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Make SAS[®] Enterprise Guide[®] Your Own

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ABSTRACT

If you have been programming in Base SAS[®] with SAS[®] Display Manager for years, you will have made SAS[®] Display Manager your own: customized window layout, customized program text colours, bookmarks and abbreviations/keyboard macros. Now you are using SAS[®] Enterprise Guide. Did you know you can have almost all the same enhancements you had in SAS Display Manager in SAS Enterprise Guide plus more.

INTRODUCTION

Any tool that you use regularly, be it a hammer or a software package, we all make little changes to suit our needs. My new hammer does not feel as comfortable as my old hammer did; so, I add a little grip tape to the handle. With SAS Enterprise Guide, there are lots of places you can add grip tape to enhance the package. This paper was written using SAS Enterprise Guide 5.1 and SAS[®] 9.3. Version 6.1 of SAS Enterprise Guide is now available and has additional enhancements; but, SAS Enterprise Guide Version 6.1 will not be covered under this paper. Some of the features of Base SAS and SAS Enterprise Guide mentioned in this paper can be very involved and will not be discussed in detail in this paper.

CARRY OVER FROM BASE SAS®

Many of the enhancements you could make to the display manager are still available in the SAS Enterprise Guide editor. In fact, some customizations may carry over from your Base SAS installation through to your SAS profile and are already available to you in SAS Enterprise Guide.

It is still possible to customize the Enhanced Editor to meet your needs. The dialogue box is very similar to the Base SAS dialogue box. Select Tools, Options, SAS Programs. Select the Editor Options button.

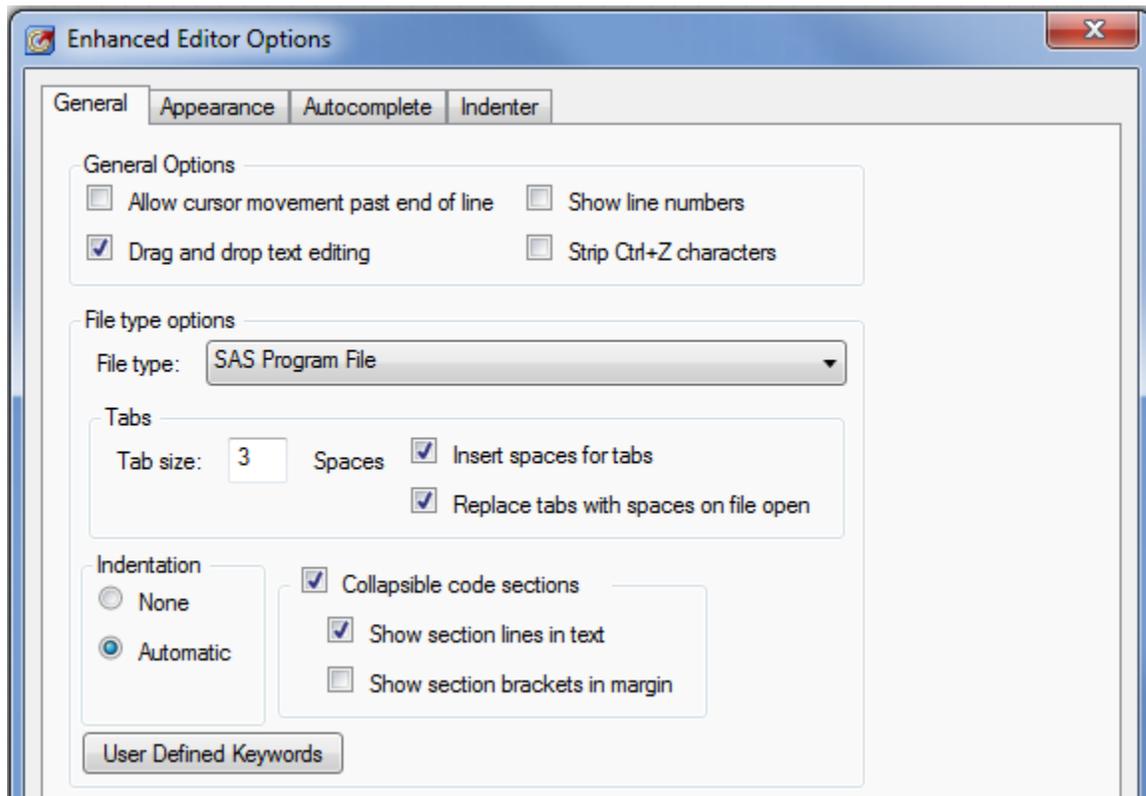


Figure 1

Abbreviations and Keyboard macros are also still available and behave as they did in SAS Display Manager. In SAS Display Manager you could use a key stroke recorder to build custom actions into keyword or keyboard buttons.

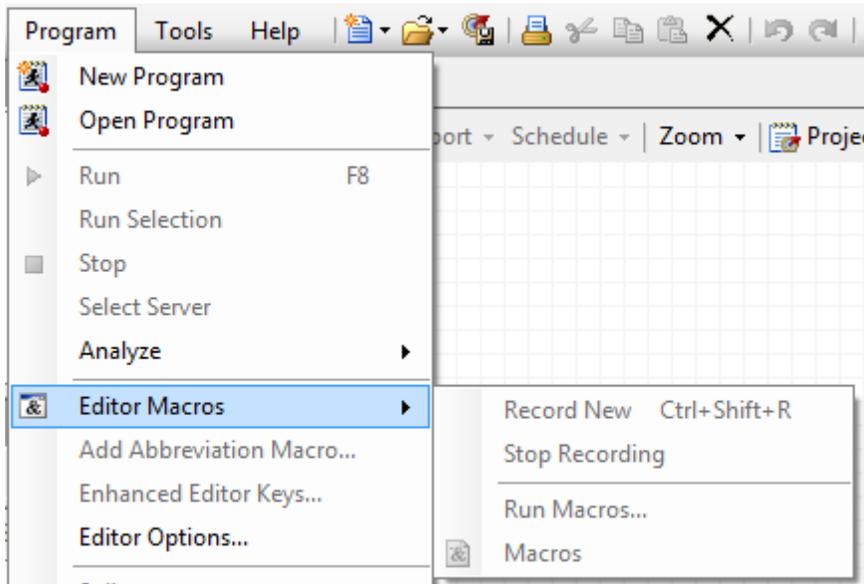


Figure 2

Another hold over from SAS Display Manager is the ability to select a vertical block of code using the ALT key and mouse to select the desired columns. For example, you can make vertical selection of code versus the more typical horizontal selection.

Bookmarks are a handy trick to mark a line you want to return to easily. Using CNTL-F2 to bookmark a line and F2 to return to the bookmark still works. Although the ability to split an edit window maybe more useful, as we will see later.

NOT QUITE THE SAME AS BASE SAS®

In SAS Display Manager, you could save your own layout of windows. It was possible to save the placement of the editor, log and output windows. While that is not possible in SAS Enterprise Guide, you can choose to view more than one aspect of the environment using the toolbar split icon to split the workspace window.

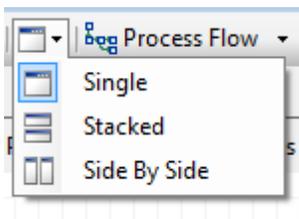


Figure 3

It is also possible to maximize workspace using CNTL-M to close the Project Tree window and the other docked windows and maximize whatever is open in the workspace window.

NEW IN SAS® ENTERPRISE GUIDE®

In SAS Display Manager, multiple results output are controlled by code. SAS Enterprise Guide provides multiple results outputs at the check of a box: SAS Report, HTML PDF RTF or Text. SAS Enterprise Guide supports multiple output forms at the task level and project level. Right click a task icon and select Properties then Results.

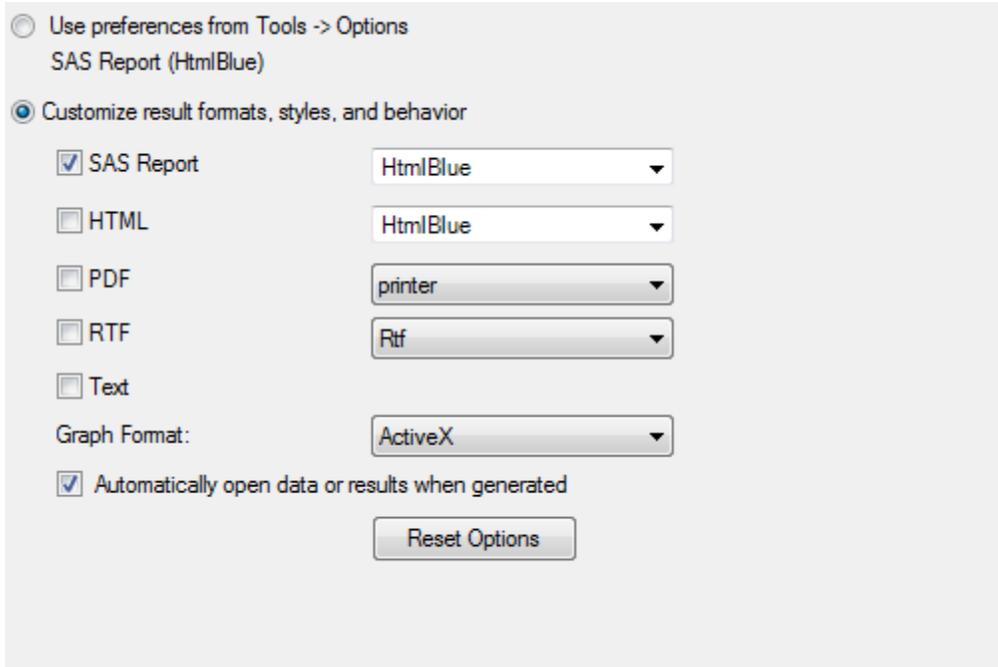


Figure 4

For the whole project select Tools in the toolbar and select Options, Results

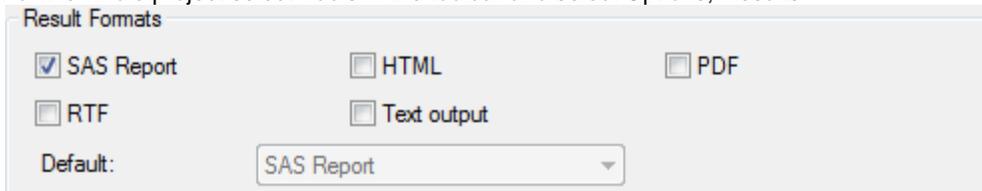


Figure 5

The split editor window is a new feature of the enhanced editor. Similar to the F2 Bookmark tool you can use the split editor window tool found in the upper right hand corner to look at two sections of the same program code at the same time. It is possible use these two tool together.

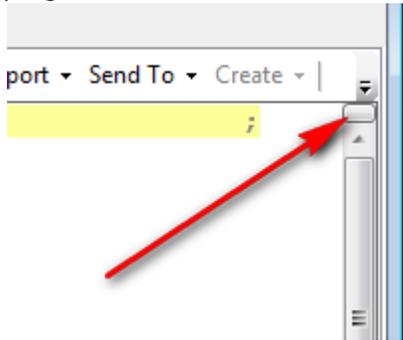


Figure 6

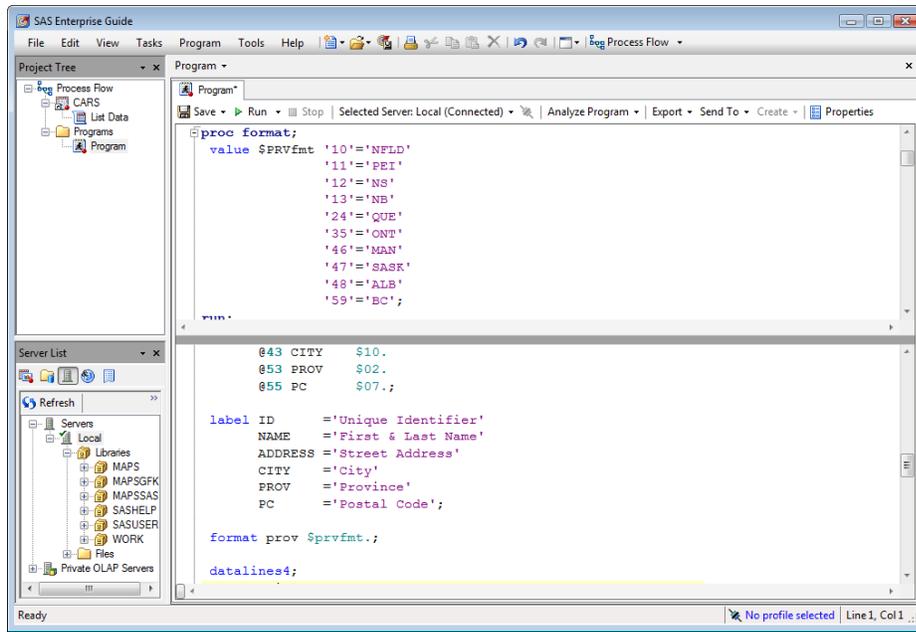


Figure 7

Prompts work with macro variables to allow user interaction with the project. Prompts remove the need for directly editing code before submission or creating tedious display windows to gather user inputs. The Prompts dialogue box is found on the left hand panel with other often used SAS Enterprise Guide tools.

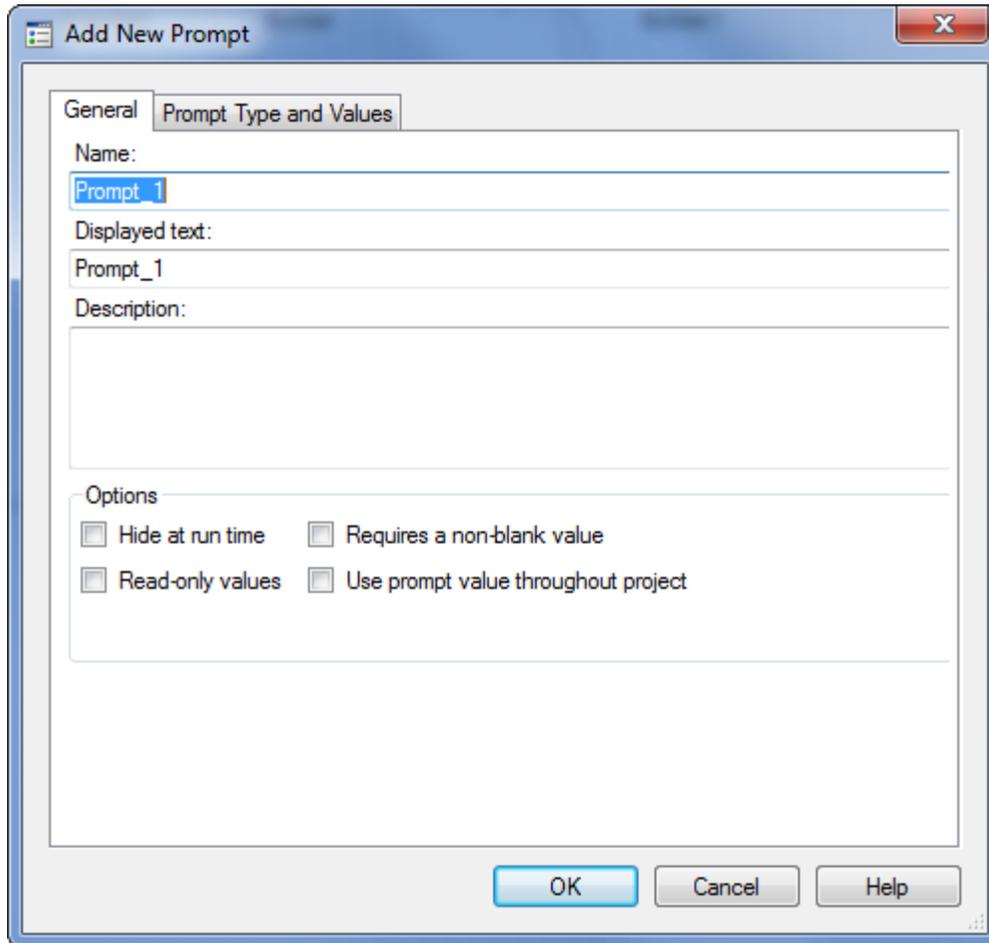


Figure 8

General Prompt Type and Values

Prompt type:
Text

Method for populating prompt: User enters values

Number of values: Single value

Text type:
Single line

Minimum length:

Maximum length:

Include Special Values

All possible values Missing values

Default value:

Hint:

Figure 9

Prompts provide a rich assortment of options that can result in a major reduction in the need to program similar behaviours.

General Prompt Type and Values

Prompt type:
Text

- Text
- Text range
- Hyperlink
- Numeric
- Numeric range
- Date
- Date range
- Time
- Time range
- Timestamp
- Timestamp range
- Data source
- Data source item
- File or directory
- Color
- Data library
- Variable

Number of values: Single value

Maximum length:

Figure 10

Conditional processing of tasks can be used to control the flow of the SAS Enterprise Guide processing. Specific task can be run based on a variety of conditions from a variety of sources including prompts. To program a condition right click the task you wish add a condition to.

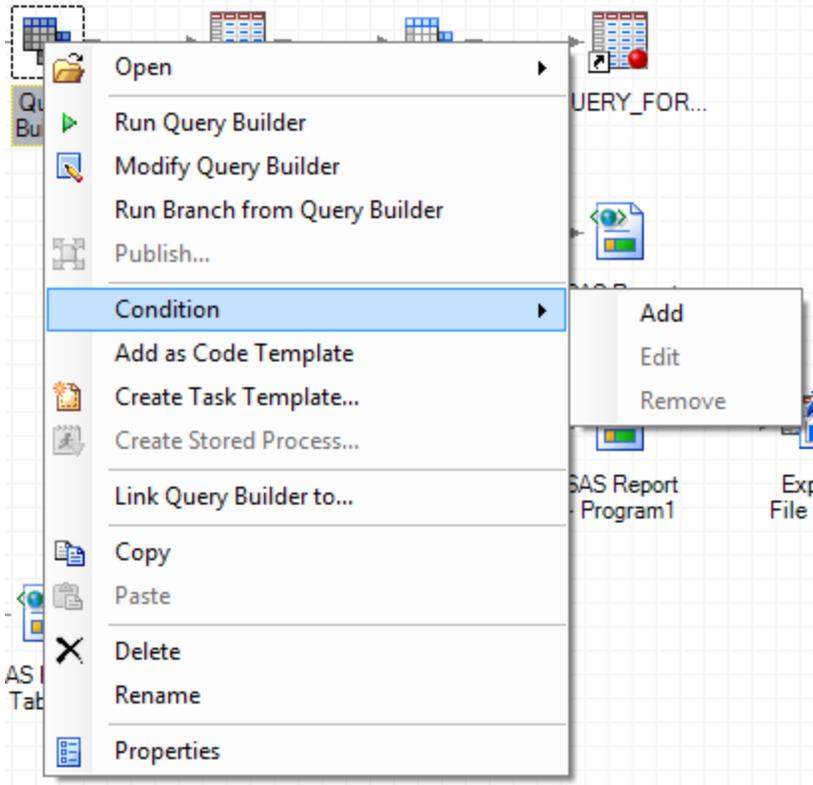


Figure 11

Select Add and complete the prompts in the dialog box.

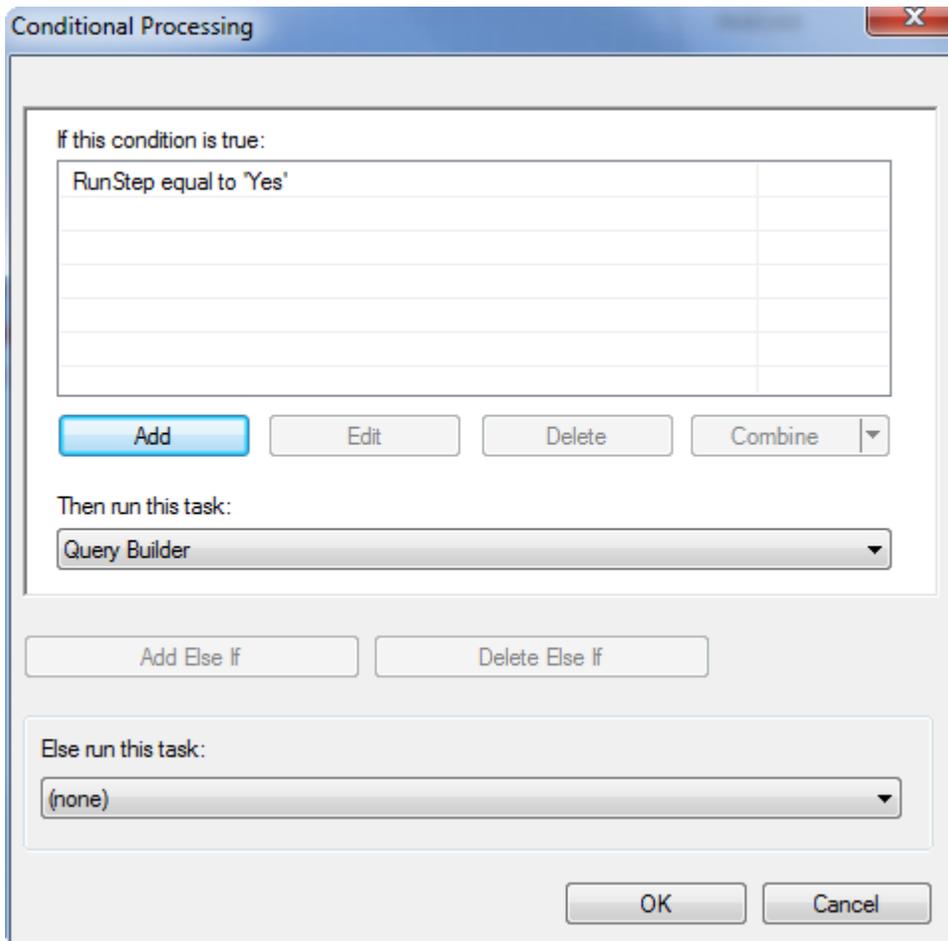


Figure 12

The flag in the right hand corner of the task icon indicates that this is a conditional task.

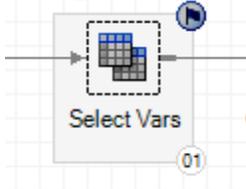


Figure 13

It should be noted that if you are using SAS Enterprise Guide to write stored procedures Conditional Processing is not supported.

Comments icons can be attached to tasks within a process flow to explain the specific task or the process flow or the whole project.

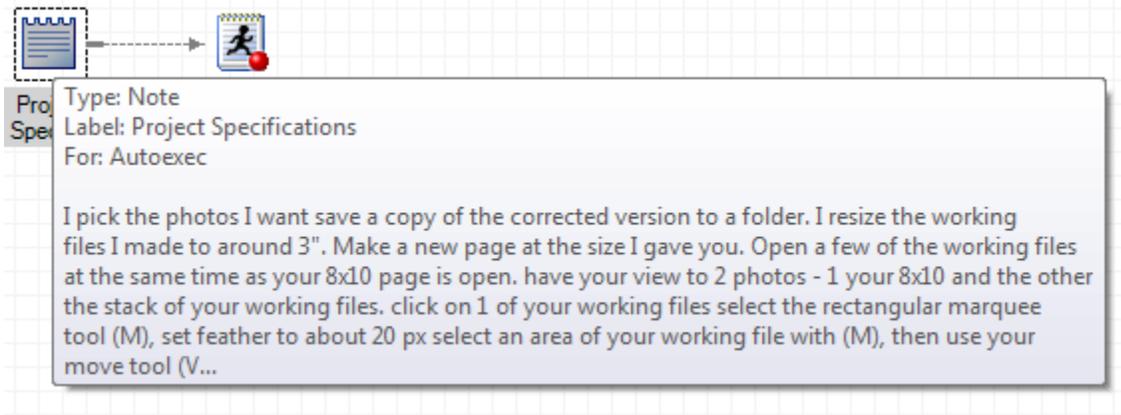


Figure 14

Comment in macro calls to explain input variables:

```
%macro selectDept(dept=/* Select Dept Number */);  
%mend;
```

```
%selectDept(dept=
```

selectDept(dept)
dept:
Select Dept Number

Figure 15

Autoexec process flow works just as the old DOS autoexec.bat file did. It will run at the project start up. Any Process flow can be renamed to "Autoexec". SAS Enterprise Guide will prompt the user to run the Autoexec process flow when the project is first opened.

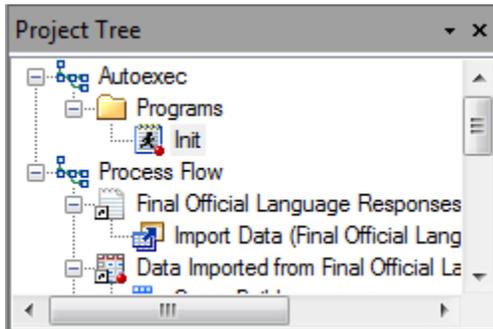


Figure 16

The prompt to run the Autoexec process flow can be controlled in the Tool, Options, General panel.

It is possible to insert code before and after every task in a project. This a handy tool for debugging, adding step timers, or setting options. It is found under Tools, Options, Tasks, Custom Code.

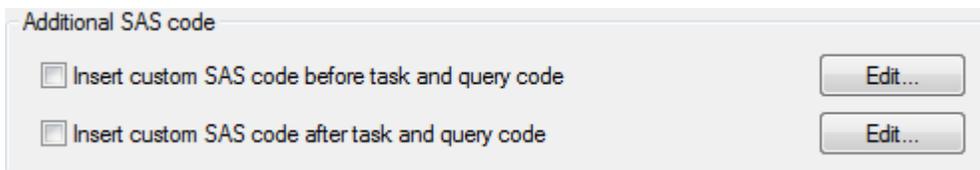


Figure 17

Logs in SAS Enterprise Guide is again similar to SAS Display Manager but far more robust than SAS Display Manager. Programming tasks logs and retains the last submitted code from run to run and are even saved within the project. They can be examined days later. Report results are also retained like the task logs and last submitted code. It can prove very handy when all you need to do is verify a single number or the contents of a variable.

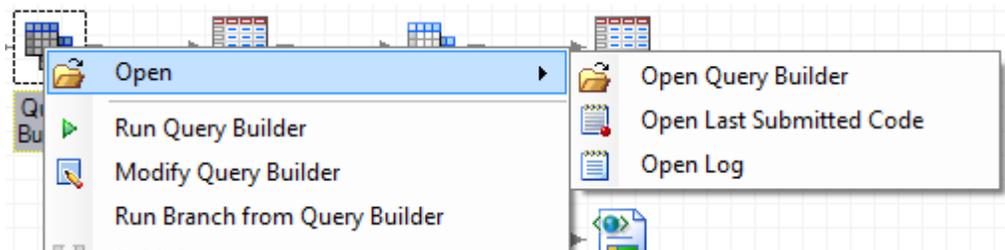


Figure 18

The entire project's log can optionally be retained and exported. Look under File, Project Properties, Project Log or on the Project's tool bar for the Project Log Icon.

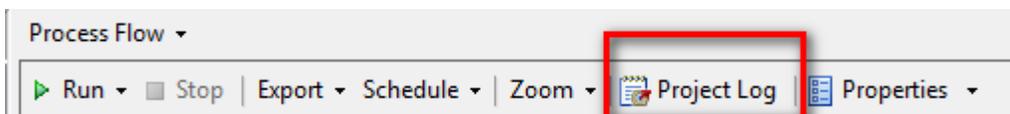
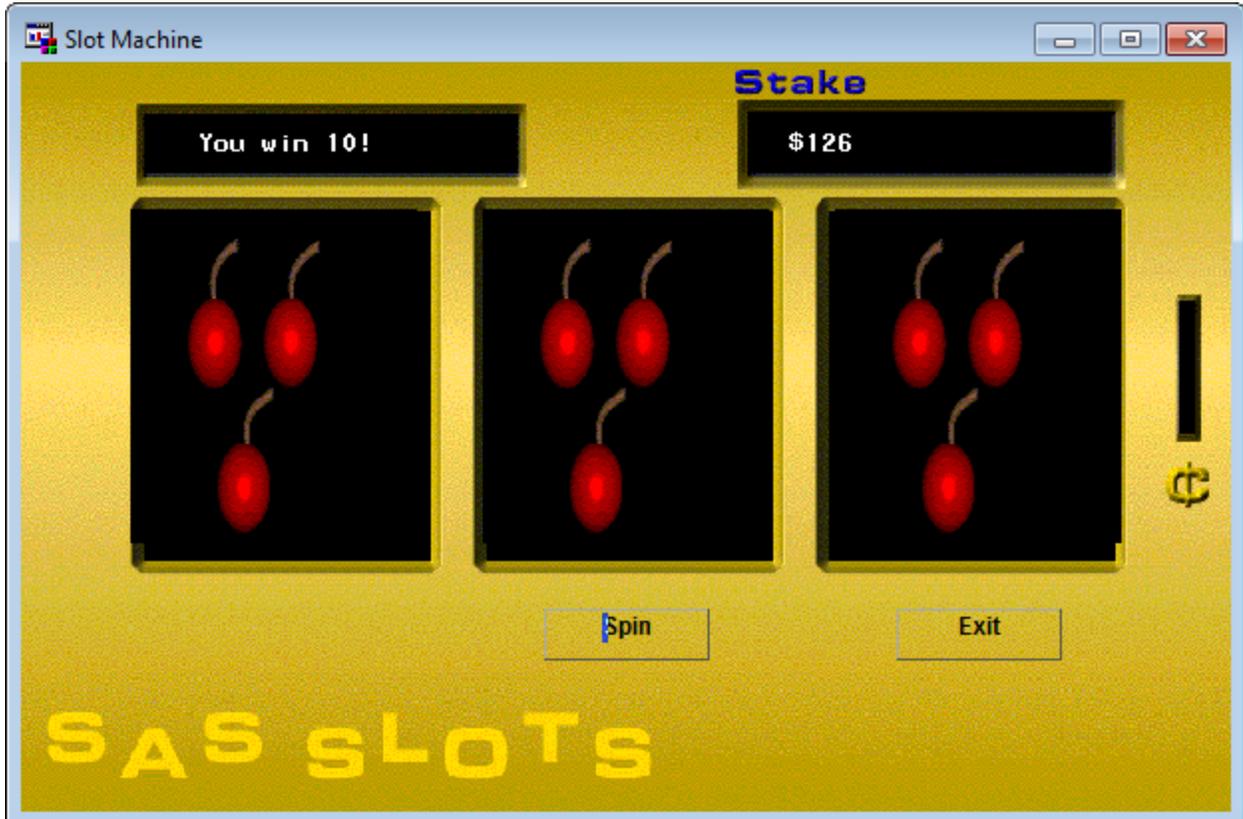


Figure 19

CONCLUSION

While you may not be able to play SAS Slots any more as in SAS Display Manager, there are many more new tools in SAS Enterprise Guide for experienced SAS programmers to use. As I have found with SAS Display Manager, there is always something new -- even after 30 years of SAS experience.

There are more tools in Enterprises Guide that you can discover on your own. Far more than I have the time to present here.



REFERENCES

While writing this paper, I have discovered the best resources are other users, local user groups and the software itself.

ACKNOWLEDGMENTS

I would like to thank my colleagues at the SAS Technology Centre in Statistics Canada for their support and encouragement. I would also like to thank the members of the Ottawa SAS Users Society OASUS for helping to keep me on top of all this technology.

CONTACT INFORMATION

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