The VanSUG Newsletter

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Who We Are

The Vancouver SAS Users Group (VanSUG) is an informal group of SAS users in the Vancouver area who meet and share their knowledge. There are no fees – we simply meet every spring and fall to have presentations, networking, and fun! Check us out at vansug.ca.

Newsletter Inputs

This newsletter is for and by the local Vancouver SAS community. If you'd like to contribute to a future newsletter, please email us at vansug@gmail.com!

Executive Team

Executive Update

To sustain a high level of engagement with the BC SAS User Community, the morning VanSUG and afternoon Business Analytics VanSUG sessions have been combined into a single morning session. We are still actively looking for presenters and welcome individuals to share their SAS knowledge and experience with their peers.

The VanSUG Executive Team would like to welcome Eric Cai as the newest member of the Executive Team. Eric works as a Biostatistical Analyst at the BC Cancer Agency. He shares his passion about statistics and chemistry via his blog - The Chemical Statistician; his Twitter @chemstateric ; and his video channel on Youtube . Welcome to the team Eric!

TIPS & TRICKS:
Shortening Your DO Step by IN: Arrays

Gillian Frosst: gillian.frosst@phsa.ca

Arrays allow you to perform repetitive analysis across multiple variables. One particular utility of arrays is reading across character variables to identify those beginning with a certain value or series of values. In the DO group processing of an array program (in your DATA step), the SUBSTR function is adequate when your value(s) of interest are the same length (e.g., all values beginning with "A", "B" or "C"). However, coding quickly becomes tedious when you wish to identify records beginning with values of different lengths (e.g., all codes beginning with "A", "B1" or "C12"). The IN: operator simplifies coding by searching for character values of different lengths in a single step.

Suppose you have a dataset containing serial numbers for 500,000 records, where each record can have up to 25 serial numbers associated with it. Serial numbers are provided as variables serialNum1 - serialNum25 in your dataset. You would like to flag all records that have at least one serial number beginning with "12", "345", or "6789".

Using the SUBSTR function, your code would look something like this:

```
ARRAY serialNum[25] serialNum1 - serialNum25;
    DO a = 1 to 25;
        IF SUBSTR(serialNum[a],1,2) = '12' THEN flag = 1;
        IF SUBSTR(serialNum[a],1,3) = '345' THEN flag = 1;
        IF SUBSTR(serialNum[a],1,4) = '6789' THEN flag = 1;
    END;
```

However, using the IN: operator, your code would look something like this:

```
ARRAY serialNum[25] serialNum1-serialNum25;
    DO a = 1 TO 25;
        IF serialNum[a] IN: ('12','345','6789') THEN flag = 1;
    END;
```

Tips & Tricks: Shifted Intervals in `INTNX()`

Dmitry Shopin: dmitry.shopin@gmail.com

Sometimes we need to determine a "non-calendar" time interval that some date belongs to. For example, a fiscal year usually does not coincide with a calendar year, starting, e.g., on the 1st of April and ending on the 31st of March of the next year. In this case `INTNX()` function with shifted intervals will be very useful:

```
DATA _NULL_;
    x = '21Feb2012'd;
    fiscal_year = intnx('year.4',x,0,'beginning');
    PUT fiscal_year = date9.;
RUN;
```

Output:

```
fiscal_year=01APR2011
```

'Year.4' means that we are interested in an annual period that starts on the first day of the fourth month of the calendar year - April. Incrementing our date by 0 intervals and using option 'beginning' we get the exact start date of the fiscal year that our date belongs to.

Tips & Tricks: Macros and Autocall Library

Nadia Lesnikova: Nadia.Lesnikova@bccdc.ca

The autocall macro facility allows invoking a macro that has not yet been defined in the current SAS session. Any SAS macro stored in the autocall library can be used in any SAS program as needed. It can also be used by multiple users at the same time. Follow these two simple steps to use the autocall macro facility:

1. Set up the SAS autocall library.

   One or more folders can be designated as the SAS autocall library. Each designated folder must contain a file - an autocall library member with a macro definition. The file should have the same name as the name of the defined macro. Each folder may contain as many library members as you need.

2. Specify the following system options:

   - `MAUTOSOURCE` - turns on the autocall macro facility
   - `SASAUTOS=("library-specification-1"... <"library-specification-n">)` - specifies the location of the autocall libraries. This is the location where compiled macros are stored. "library-specification-n" is a pathname which is a valid folder name. For example:

   ```
   FILENAME mlb1 'O:\ABC\DEF\macrolib1';
   FILENAME mlb2 'O:\ABC\DEF\macrolib2';
   OPTIONS  MAUTOSOURCE SASAUTOS = (mlb1, mlb2);
   ```

Once you run the lines of code above, all macros stored in the specified autocall libraries are going to be available to you at any time during the current SAS session. Use the relevant macro name to call the macro from the autocall library in any one of your SAS programs:

```
%macro_test(param1,param2,param3);
```

Tips & Tricks: Turn Off the Outputs

Mei Chong: mei.chong@telus.net

1) If you are running a simulation study and you do not want to see the output from thousands iterations, you can turn off all output from procedures by using the `ODS SELECT` command.

```
ODS SELECT NONE;
     PROC procedure1;
     PROC procedure2;
     ......
     PROC procedure10;
ODS SELECT ALL;
```

2) You can read your excel file without using `PROC IMPORT` as follows:

```
LIBNAME myfile  'c:\data.xls';
DATA mydata;
   SET  myfile.'Sheet1$'n;
RUN;
```

Our next user group meeting will be on **May 27, 2015**. Check out the VanSUG website at vansug.ca later for more information!

The archived presentations and newsletters, as well as a link to scheduled SAS training courses held in Vancouver, can all be found on the VanSUG website at vansug.ca!

The **SAS Global Forum 2015** will be held in Dallas, TX on April 26-29. Information can be found at sasglobalforum.com.

The **Western Users of SAS Software (WUSS) Conference 2015** will be held in San Diego, California on September 9-11. Come on down! Information can be found at wuss.org.

The **PharmaSUG Conference 2015** will be held May 17-20 at the Renaissance Orlando at SeaWorld in Orlando, Florida. Information can be found at pharmasug.org.