

VIEWS

International SAS Programmer Community

News, Hints, Tips and Information
for SAS® Users

Issue 69, 3rd Quarter 2022

In the UK we have just experienced our joint hottest summer on record since 1884, and our driest summer since 1995, and not all Brits celebrate warm weather! This newsletter issue includes yet another useful SAS programming tip from Nina L Werner, and some extracts from my SAS conference papers about SAS Studio and ODS Graphics. As usual I have publicised some SAS-related events for the next few months, and I have also added some more SAS formats, options and functions that you may or may not have come across before, but you might find interesting, and even useful.

If you would like to contribute an article, to re-visit and improve an existing article, or just discuss the possibility of doing so, please feel free to send an email to me at views-uk@hollandnumerics.org.uk.

Philip R Holland (Newsletter Editor)

Membership of VIEWS is **free** and you can register for notification of all future VIEWS News issues by registering at blog.hollandnumerics.org.uk, and then emailing views-uk@hollandnumerics.org.uk, or using the blog site menu, to request access to the VIEWS UK forum. Members will receive an email notification whenever a new issue of the free quarterly VIEWS News is published on the web site, please inform us when you change your email address, otherwise your registration may be cancelled.

Did You Know?

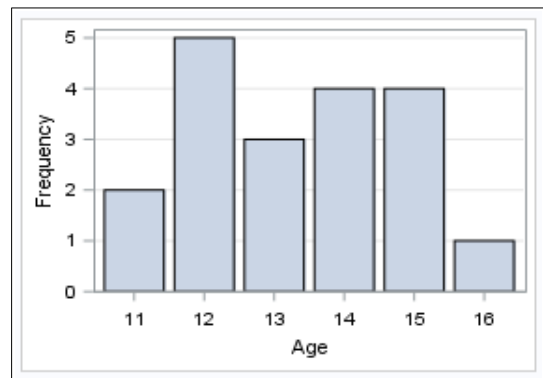
If you have a useful hint or tip, please send it to the Editor, and share it with the VIEWS membership.

SAS Studio tasks for Vertical Bar Charts

[SAS 9.4] SAS Studio includes Tasks that can be used to generate SAS programs to process SAS data sets. The Graph Tasks generate SAS programs that use ODS Graphics to produce a range of plots and charts. However, SAS Enterprise Guide from version 7.1 and SAS Add-In for Microsoft Office from version 7.1 can also make use of these SAS Studio Tasks to generate graphs with ODS Graphics, even though their built-in Tasks use SAS/GRAPH. This article describes the SAS Studio Graph Tasks that create Vertical Bar Charts.

This group of bar charts were previously created by PROC GCHART in SAS/GRAPH. Each group will include a simple bar chart, a stacked bar chart (known as “sub-grouped” in SAS/GRAPH) and a clustered bar chart (known as “grouped” in SAS/GRAPH). All of the graphs here are drawn in square graph areas.

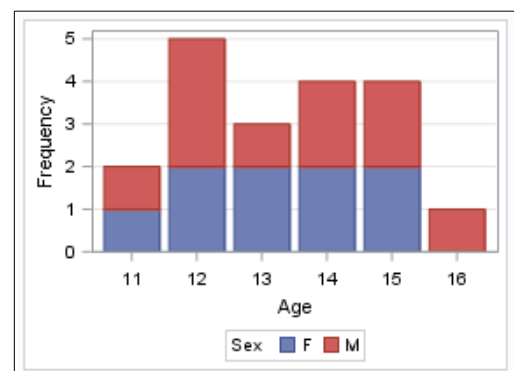
Note that the identification of the bars in the stacked and cluster bar charts are solely in the legend.



Category variable: Age
Direction: Vertical

Task-generated SAS code:

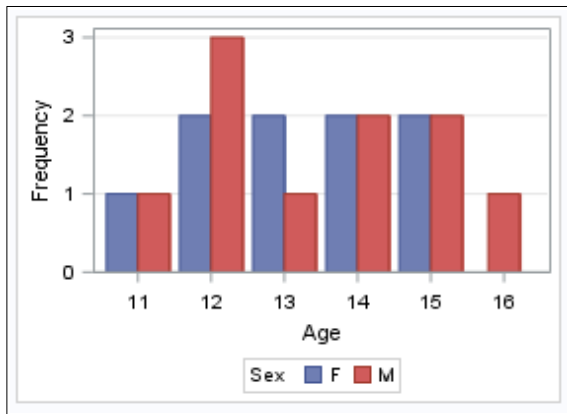
```
/*--SGPLOT proc statement--*/  
proc sgplot data=SASHELP.CLASS;  
  /*--Bar chart settings--*/  
  vbar Age / name='Bar';  
  /*--Response Axis--*/  
  yaxis grid;  
run;
```



Category variable: Age
Group variable: Sex
Direction: Vertical
Group layout: Stack

Task-generated SAS code:

```
/*--SGPLOT proc statement--*/  
proc sgplot data=SASHELP.CLASS;  
  /*--Bar chart settings--*/  
  vbar Age / group=Sex  
    groupdisplay=Stack  
    name='Bar';  
  /*--Response Axis--*/  
  yaxis grid;  
run;
```



Category variable: Age
Group variable: Sex
Direction: Vertical
Group layout: Cluster

Task-generated SAS code:

```
/*--SGPLOT proc statement--*/
proc sgplot data=SASHELP.CLASS;
/*--Bar chart settings--*/
vbar Age / group=Sex
groupdisplay=Cluster
name='Bar';
/*--Response Axis--*/
yaxis grid;
run;
```

Philip R Holland (Newsletter Editor)

Extract from "Using SAS Studio Tasks to Plot with ODS Graphics" by Philip R Holland

How Did We Get to SAS Studio 3.81?

[SAS 9.4] The first public version of SAS Studio (previous known as SAS Web Editor) was version 3.1, which was included in SAS 9.4 M1 in 2013 as an alternative programming environment to Enterprise Guide and interactive SAS. The only available perspective was later called the SAS Programmer perspective, including expandable sections for Folders, Tasks, Snippets, Libraries and File Shortcut, and tabbed windows for Code, Log and Results (see Figure 1. SAS Programmer perspective in SAS Studio 3.2).

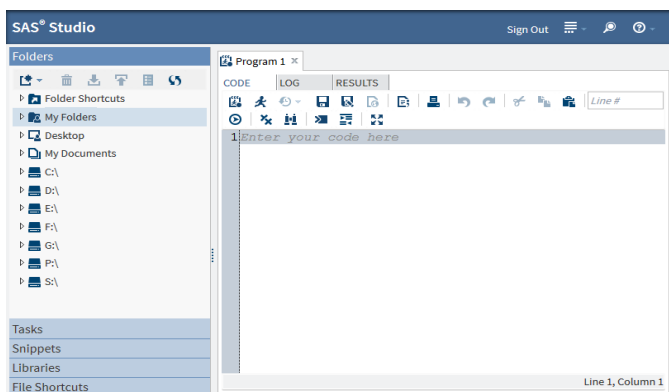


Figure 1. SAS Programmer perspective in SAS Studio 3.2

In SAS Studio version 3.5 the Visual Programmer perspective was added to provide a process flow view of the programs (see

Figure 2. Visual Programmer perspective in SAS Studio 3.5), similar to that in Enterprise Guide, which can be saved as, and loaded from, a CPF (*.cpf) file. Like SEG and EGP files, CPF files are zipped collection of XML files, but are currently not readable by Enterprise Guide.

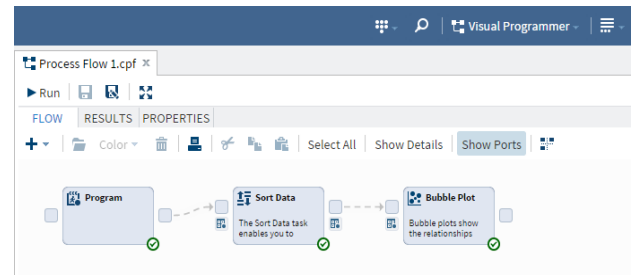


Figure 2. Visual Programmer perspective in SAS Studio 3.5

SAS Studio version 3.6 included an experimental feature to import Enterprise Guide project files into SAS Studio, with the caveat that only SAS Studio-compatible Enterprise Guide nodes are imported, which was upgraded to a production feature in version 3.7.

SAS Studio version 3.8, available with SAS 9.4 starting from the M4 release, included an experimental interface to Git repositories for retaining program development history. This could be updated to the production version with a hot fix, but it is now fully in production in SAS Studio version 3.81, which is the latest version and available with SAS 9.4 starting from the M7 release.

Philip R Holland, Newsletter Editor

Extract from "How Many Shades of Guide: SAS Enterprise Guide to 8.3 and SAS Studio to 3.81 with SAS 9.4" by Philip R Holland

Ask The Consultant

This part of VIEWS News is where you can get your technical questions answered. Send your questions to the Editor.

%OK_now: timestamp SAS Macro

Q: How can I find out how long a SAS step runs?

A:[SAS] I had an old macro from SAS version 6 called %now that put a timestamp into my SAS Log. I would call it with %PUT at various milestones in long-running jobs. At some point, it stopped working when NOW became a reserved word in a later version of SAS [version 8?]. I renamed and compiled it as %OK_now. The optional parameter allows various formats to be displayed, defaulting to full date and time:

```
%MACRO OK_now (fmt = DATETIME23.3) /
    DES='timestamp' STORE SOURCE;
    %SYSFUNC(DATETIME(), &fmt.)
%MEND OK_now;

%PUT mySASjob.SAS started at %OK_now.;

... some SAS statements or %INCLUDE ...

%PUT mySASjob.SAS reached milestone 1 at
%OK_now(fmt=DATETIME14.);
```

Nina L Werner, Wisconsin

Formats, Options, and Functions

This section is devoted to the description of useful, or unusual, SAS Formats, Options, and Functions. Please read the SAS documentation to find out more about them.

[SAS 9.4] The SAS format **JULIANw.** displays SAS date values as year + day-of-the-year, so 01OCT2022 will be displayed as 22274 or 2022274, depending on whether w=5 or 7. The equivalent SAS informat **JULIANw.** converts Julian date strings into SAS dates. The **JULDAYw.** format just displays the day-of-the-year.

[SAS 9.2] The PROC SGLOT XAXIS and YAXIS option **FITPOLICY=** specifies the way SAS display the axis labels, and includes: **NONE**, **ROTATE**, **ROTATEALWAYS** (9.4M7), **ROTATETHIN**, **SPLIT**, **SPLITALWAYS**, **SPLITROTATE**, **STACKEDALWAYS** (9.4M5), **STACKEDALWAYSTHIN** (9.4M5), **STAGGER**, **STAGGERROTATE** and **THIN**.

[SAS 9.4] The SAS call **CALL STREAMINIT()** uses a positive seed to initialize a Random Number Generator. After a Random Number Generator is initialized, each call to the **RAND()** function modifies the state of the Random Number Generator.

In Brief

- Back issues of *VIEWS News* are available from the VIEWS UK forum at **blog.hollandnumerics.org.uk**. Please register for free membership on the blog, and then request free access to the VIEWS UK forum.
- The SAS Professional Forum group on LinkedIn, which currently has over 38,000 members. Everyone is welcome to request to join, but discussions here are restricted to SAS-related topics: **www.linkedin.com/groups?gid=70702**.
- The SAS Opportunities group on LinkedIn, which currently has over 15,600 members. Everyone is welcome to request to join, but discussions here are also restricted to SAS-related topics: **www.linkedin.com/groups?gid=805217**.
- In the UK and Ireland the SUGUKI group had been holding regular meetings in London, and also occasional meetings in Bristol, Dublin, Edinburgh, Leeds and Manchester. Unfortunately the pandemic necessitated running webinars instead. For more details and to register for future events please go to **meetup.com/SUGUKI**.
- Fancy joining the SAS EMEA Analytics Explorers, then please send your **country**, **name**, **email address** and **company** with your permission to pass these details on to SAS to **views-uk@hollandnumerics.org.uk**. Other regions include Asia Pacific, Canada, Latin America and US, but to join these communities based on where you live, you will now need to provide this information to a current member of these communities, instead of me.

- WPS Community Edition provides users with free access to WPS Analytics software including a SAS language compiler with coding and workflow tools on unlimited data volumes. A Community Edition licence key will be issued that will activate the software for up to six months. At the end of this term, users may be invited to renew their licence and to upgrade to the latest available version of the software. No technical support service is offered with the Community Edition. Download from **www.worldprogramming.com/try-or-buy/editions**. Note that the software is made available without warranty or indemnity, and is not made available to US residents.

Diary

Are you organising an event that would be of interest to the VIEWS readership? Let us know as we are interested in all non-profit making events related to SAS.

November 2022

13-16 **PhUSE EU Connect**, Belfast, N Ireland

PhUSE Connect events bring together our global Community to collaborate on hot topics, share perspectives and discuss different approaches to guiding the healthcare industry landscape, both now and in the future. at **www.phuse-events.org**.

March 2023

5-8 **PhUSE US Connect**, Orlando, FL, USA

PhUSE Connect events bring together our global Community to collaborate on hot topics, share perspectives and discuss different approaches to guiding the healthcare industry landscape, both now and in the future. at **www.phuse-events.org**.

May 2023

14-17 **PharmaSUG**, San Francisco, CA, USA

Join us for the premier event of the year for statistical programmers, statisticians, data managers, researchers, and others who analyze data in the life sciences - PharmaSUG 2023! Full details at **www.pharmasug.org**.

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