

Survival Tips for the Lone SAS programmer among Stata, SPSS, R and Excel users

Presented by:

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My current SAS world



Collecting Rent in the Tower of Babel

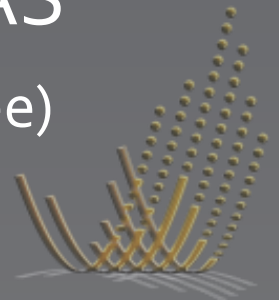
My life & work as an
interpreter & translator



Mystery files



- Proc Contents
- Universal Viewer
- Wizard Exports in EG or Base SAS
- PC SAS Access (Options for extra fee)
- DDE (dynamic data exchange)



Universal Viewer - unlock the mystery

The screenshot shows a web browser window with the address bar displaying `support.sas.com/downloads/browse.htm?fil=&cat=74`. The search bar contains the text "sas univeresal viewer". The browser's toolbar includes links for "pers accounts", "myPay Web Site", "Lincoln Financial", "American General Life ...", "LinkedIn", "News", "Sozo", "Netflix -", "Today's Catholic", "modem", and "thur free movies".

The SAS logo is visible, along with the tagline "THE POWER TO KNOW." and the text "Providing software solutions since 1976". A navigation bar contains links for "support.sas.com", "Knowledge Base", "Support", "Training & Books", "Happenings", "Store", and "Support Communities".

The main content area is titled "SUPPORT / DOWNLOADS & HOT FIXES". On the left, a sidebar lists various support options, with "Downloads & Hot Fixes" selected. The main content area displays a list of "SAS Universal Viewer" downloads, organized by version and release date.

Version / Release	A - Z	Release Date
• SAS 9.4		
◦ SAS Universal Viewer		Release 9.4 - SEP 2014
◦ SAS Universal Viewer		Release 9.4 - JUN 2013
• SAS 9.3		
◦ SAS Universal Viewer		93.130 12w16 - APR 2012
◦ SAS Universal Viewer		Release 9.3 - JUL 2011
• SAS 9.21		
◦ SAS Universal Viewer		92.120 10w20 - MAY 2010
◦ SAS Universal Viewer		92.110 09w09 - FEB 2009
• SAS 9.2		
◦ SAS Universal Viewer		92.15 08w23 - JUN 2008

Release 9.4 - SEP 2014

The SAS Universal Viewer is a replacement for the SAS System Viewer and is an application for the Windows environment to view SAS data sets

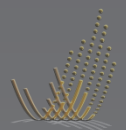
You cannot edit SAS data sets with the SAS Universal Viewer, but you can sort and filter data sets.

The SAS Universal Viewer enables you to view the contents of SAS data sets without invoking SAS

and without installing SAS on your machine.

My spreadsheet to give to SAS

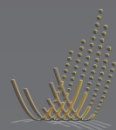
	A	B	C	D	E	F	G	H	I	J	K	L	
	LoanId1	LoanId2	LoanId3	Deal	City	State	Zip	Note Date	AVM value	AVM numericFsd	AVM confidence	Loan Amount/Original Balance	
1													
2	9402390523710			SEMT 2005	WOODBRI	VA	22193	07/21/20	500210	14	79.8122	266000	
3	9402390523892			SEMT 2005	PALM COAST	FL	32137	07/26/20	440222	24	59.8131	322500	
4	9402390524189			SEMT 2005	HOUSTON	TX	77005	07/29/20	510000	29	56.0748	2900000	
5	402919276	M1000157000	402919276	ARMT 200	RIVERSIDE	CA	92501	02/11/20	421000	16	75.72	324000	
6	403011627	# 1000606770	403011627	ARMT 200	Hilton Head I	SC	29926	12/22/20	420555	12	84.9358	250000	
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													



My data file

Code Log Output Data										
Modify Task Filter and Sort Query Builder Data Describe Graph Analyze Export Send To										
	LoanId1	LoanId2	LoanId3	Action	Deal	Originator	Address1	Address2		
1	9.4023905E12			Seattle	SEMT 2005-4	MSCC	6078 TICKET W...			WOODB...
2	9.4023905E12			Seattle	SEMT 2005-4	MSCC	400 CINNAMON...			PALM CO
3	9.4023905E12			Seattle	SEMT 2005-4	MSCC	1816 RICE BV			HOUSTO
4	9.4023905E12			Seattle	SEMT 2005-4	MSCC	734 ONEIDA PL			MADISON
5	9.4023905E12			Seattle	SEMT 2005-4	MSCC	123 TYLER CT			EATONT
6	9.4023905E12			Seattle	SEMT 2005-4	MSCC	1 OLD KINDERH...			CAMDEN
7	9.4023905E12			Seattle	SEMT 2005-4	MSCC	18610 CLOVER...			OLNEY
8	9.4023905E12			Seattle	SEMT 2005-4	MSCC	1683 SPENCER...			BENTON
9	9.4023905E12			Seattle	SEMT 2005-4	MSCC	1023 BUTTE AV			BIG BEA...
10	601511156		675055073	Seattle	WAMU 2004-AR...	WaMu	17637 Scottsdal...			RIVERSID
11	601511201		68843689	Seattle	WAMU 2004-AR...	WaMu	49 Avenida Meri...			SAN CLE...
12	601511282		83592287	Seattle	WAMU 2004-AR...	WaMu	5455 N Bay Road			MIAMI BE
13	601511300		83604207	Seattle	WAMU 2004-AR...	WaMu	17073 Sabina C			Castro Va

- I can view the SAS dataset – so it appears the SAS import did generate a sas dataset from my spreadsheet –
- But the values SAS displayed in the far left column for LOANId1 have been incorrectly truncated
- Those ID values should be UNIQUE record identifiers – no duplicates – so SAS is not correctly reading and/or displaying the information stored in the spreadsheet.
- The zero observation ERROR occurs because of FORMAT mismatches.



CSV and infile command

```
INFILE "C:\path\filename.csv" delimiter = ","  
MISSOVER DSD lrecl=32767 firstobs=2;  
Informat loanID $6o.;  
Format loanID $6o.;  
Input loanID $  
Run;
```

Enterprise Guide Wizard

The screenshot displays the SAS Enterprise Guide interface. The main window is titled "SAS Enterprise Guide" and features a menu bar with "File", "Edit", "View", "Tasks", "Program", "Tools", and "Help". Below the menu bar is a toolbar with various icons. The "Process Flow" tab is active, showing a workflow diagram with a file icon labeled "forSAS.xlsx" connected to an "Import Data" task icon. A dialog box titled "Import Data from forSAS.xlsx" is open, showing the "Advanced Options" tab. The dialog box has a progress indicator "4 of 4" and three checkboxes:

- ☐ Embed the data within the generated SAS code.
- ☒ Import the data using SAS/ACCESS Interface to PC Files whenever possible.
- ☒ Remove characters that can cause transmission errors from text-based data files.

The "Project Tree" on the left shows the "Process Flow" structure, including "forSAS.xlsx" and "Import Data (forSAS.xlsx)". The "Server List" tab is visible at the bottom left.

ZERO observations OUCH!! See log

```
Import Data (forSAS.xlsx[Sheet1]) ▾
Code Log Output Data
Modify Task | Export ▾ | Send To ▾ | Create ▾ | ↑ ↓ | Log Summary | Project Log | Properties

137      Purchase_Price    BEST12.
138      Collateral_Value BEST12.
139      Original_LTV      BEST12.
140      __EG_7E39_2       $CHAR1. ;
141      __EG_7E39_1 = LEFT(PUT(Note_Date, BEST32.));

                                     484
142      __EG_7E39_2 = LEFT(PUT(Loan_Purpose, BEST32.));

                                     484
NOTE 484-185: Format $BEST was not found or could not be loaded.

143      RUN;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.FORSAS may be incomplete.  When this step was stopped there were 0 observations
WARNING: Data set WORK.FORSAS was not replaced because this step was stopped.
NOTE: DATA statement used (Total process time):
      real time           0.02 seconds
      cpu time            0.03 seconds

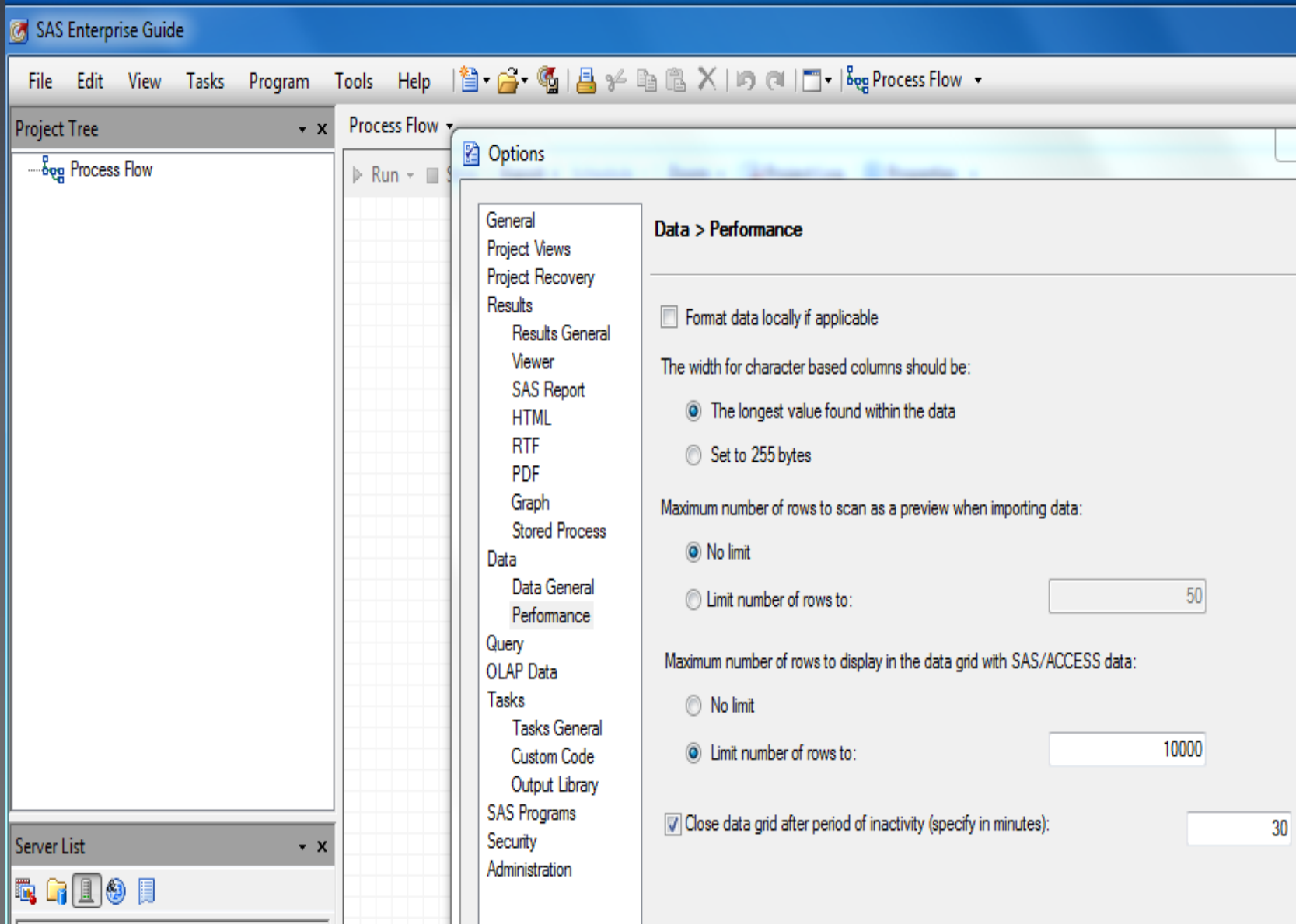
144
145      QUIT; RUN;
```

Log Summary

Errors (2) | Warnings (2) | Notes (6)

Description	Line	Affected Code
NOTE: PROCEDURE IMPORT used (Total process time):	31	RUN;
NOTE: WORK.FORSAS data set was successfully created.	35	RUN;
NOTE: The data set WORK.FORSAS has 26 observations and 23 variables.	36	RUN;
ERROR: Variable LoanId3 has been defined as both character and numeric.	92	'Loan Purpose'n = Loan_Purpose);
ERROR: Variable Address2 has been defined as both character and numeric.	93	'Loan Purpose'n = Loan_Purpose);
NOTE 484-185: Format \$BEST was not found or could not be loaded.	163	__EG_7E39_2 = LEFT(PUT(Loan_Purpose, BEST32.));
NOTE: The SAS System stopped processing this step because of errors.	167	RUN;
NOTE: DATA statement used (Total process time):	170	RUN;

Settings in EG under TOOLS pull down

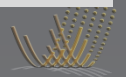


Do you know the Difference Between These two Procedures?

```
PROC EXPORT DATA= WORK.small  
    OUTFILE= "C:\Users\m.crissey\Desktop\small.xls"  
    DBMS=EXCEL LABEL REPLACE;  
    SHEET="nn";  
    run;
```

```
%let outpath = C:\Users\m.crissey\Desktop\ ;  
run;
```

```
PROC EXPORT DATA= seattle.remake  
    OUTFILE= "&outpath.mauricio.xlsx"  
    DBMS=xlsx REPLACE;  
    SHEET="ana_sample2";  
RUN;
```



The XLSX and XLS engines Option

Advantages of the XLSX and XLS engines

1. Support for the **Getnames=** Option (a header row in Excel is not required).
2. Support for Mixed data in Excel ((a combination of text and numbers in the same column), no MIXED= option is required and no changes to the windows registry is required.
3. Very few additional Options are required
4. It can read more than 255 columns.

Disadvantages : read usage note

<http://support.sas.com/kb/51/083.html>

to make sure your numbers do not come out as large exponent numbers.

Activities

- *Statistical Sampling – Representative testing*
- *Quality Control*
- *Data Management*
- *Analysis output as graphics*
- *Notebook Preparation*
- *Litigation Case Review*
- *Reading Prossups*
- *Reviewing Guidelines*
- *E-discovery Metadata file descriptors*
- *IT Manifest inventory*



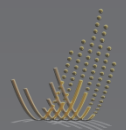
Lessons Learned

THE WRONG WAY...

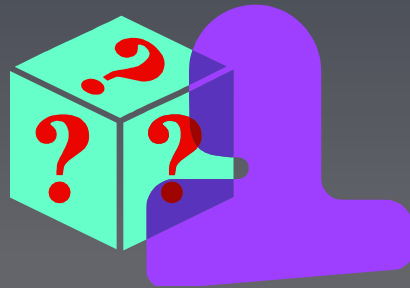
- *Not reading the Log for warnings*
- *Running 64bit SAS system with 32 bit MS OFFICE excel*
- *BEST formats default can cause ugly mess in log when viewing your files.*

THE CORRECT WAY...

- *SAS 9.4 PROC IMPORT DBMS=xlsx better than DBMS=excel or DBMS=xls*
- *KNOW your data – continuous vs categorical -- UNIQUE keys*
- *Force your ID# as character by prepending the # with letters to avoid precision rounding*



Questions ???



THANK YOU FOR ATTENDING ,
Have Fun SASsing Away

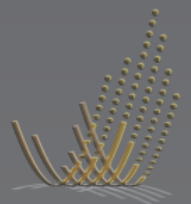
Perl & Favorite SAS 9 Functions

Substring Parsing

- *COMPBL*
- *NOTDIGIT*
- *VERIFY*
- *SCAN*
- *ANYNUM*
- *TRANWRD*

Table Lookup

- *Proc Format and CNTLIN*
- *Proc Contents, COMPARE*
- *Proc tabulate , FREQ*
- Call PRXmatch functions
- *UPDATE rather than Merge*





Connect with us online!



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