Useful Tips from my Favorite SAS Resources

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You need an answer – QUICK!

I don’t want to run the whole program if the input data is non-existent

My numbers are stored as Character – how do I fix them?

Why should I learn DS2 – and how can I learn it, quickly!

Is it true that I don’t have to copy-paste my results into PPT??
Type Conversions – Character to Numeric

My Numbers are stored as Character – how do I fix them?

Reference:  [http://support.sas.com/kb/24/590.html](http://support.sas.com/kb/24/590.html)

Key Features:
- INPUT function for Character to Numeric (and other uses)
- PUT function for Numeric to Character (and other uses)

Character  ➔ Numeric:
  
  orig_var = "43,000.24";
  new_var = input (orig_var, comma9.2);

Character  ➔ Numeric & Keep same name – salary = "43,012.24":
  
  Set InputData (rename = (salary = HoldSalary));
  Salary = input (HoldSalary , comma12.2);
  drop HoldSalary;
Dates that are hard to use

My DATES are stored as Character – how do I fix them?

Reference:  http://support.sas.com/kb/24/590.html

Key Features:
• INPUT function for Character to Numeric Date Representation

/ * * CHARACTER:    Orig_Date = '04-23-2013'   * * /
SAS_date_Value = input(Orig_Date , mmddyy10.);
    format  SAS_date_Value  worddate9. ;

/ * * NUMERIC:     Orig_Date = 10122012 * * /
    /** 1: Convert to Char for use in Input function **/
SAS_date_Value = input ( put(orig_var,8.) , mmddyy8. );
Controlling Program execution

How can I stop my program if the input data set doesn’t exist?

Reference:  http://support.sas.com/kb/24/670.html

Key Features:
• Macro Decisioning
• EXIST function

%macro checkds(dsn);
   %if %sysfunc(exist(&dsn)) %then %do;
      insert program here
   %end;
   %else %do;
      Perhaps send an email alert - or other processing
   %end;
%mend checkds;
%checkds(sasuser.not_there)
How many rows are returned from my SQL query – and how can I store that in a macro variable?

Reference:
https://blogs.sas.com/content/sasdummy/2017/03/27/sqlobs-record-count/

Key Features:
• &SQLOBS
• NO need for a COUNT or INTO:

```sql
proc sql noprint;
  create table result as select * from sashelp.cars where origin='Asia';
%let ResultCount=&sqlobs;
```
Preserving an EG project environment

Is there an easy way to maintain my macro variable values and my work datasets in my EG projects? instead of rerunning the whole flow!

Reference: A Long Time SAS Programmer Learns New Tricks

Key Features:
• PresEnv Option and Procedure

Includes
• returning temporary SAS data sets to the WORK library
• recompiling macro code
• reassigning values to macro variables
• reissuing global statements and global options
• and more.

Complete example and explanations in the paper
## Writing from SAS to PPT

How can I write output directly to **PPT** – without Copy-Paste

Reference: A Long Time SAS Programmer Learns New Tricks

### Key Features:
- **ODS POWERPOINT <option(s)>;**

Includes
- Using templates (to layout the slides)
- Additional flexibility in 9.4 M3 for PowerPoint features like:
  - Advance
  - Repeat
  - Sound
  - Transitions.
Why should I learn DS2?

Why should I learn DS2, and how can I learn it quickly?

Reference: Moving your programs to the world of DS2

Key Features:
• Explains WHY you would want to use DS2
• Discusses Efficiency
• Provides the basics to help you learn

Special Notes:
• For Data Step Programmers, a nice “side by side” comparison of writing Data Step vs writing DS2
• Nice visual explanations of Threading and advantages
• Long but the PDF is a good self read in addition to watching the “on-demand” video

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More DS2 . . .

<table>
<thead>
<tr>
<th>Want to learn more details and examples of DS2?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>References:</strong> Peter Eberhardt</td>
</tr>
<tr>
<td>DS2 with Both Hands on the Wheel</td>
</tr>
<tr>
<td>The DS2 Procedure: SAS Programming Methods at Work</td>
</tr>
<tr>
<td><strong>Key Features:</strong></td>
</tr>
<tr>
<td>• Step by Step to get you started</td>
</tr>
<tr>
<td>• Efficiencies comparisons</td>
</tr>
<tr>
<td><strong>Special Notes:</strong></td>
</tr>
<tr>
<td>• Proceedings paper accompanied a Hands On Workshop at SAS Global Forum</td>
</tr>
<tr>
<td>• Easy development of topics, increasing in complexity</td>
</tr>
<tr>
<td>• Includes Hash example</td>
</tr>
<tr>
<td>• Book – great intro and examples</td>
</tr>
</tbody>
</table>

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Comparing Data – to confirm changes

Remember to compare before and after – when you make changes!

Reference: Lisa Eckler
When Good Looks aren’t Enough

Key Features:
  • Data Validation Tips
  • Proc COMPARE

```sql
proc compare
  data    = CONTENTS_NEW
  compare = CONTENTS_OLD;
  by name;
run;
```
Other Notable Presentations

• Michelle Homes – Oct 2017 Australia Users Group
  **Ten Treasure Trove Tips to Takeaway for SAS Professionals**
  - Compilation of RESOURCES on topics such as SAS **VIYA**, SAS **Admin**, **Visual Analytics**, SAS **Studio**, SAS **Data Integration**, EG (*including great pics of Chris 😊*)

• Ask The Expert: Jeff Simpson
  **Top Ten Ways to Optimize Your SAS Code**
  - Really good explanations of **DATA Step** efficiencies, Join considerations, Data construct
References

• Proceedings from SAS Global Forum
  o http://support.sas.com/events/sasglobalforum/previous/online.html

• Communities
  o Ask the Experts:
  o Chris’s Blogs:  https://blogs.sas.com/content/sasdummy/

• SAS support.sas.com
  o Papers:  http://support.sas.com/resources/papers/
  o Free Webinars:  http://support.sas.com/training/askexpert.html

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Other Resources

• **Art Carpenter - Arrays or HASH tables**

• **Univ Md - “home grown” how-to site**
  - [https://www.popcenter.umd.edu/resources/research-tools/stats-support/sas-frequently-asked-questions#q2](https://www.popcenter.umd.edu/resources/research-tools/stats-support/sas-frequently-asked-questions#q2)
  - **Note:** Some of the solutions aren’t optimal, but I do enjoy the creativity
Thank You!

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