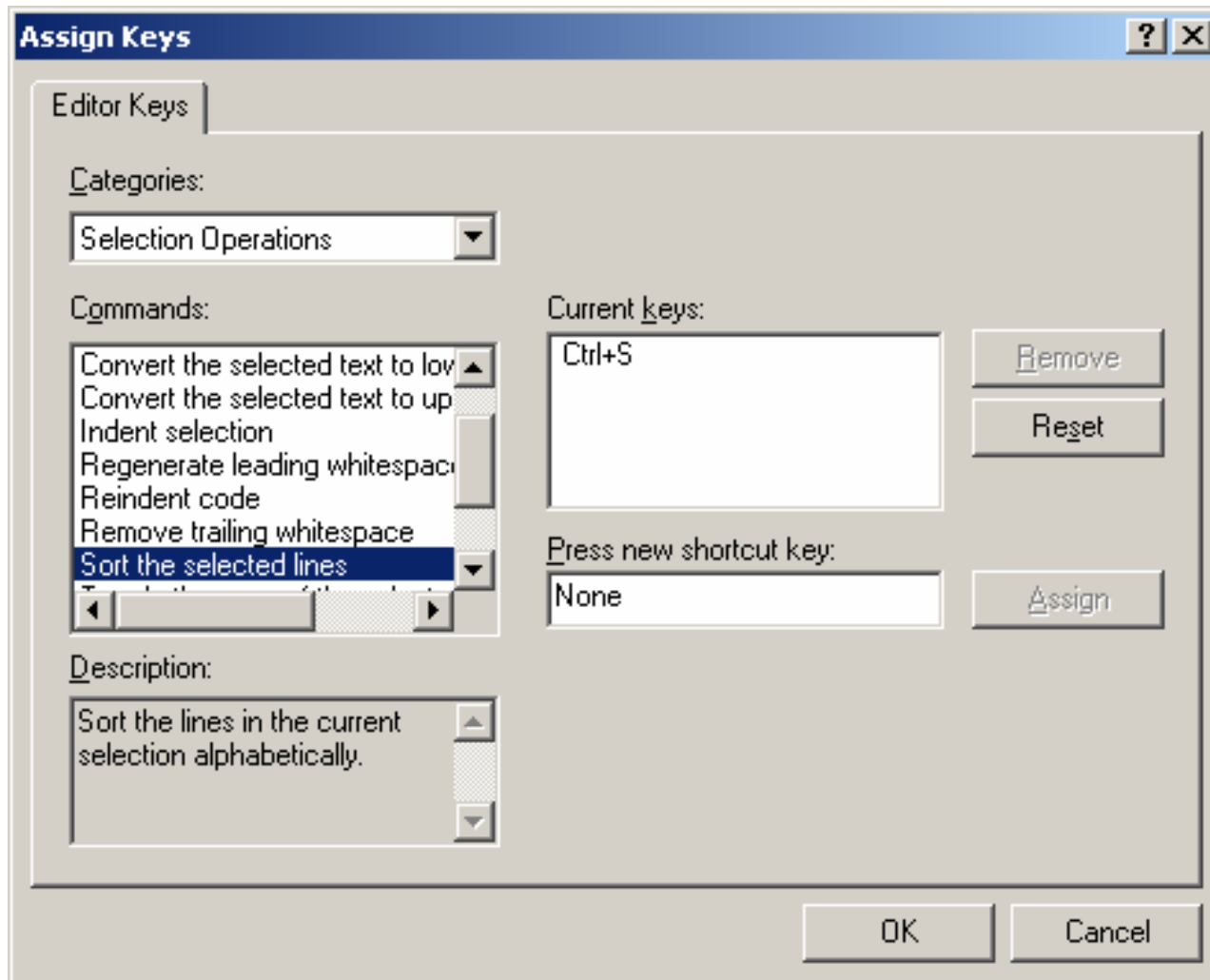
Redo

Undo

Some Customizations -- dmkeys

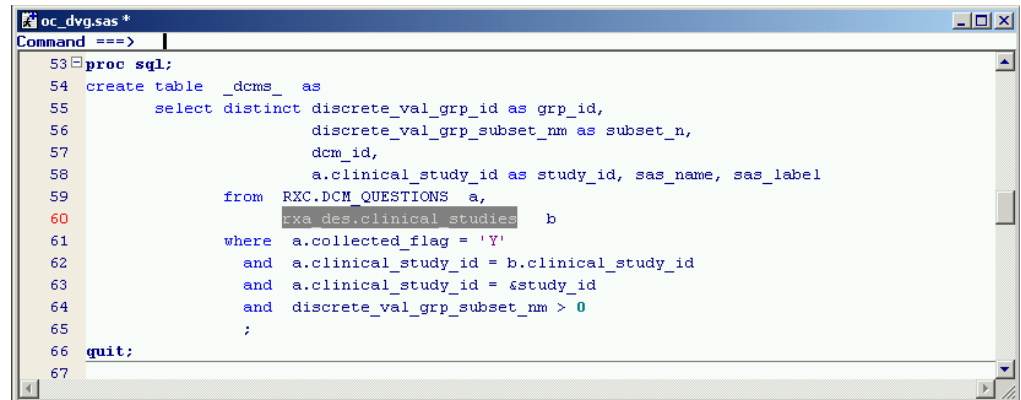
```
data _null_; /* Custom key definitions */
  if resolve('&sysprocessname') = 'DMS Process'
  then do;
    call execute('dm wedit ''Keydef "F3" end'' wedit;');
    /* change this from wpgm to wedit (enhanced editor) */
    call execute('dm wedit ''Keydef "F5" wedit'' wedit;');
    /* viewtable last SAS data table opened */
    call execute('dm wedit ''Keydef "SHF F2" vt _last'' wedit;');
    call execute('dm wedit ''Keydef "SHF F6" next;icon off'' wedit;');
    /* submit what's in the windows paste buffer */
    call execute('dm wedit ''Keydef "SHF F9" gsub buf=default'' wedit;');
    call execute('dm wedit ''Keydef "SHF F11" dlgopen'' wedit;');
    call execute('dm wedit ''Keydef "SHF F12" dlgsave'' wedit;');
    call execute('dm wedit ''Keydef "CTL F11" cle log'' wedit;');
    call execute('dm wedit ''Keydef "CTL F12" cle lst'' wedit;');
    /* move title key to CTL-Y, use CTL-T for paste key */
    call execute('dm wedit ''Keydef "CTL Y" title'' wedit;');
    call execute('dm wedit ''Keydef "CTL T" paste'' wedit;');
    /* remove CTRL-H key (was online help) */
    call execute('dm wedit ''Keydef "CTL H" noop '' wedit;');
  end;
stop;
run;
```

Some Customizations – editor keys

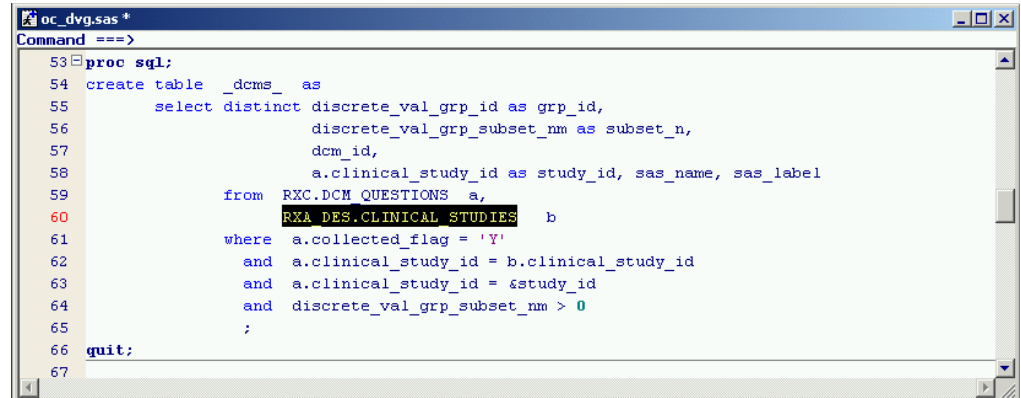


Selecting Text

- Click and Hold LMB
- Or press Shift and a directional key
- Can Submit / Rsubmit selected text
- Can Also upcase / lowercase selected text
CTRL+SHIFT+L
CTRL+SHIFT+U
- Can Also Indent



```
oc_dvg.sas *
Command ==>
53 proc sql;
54 create table _dcms_ as
55     select distinct discrete_val_grp_id as grp_id,
56                    discrete_val_grp_subset_nm as subset_n,
57                    dcm_id,
58                    a.clinical_study_id as study_id, sas_name, sas_label
59     from RXC.DCH_QUESTIONS a,
60          RXA.DES.CLINICAL_STUDIES b
61     where a.collected_flag = 'Y'
62           and a.clinical_study_id = b.clinical_study_id
63           and a.clinical_study_id = &study_id
64           and discrete_val_grp_subset_nm > 0
65           ;
66 quit;
67
```



```
oc_dvg.sas *
Command ==>
53 proc sql;
54 create table _dcms_ as
55     select distinct discrete_val_grp_id as grp_id,
56                    discrete_val_grp_subset_nm as subset_n,
57                    dcm_id,
58                    a.clinical_study_id as study_id, sas_name, sas_label
59     from RXC.DCH_QUESTIONS a,
60          RXA.DES.CLINICAL_STUDIES b
61     where a.collected_flag = 'Y'
62           and a.clinical_study_id = b.clinical_study_id
63           and a.clinical_study_id = &study_id
64           and discrete_val_grp_subset_nm > 0
65           ;
66 quit;
67
```

Drag and Drop Editing

The screenshot shows the SAS software interface with a code editor window titled "load2catalog.sas *". The editor contains SAS code for loading files into a catalog. A yellow highlight is visible on lines 20-22, and a black rectangular box is positioned over the code on line 21, indicating a drag-and-drop editing operation.

```
Command ==>
1 filename source1 pipe "dir /b *.sas";
2 libname here ".";
3 %let lib=here;
4 %let proj=mycat;
5
6 /* Sample code loads *.sas files into &lib.&proj catalog */
7 data _null_;
8     length catname dirfile $80;
9     infile source length=ln;
10    input @1 name $varying80. ln;
11    dirfile=pathname('here')||'\'||trim(name);
12    infile here filevar=dirfile end=done;
13    catname="&lib.&proj"||scan(name,1,'.')||'.source';
14    file storeit catalog filevar=catname;
15    do until(done);
16        input;
17        put _infile_;
18    end;
19 run;
20 data _null_;
21     length catname dirfile $80;
22     infile source length=ln;
```

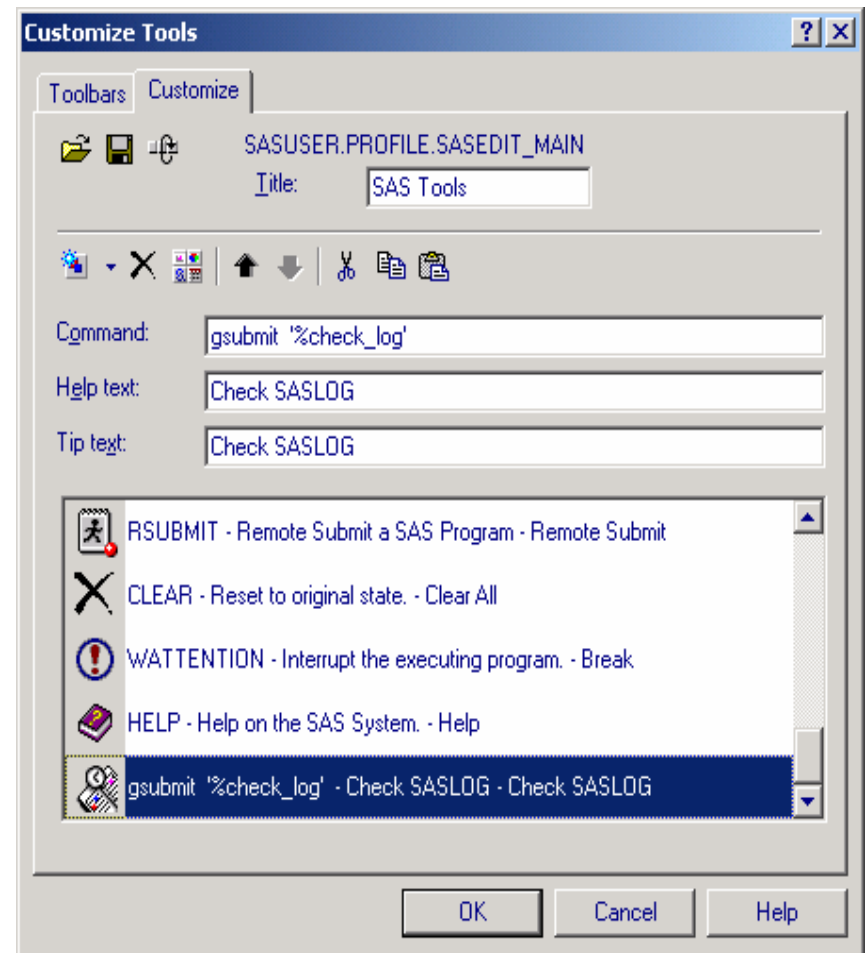
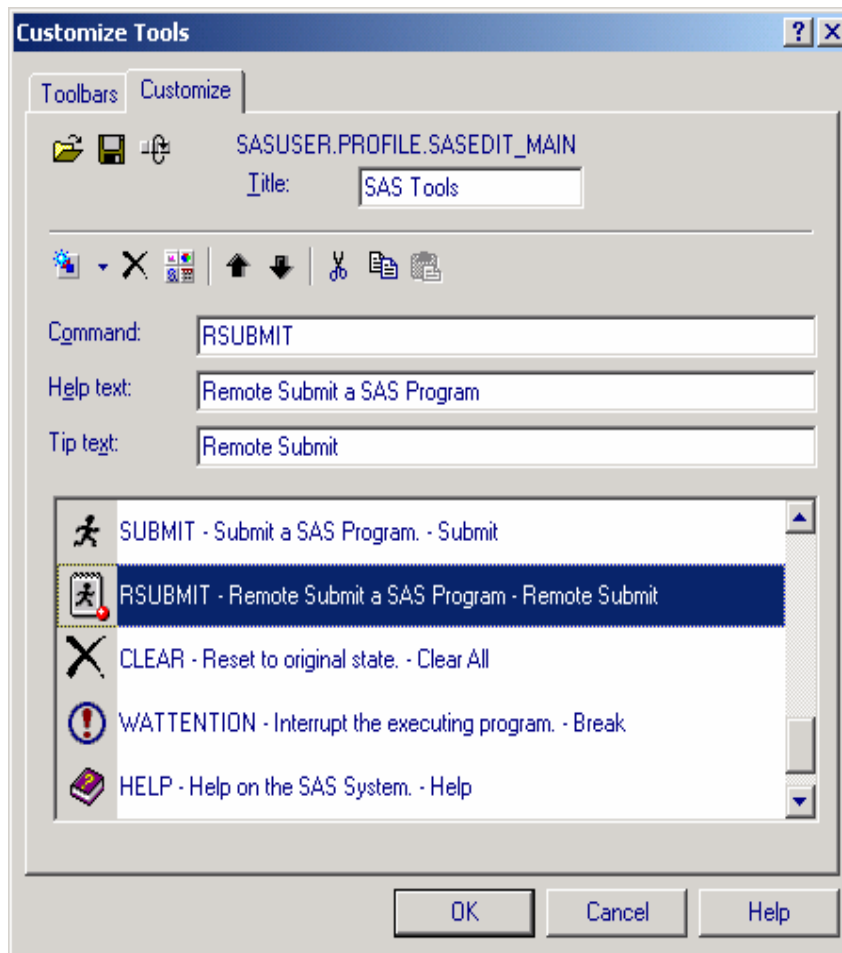
Autosave complete

C:\Documents and Settings\krajcik Ln 22, Col 30

Toolbar Customization

Tools --> Customize

Note: Gsubmit macro in quotes



References:

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