Introduction to SAS Enterprise Guide

By Meichen Zhou

By the end of this training, attendees should be able to :

- Have a good understanding of SAS EG working environment
- Connect to server on SAS EG
- Navigate in SAS EG and run SAS programs
- Know some handy tricks that are specific to the tool
- Understand the layers of nodes, branches, process flows and projects
- Create, run and save EGP files

What is SAS EG ?

SAS Enterprise Guide, also abbreviated as SAS EG, provides a graphical user interface that allows SAS users to easily fulfill analysis and reporting needs. The process flows as a key element of the tool help users to visually organize and maintain projects.

SAS EG is designed for a wide audience from statisticians, programmers, and even those having little experience using SAS.

SAS EG – How to connect to the server

- Click the SAS EG icon to start application
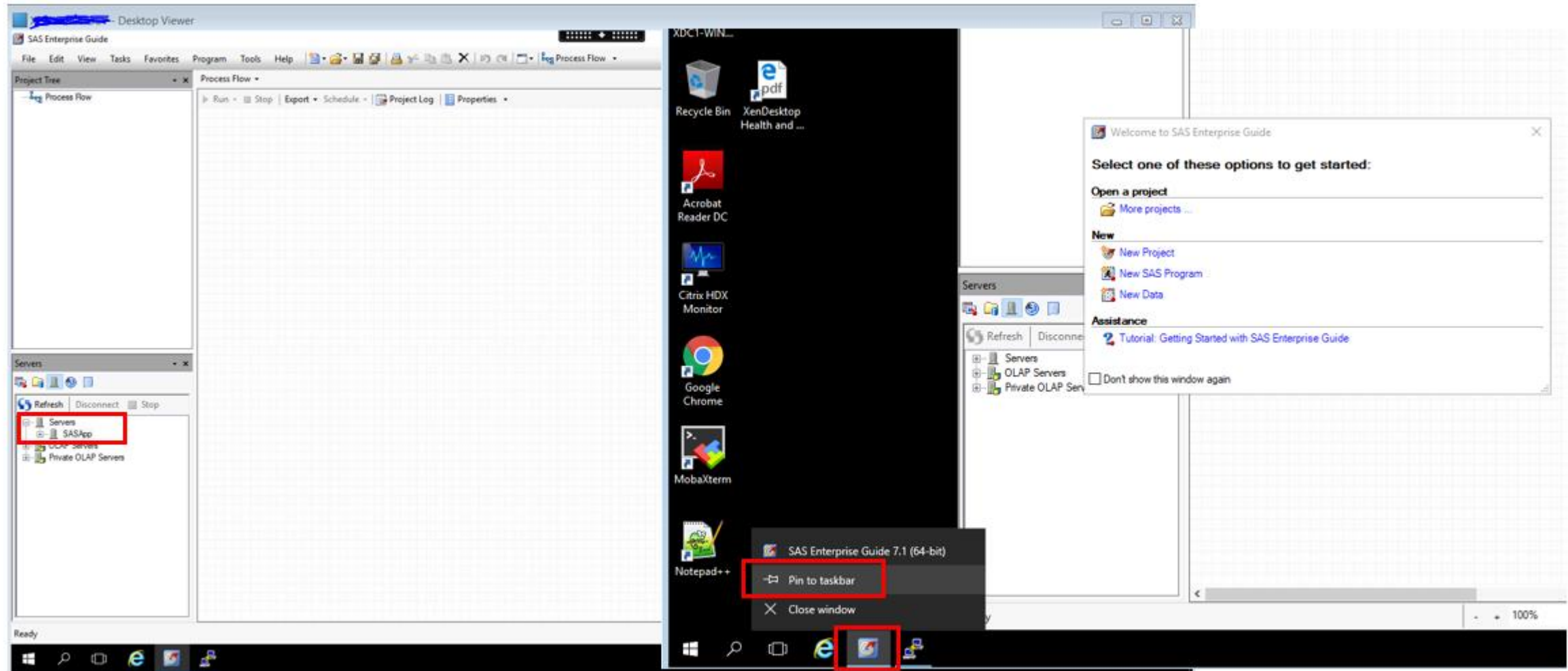- Edit the server profile as shown in the screenshot and type in your corporate credentials.

<Machine> server domain
<Port> 7777

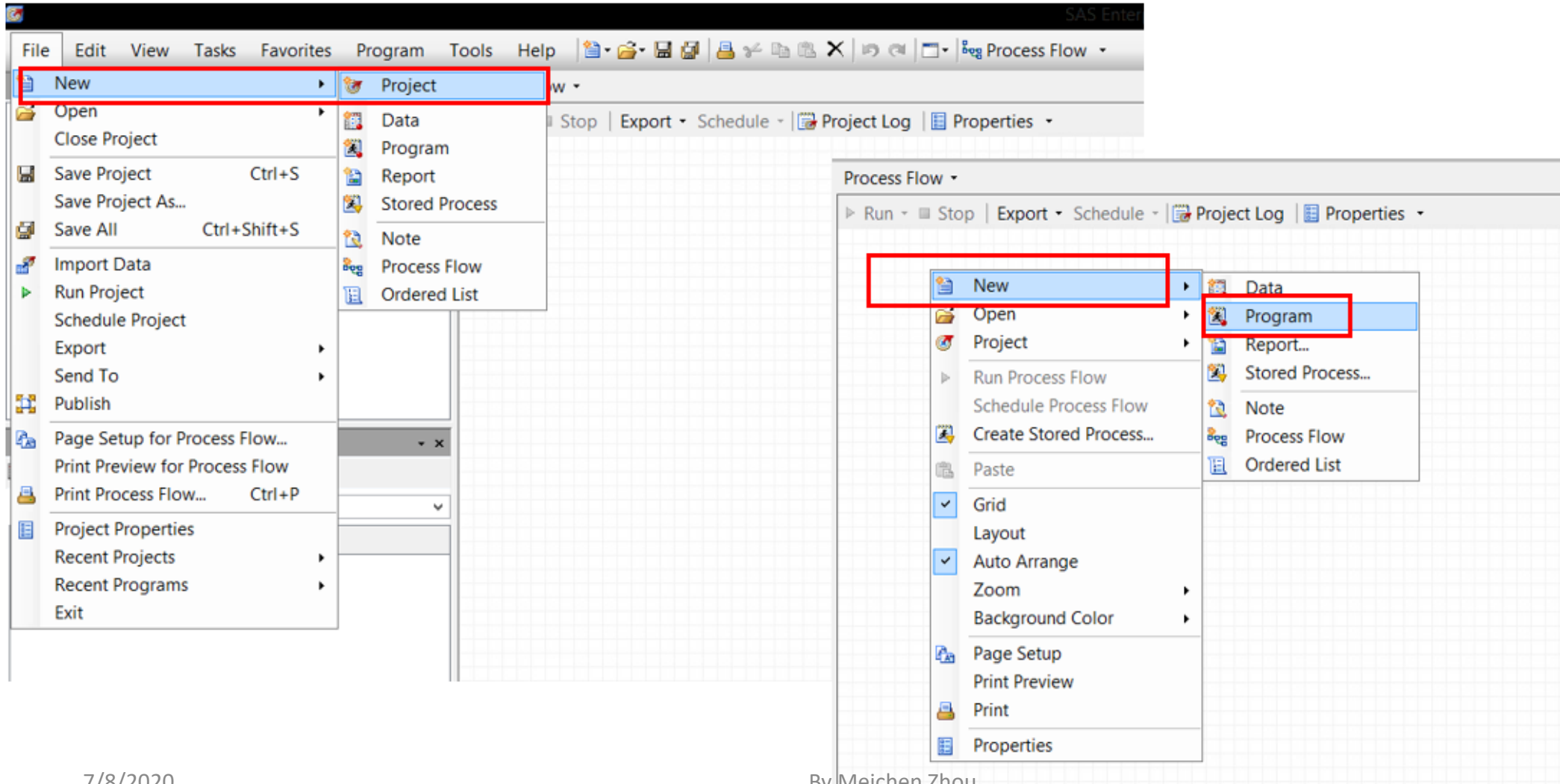- Click *Save* and then *Set Active*.

SAS EG – How to connect to the server

- You are logged in! The connected server is listed in the lower left corner.
- You have the option to right click *SAS EG icon* and *Pin* it to task bar.

SAS EG – How to Create Code Node

- Go to menu *File -> New -> Project* to open a new project.
- Then right click *on the canvas -> New -> Program* to start a SAS program.

SAS EG – How to Create Code Node

- Create a sample program and click _Run_ on the top menu, or push _F3._
  - ✓ _Note that program can run as a whole or partial code can run when it's highlighted_
- The SAS report will be prompted as a result. If there is any error, SAS log will pop up in the front showing errors in red.

Switch between tabs to check the SAS program and important output files such as log, listing and report.

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SAS EG – How to Create Code Node

- Program view – there are options to either save the project as EGP file or simply save SAS program itself.
- Click on *Process Flow* to view the entire project –
  all of the output is shown on the canvas. Right click on a file to rename it.
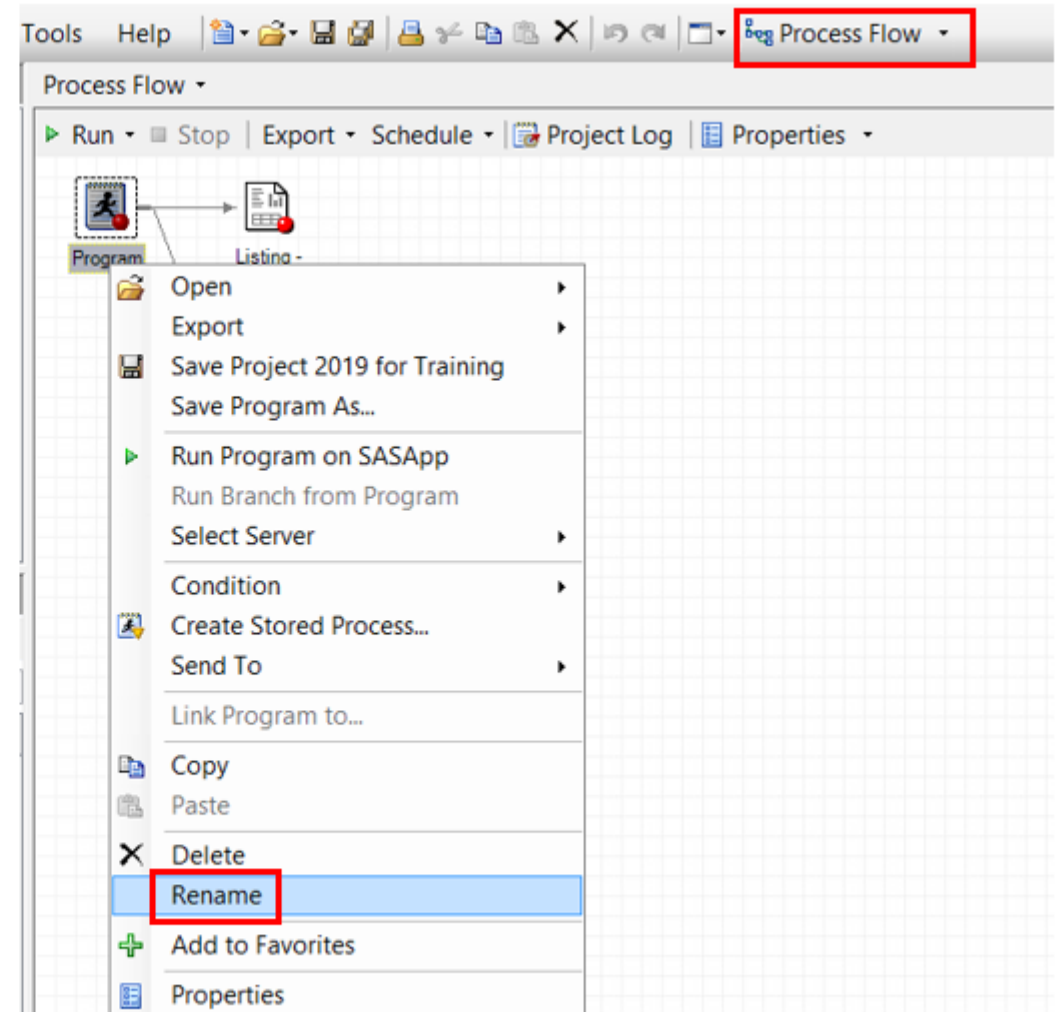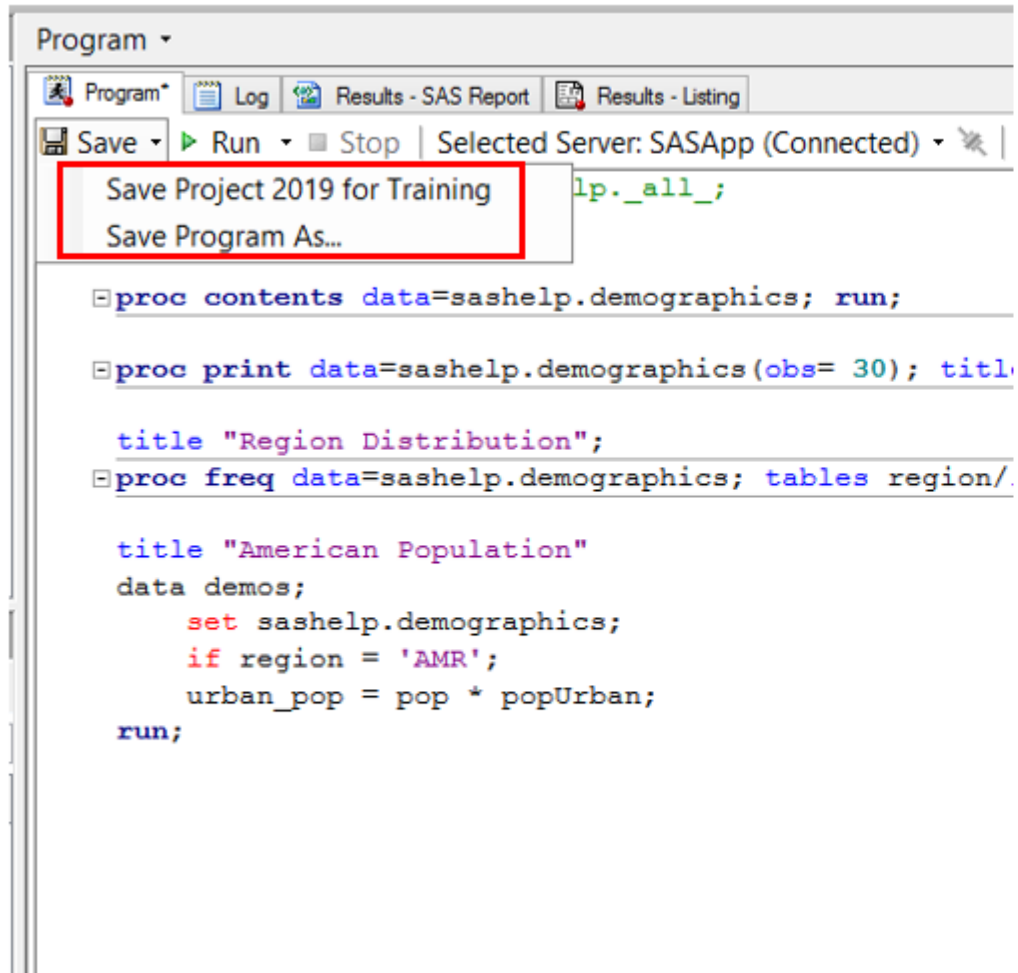
SAS EG – How to Create Code Node

- By default, log files are not shown on the process flow view.
- In order to enable log view, go to *Tools -> Options -> Project View -> Show SAS Output Log -> Click OK*. The log will appear in process flow and once the program is rerun.
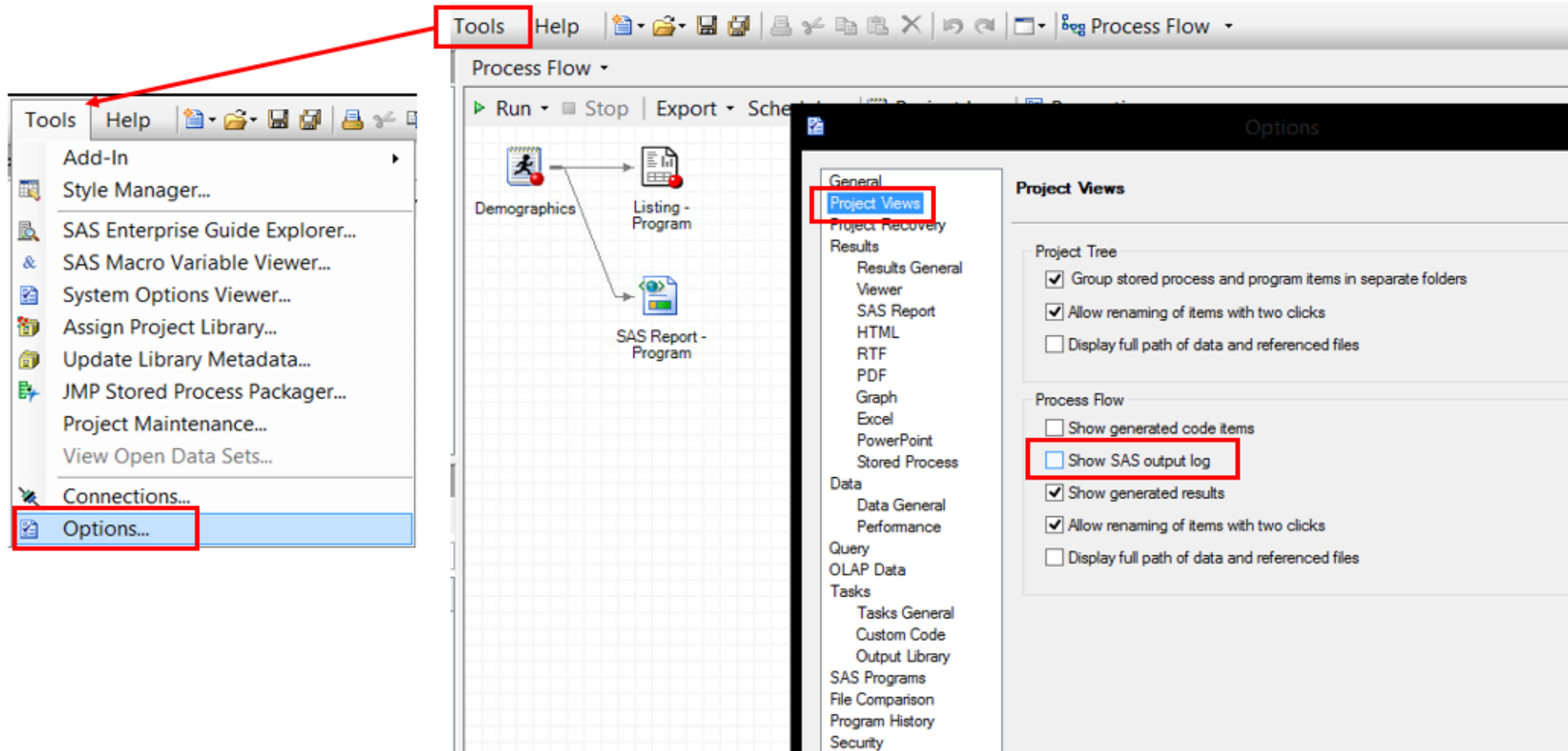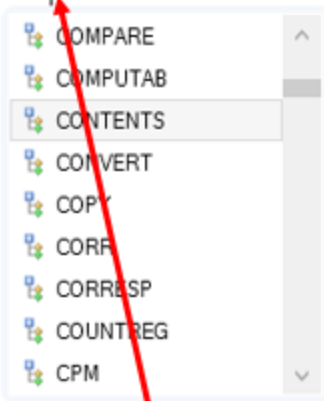
SAS EG – Tricks in running SAS programs

```
/*proc contents data=sashelp._all_;
run;*/

proc contents data=sashelp.demographics; run;

proc print data=sashelp.demographics(obs= 10); title "De

  title "Region Distribution";
proc freq data=sashelp.demographics; tables region/list
```

```
proc con
```
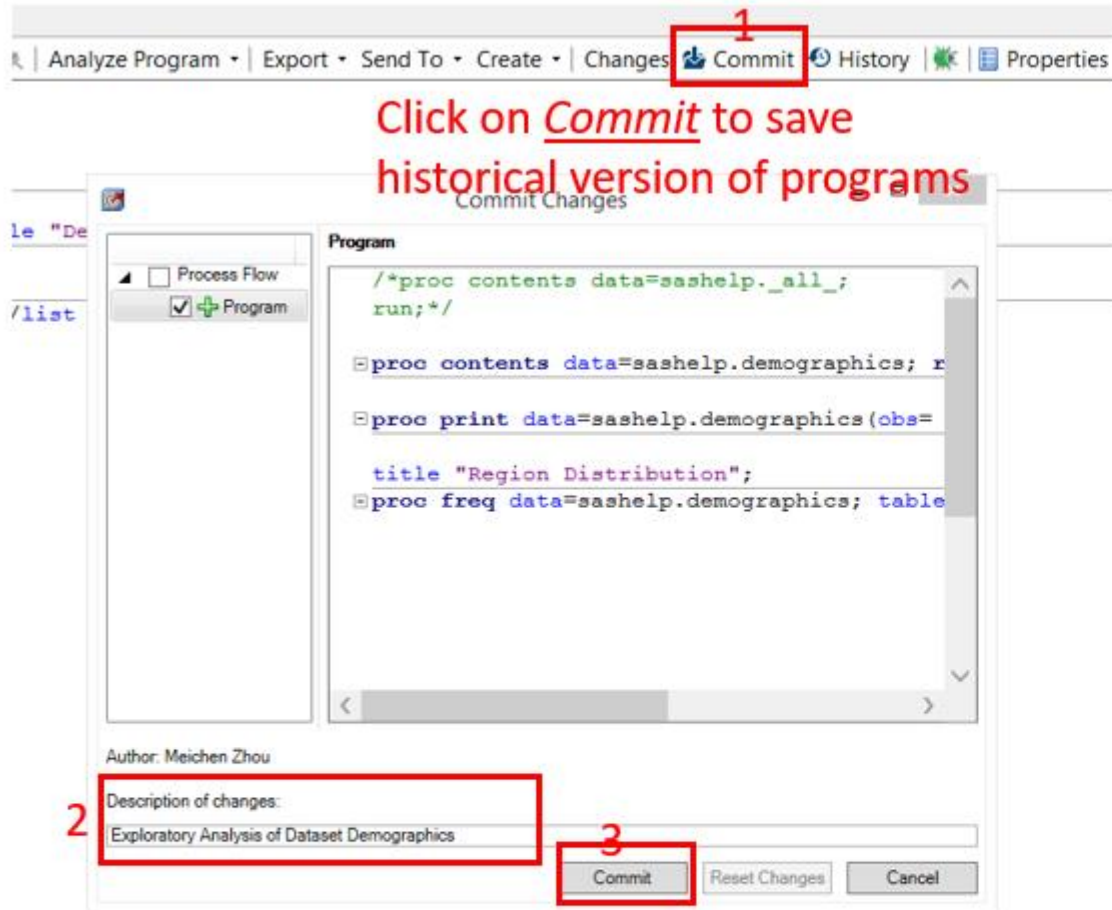
COMPARE	
COMPUTAB	
CONTENTS	
CONVERT	
COPY	
CORR	
CORRESP	
COUNTREG	
CPM	

✓ **Hit Tab to finish autospelling**

✓ **Debugging**
- Click the green bug button on the top right – the same bug will show up next to the data steps you create.
- Click on the bug on the left so the debugger window pops up.
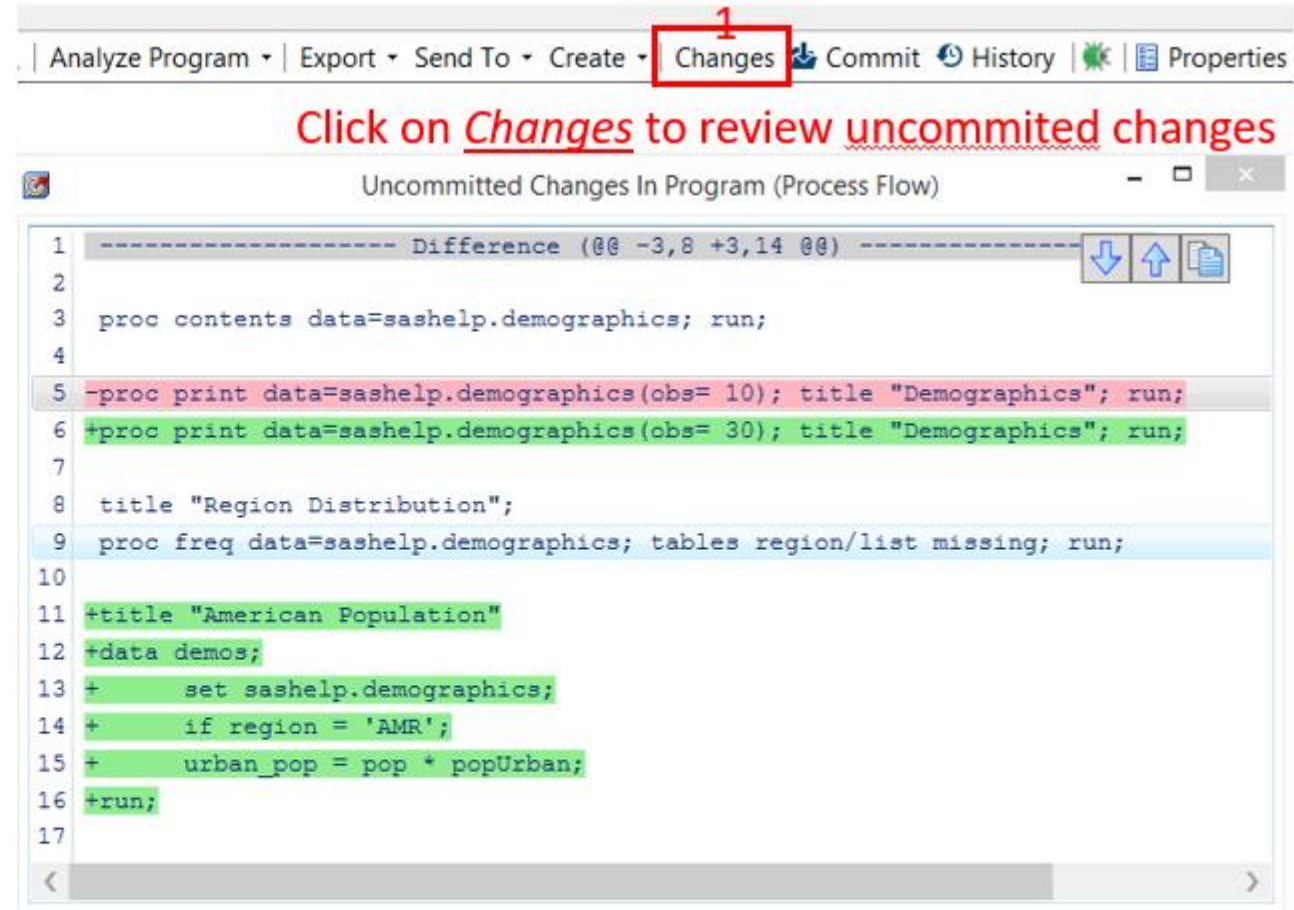- Observe changes of variables or find any errors using this tool.

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SAS EG – Tricks in running SAS programs

Click on *Commit* to save historical version of programs
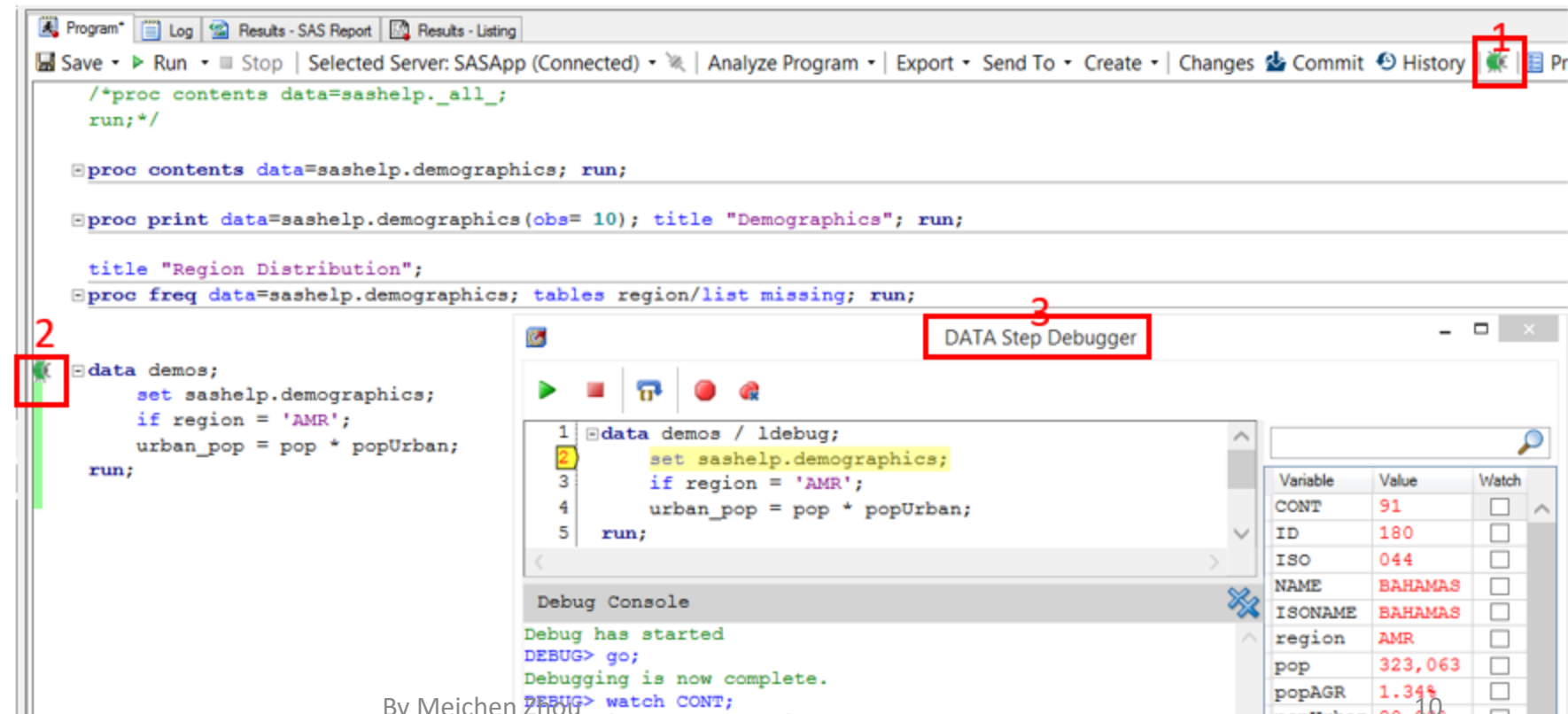
Click on *Changes* to review uncommitted changes

✓ **Commit**

Write down description of changes to easily look back, and click *Commit* to save version

✓ **View Changes**

Green highlighted indicates new code, while red highlighted indicates deleted ones

SAS EG – How to create connections between nodes and branches

- On the project canvas, right click to create the second SAS program. The new program also shows up in the left hand _Project Tree_ window under _Programs_ folder.
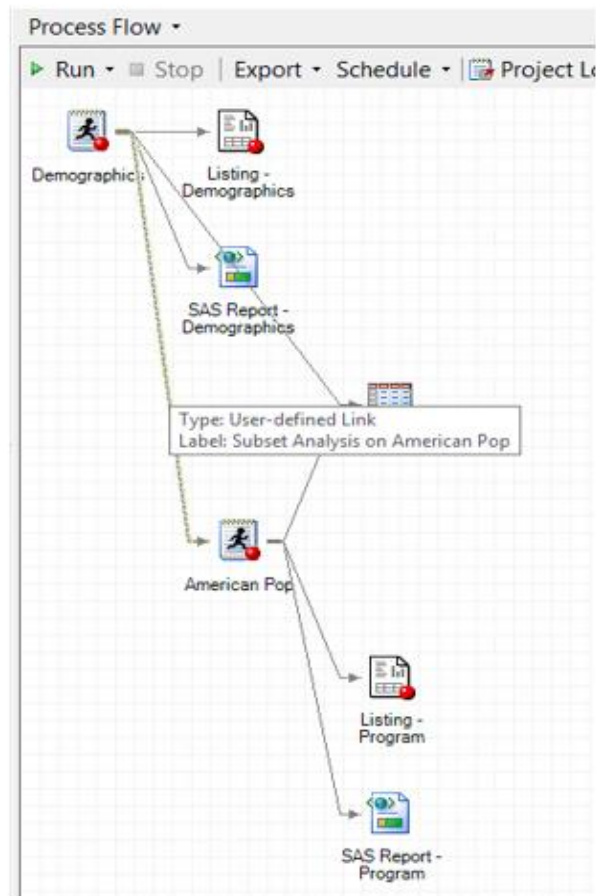- The second program also shows up in process flow.

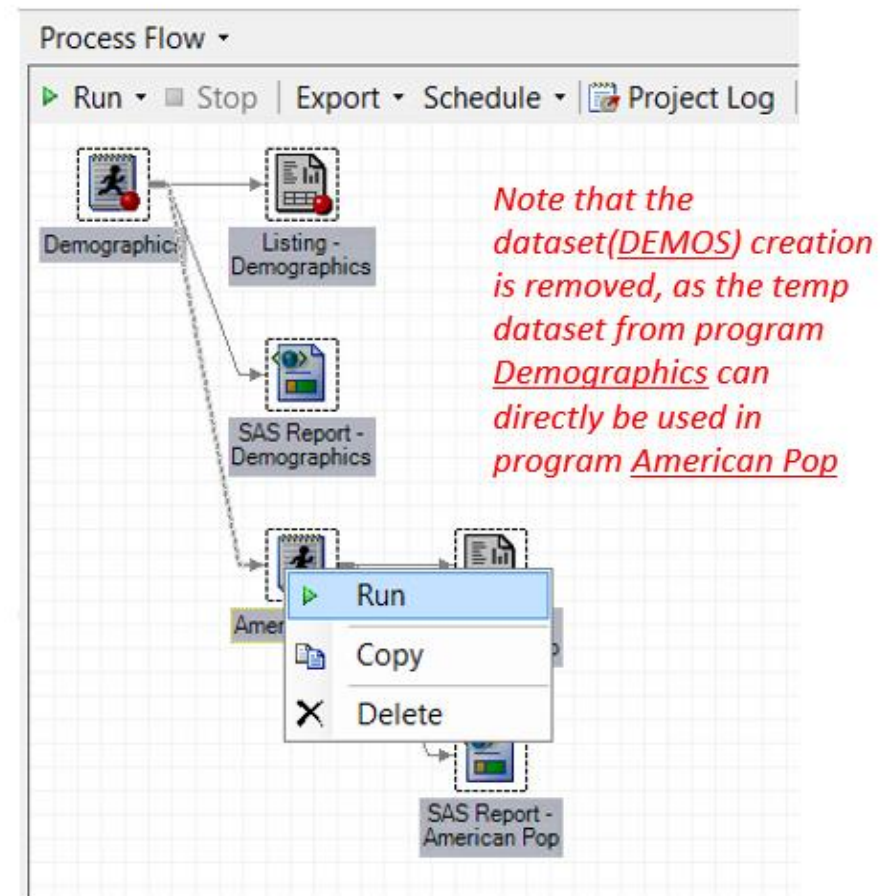# SAS EG – How to create connections between nodes and branches

- Hover over one node, and when seeing a black cross sign, drag all the way to the other node.
- In this case, I created a link from program *Demographics* to *American Pop*, and renamed the link label.
- The benefit of making a process flow is that it's easier to organize and arrange for complicated projects, and also it can run as a whole or partially. To do this, simply highlight the part of flow and *right click -> Run*.
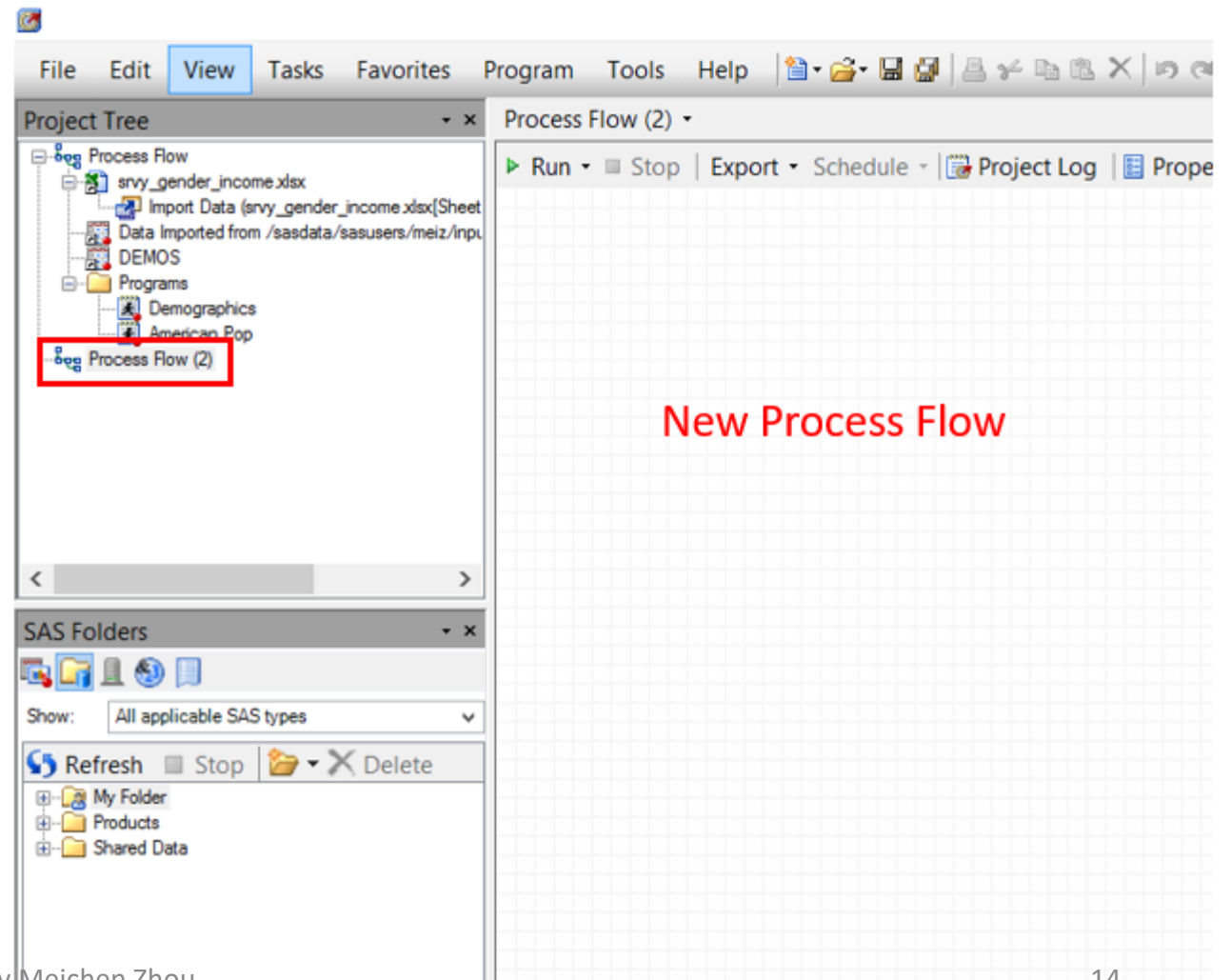

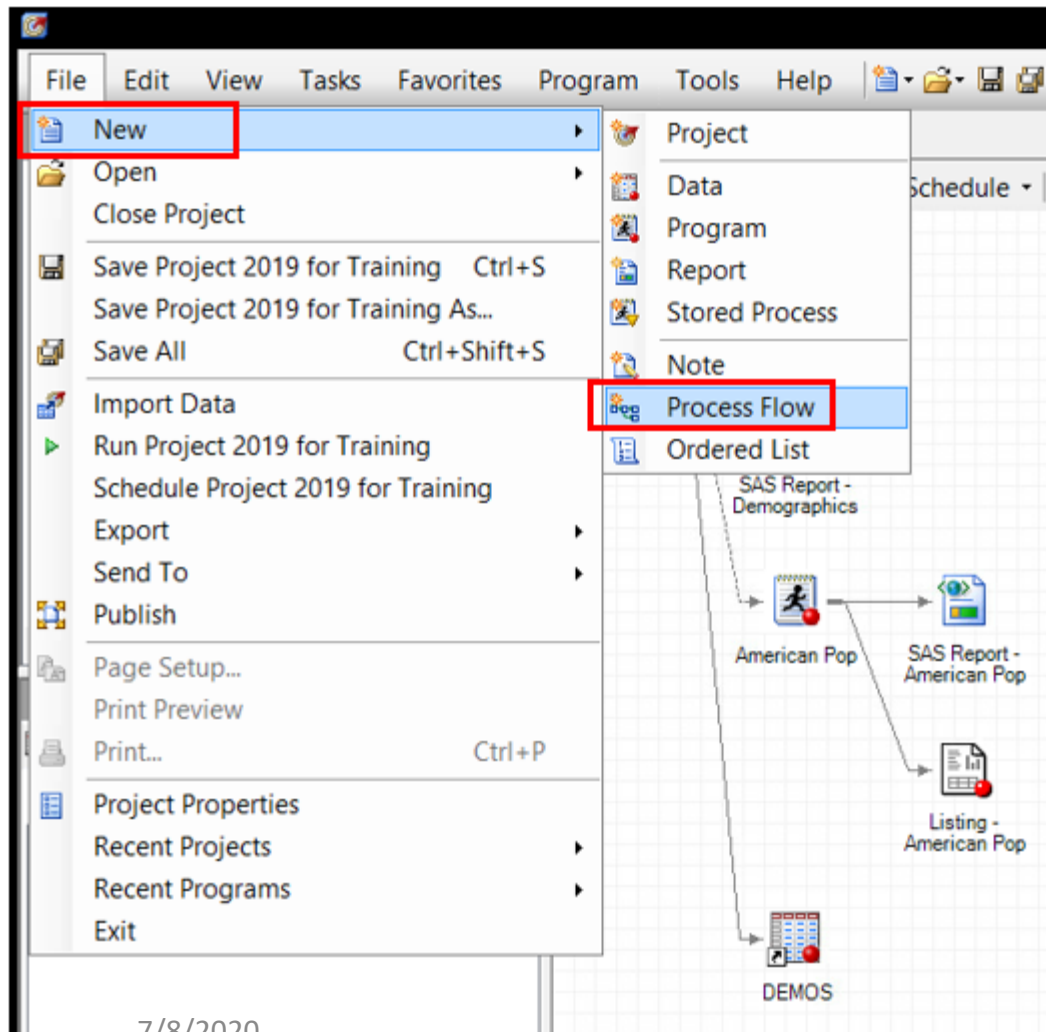*Note that the dataset(DEMOS) creation is removed, as the temp dataset from program Demographics can directly be used in program American Pop*
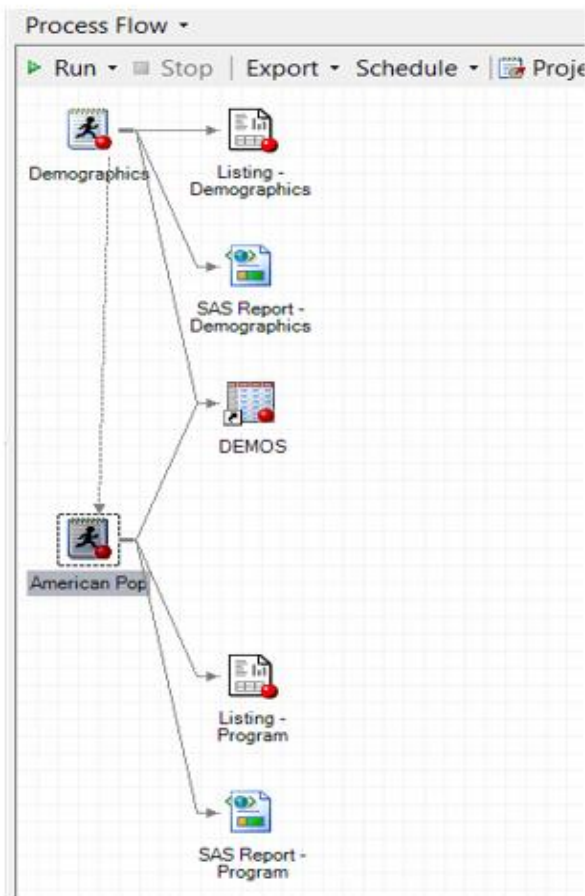
SAS EG – How to create more than one process flow

- To create a brand new process flow in the same project, go to menu *File -> New -> Process Flow*.
- A new process flow comes in the list under *Process Tree* in the upper left and a blank canvas opened.


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SAS EG – How to create more than one process flow

- To enable parallel processing of multiple tasks, click on *Properties -> Project Properties -> Code Submission -> Allow parallel execution on the same server -> OK*.

- Therefore multiple tasks can run in parallel on the same server instead of sequentially.

Note that submission of each flow is in its own distinct SAS session and doesn't have direct access to the other submissions' temporary libraries or macro variables.

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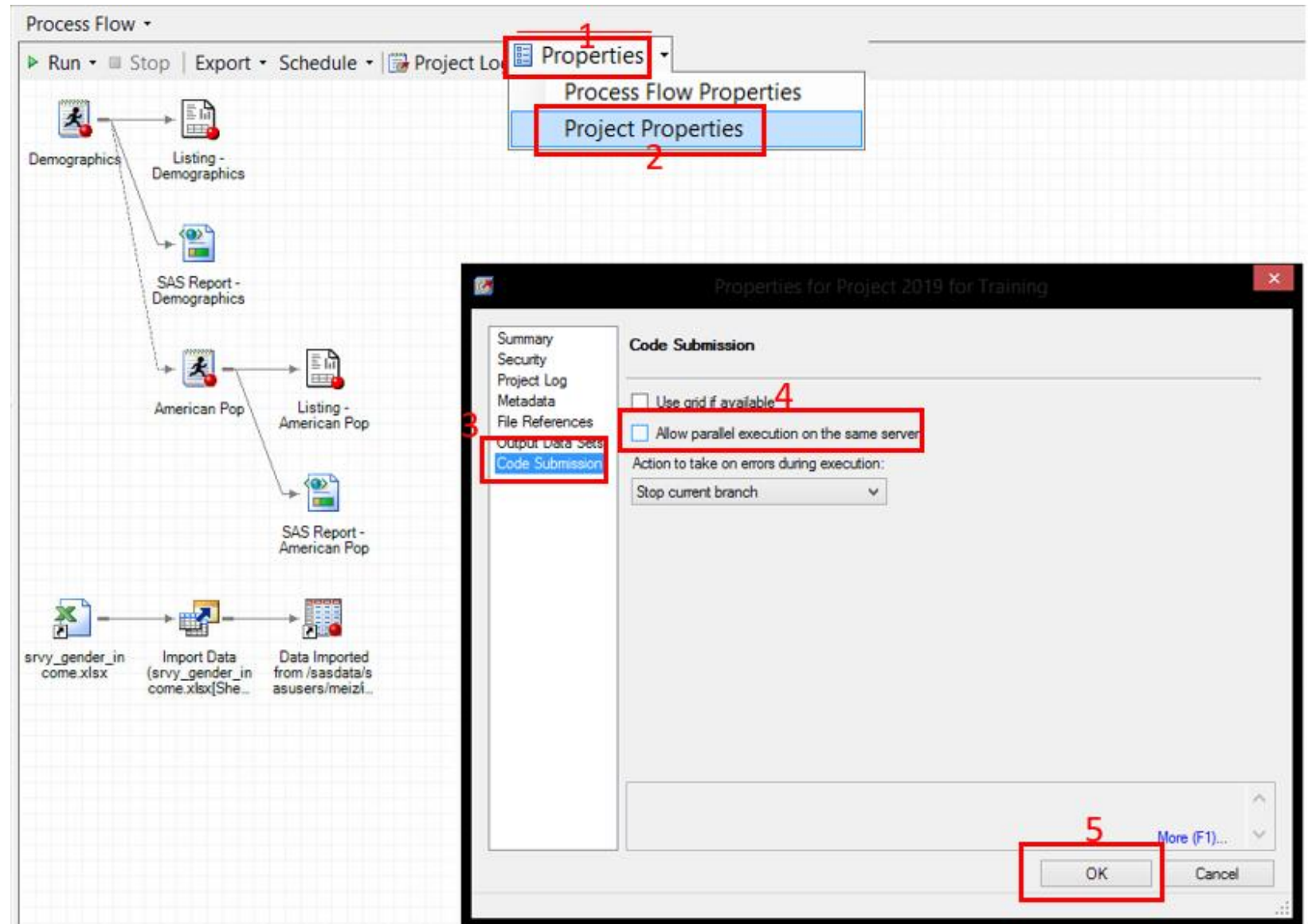
SAS EG – How to save a SAS EG Project

- To save the project, go to *menu File -> Save Project* options. Or go to *project view -> Save*. Or use the *save* buttons on the top.
- Save the project as SAS Enterprise Guide Project(EGP) file.

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