SAS Studio: Flows & Steps

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SAS Customer Success

SAS Studio

Flow History

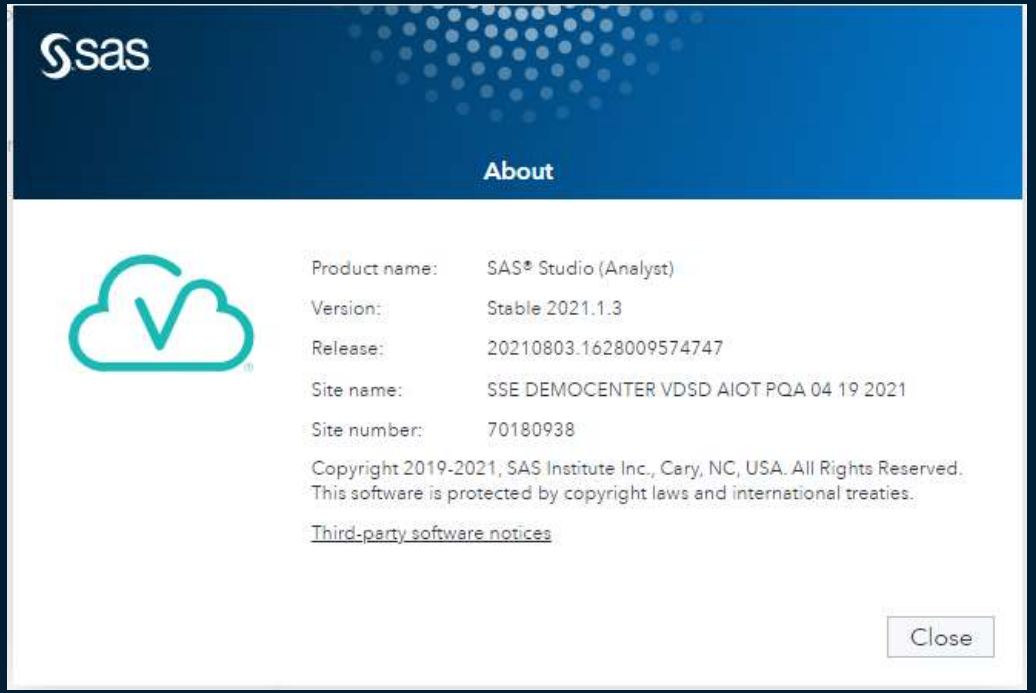
- Enterprise Guide from the very beginning utilized a concept of a Process Flow
- Many users have become accustomed to creating lengthy and sometimes complex Flows
- Some users only had one or two types of tasks in their Flows – programs and the Query Builder
- Enterprise Guide 8.x does not require a Project or Process Flows
- Flows and Steps were introduced to SAS Studio in April of last year
- Custom Steps were added shortly thereafter as part of CD/CI in Viya

SAS Studio

- SAS Studio supports different levels of functionality depending on the license you have
- This added functionality shows up as specific Steps
- Steps are like Tasks but usually more targeted to one activity
- Steps are used in building SAS Studio Flows
- Users can create Custom Steps – there is a growing number of these that are on Github

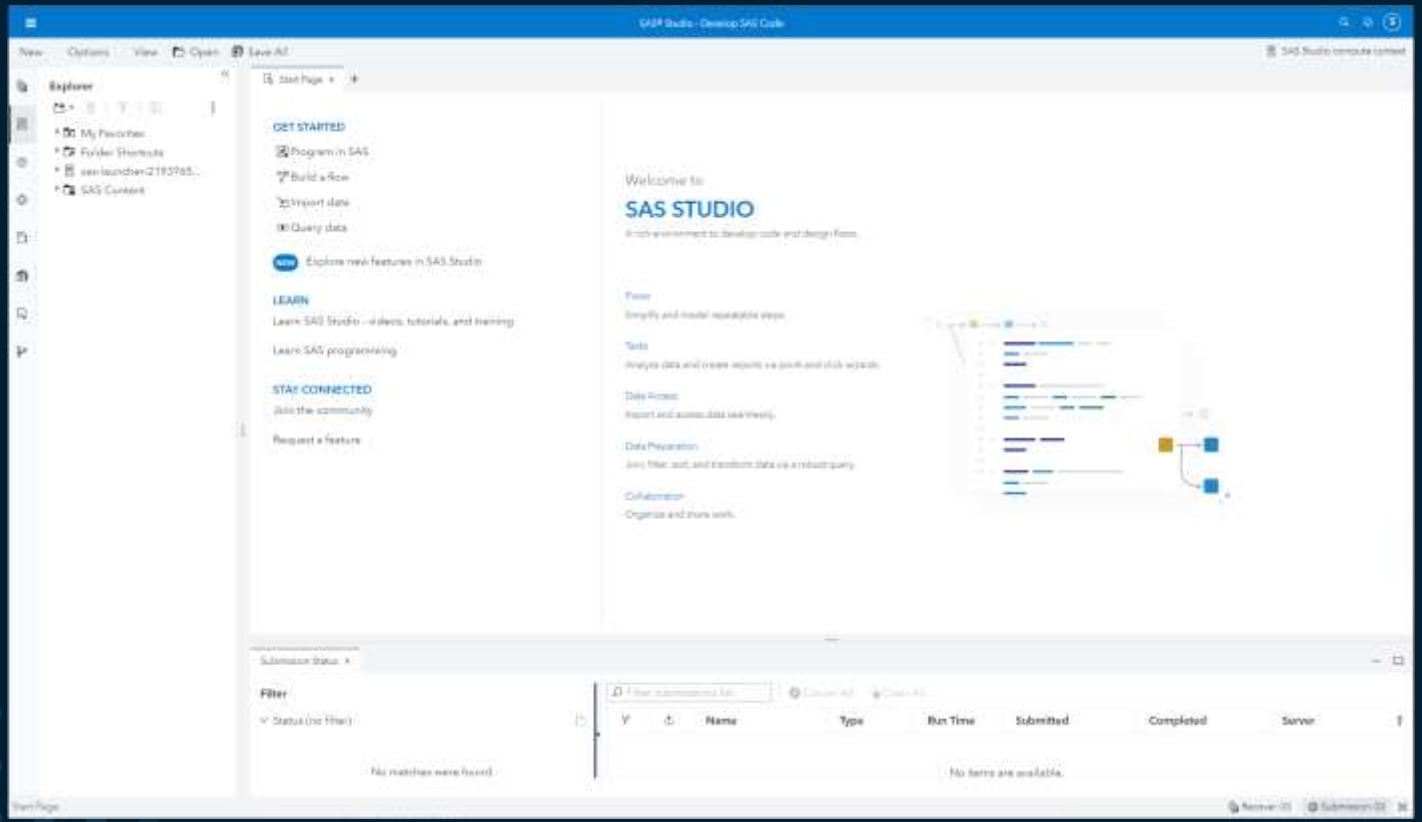
SAS Studio

Check your version



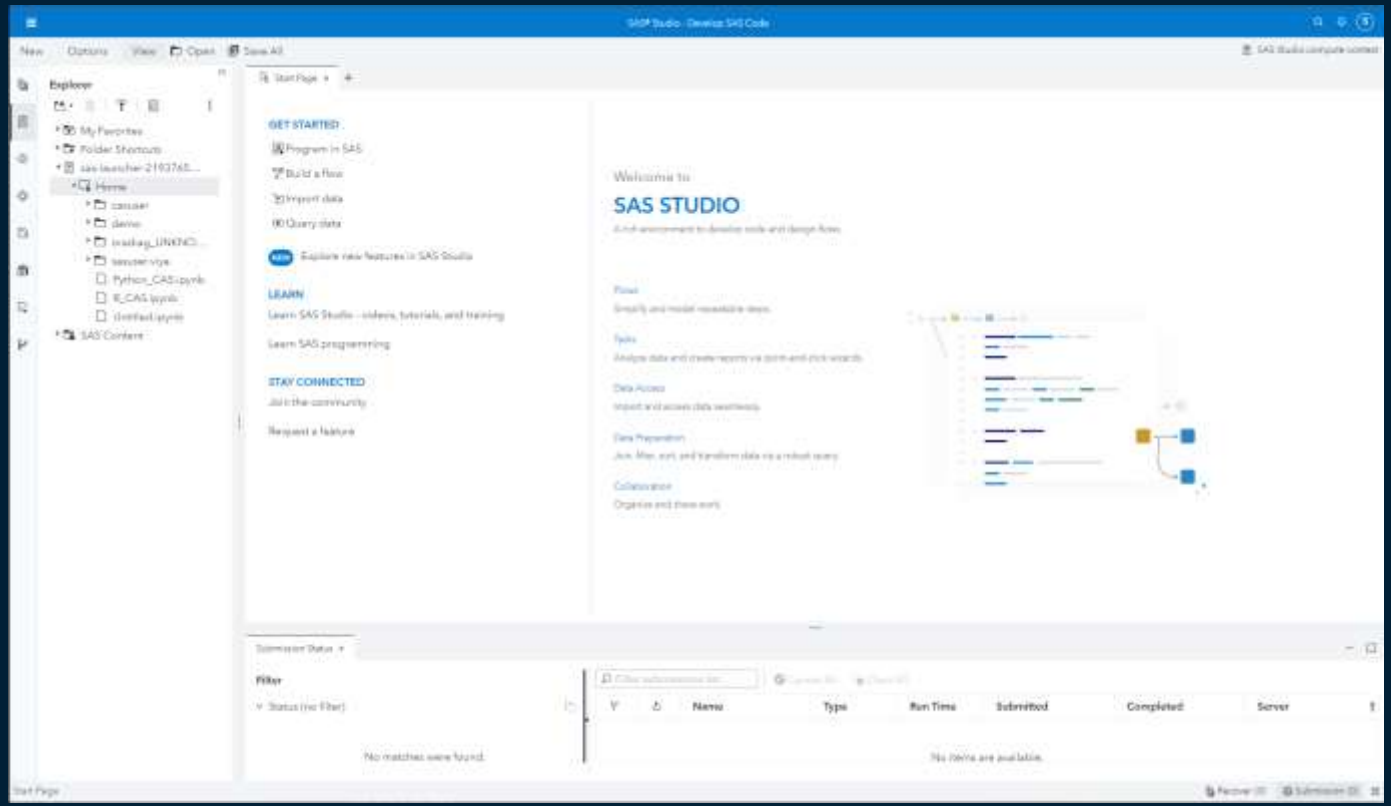
SAS Studio

Start Page



SAS Studio

File system access as well as SAS Content



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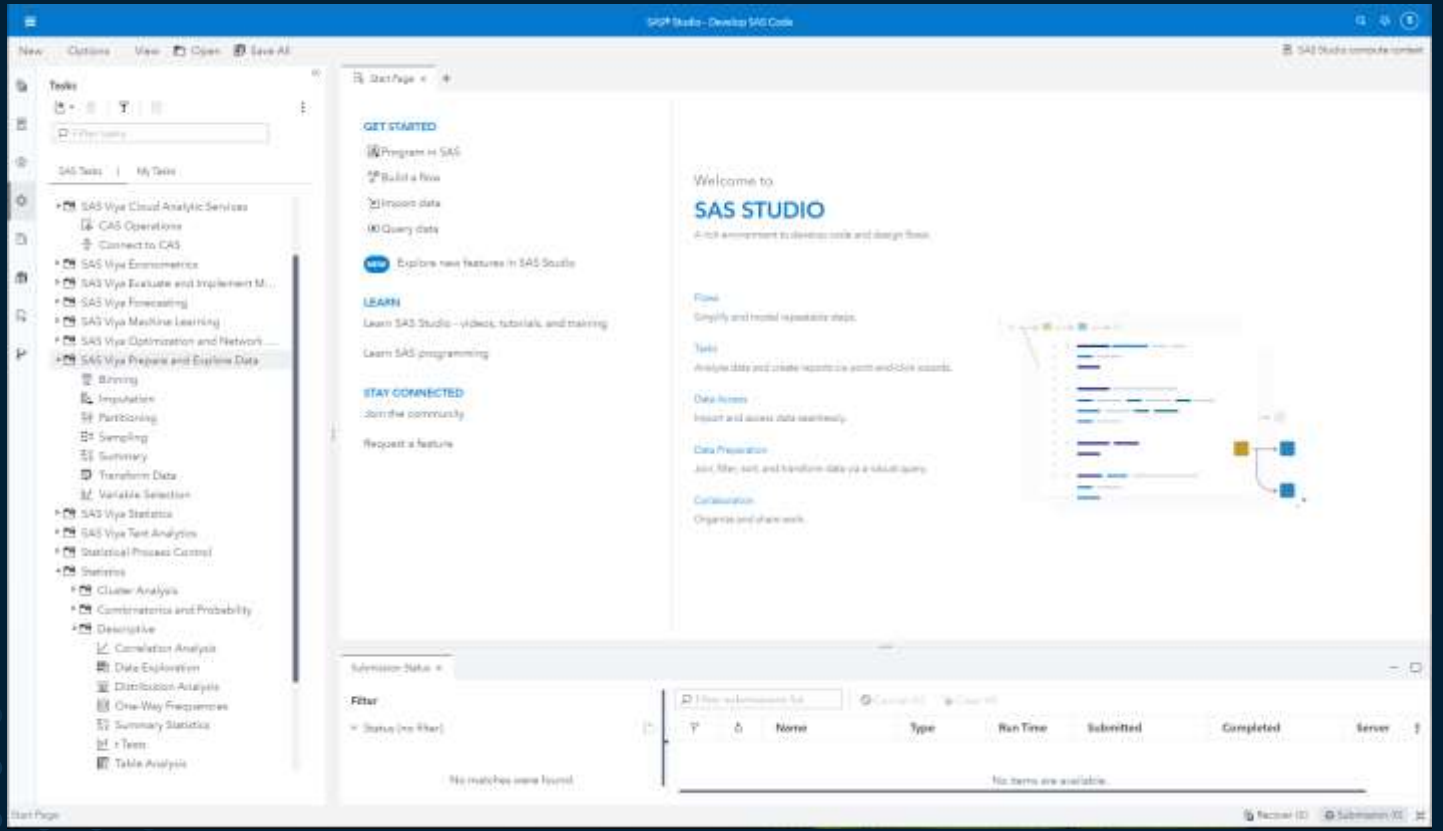
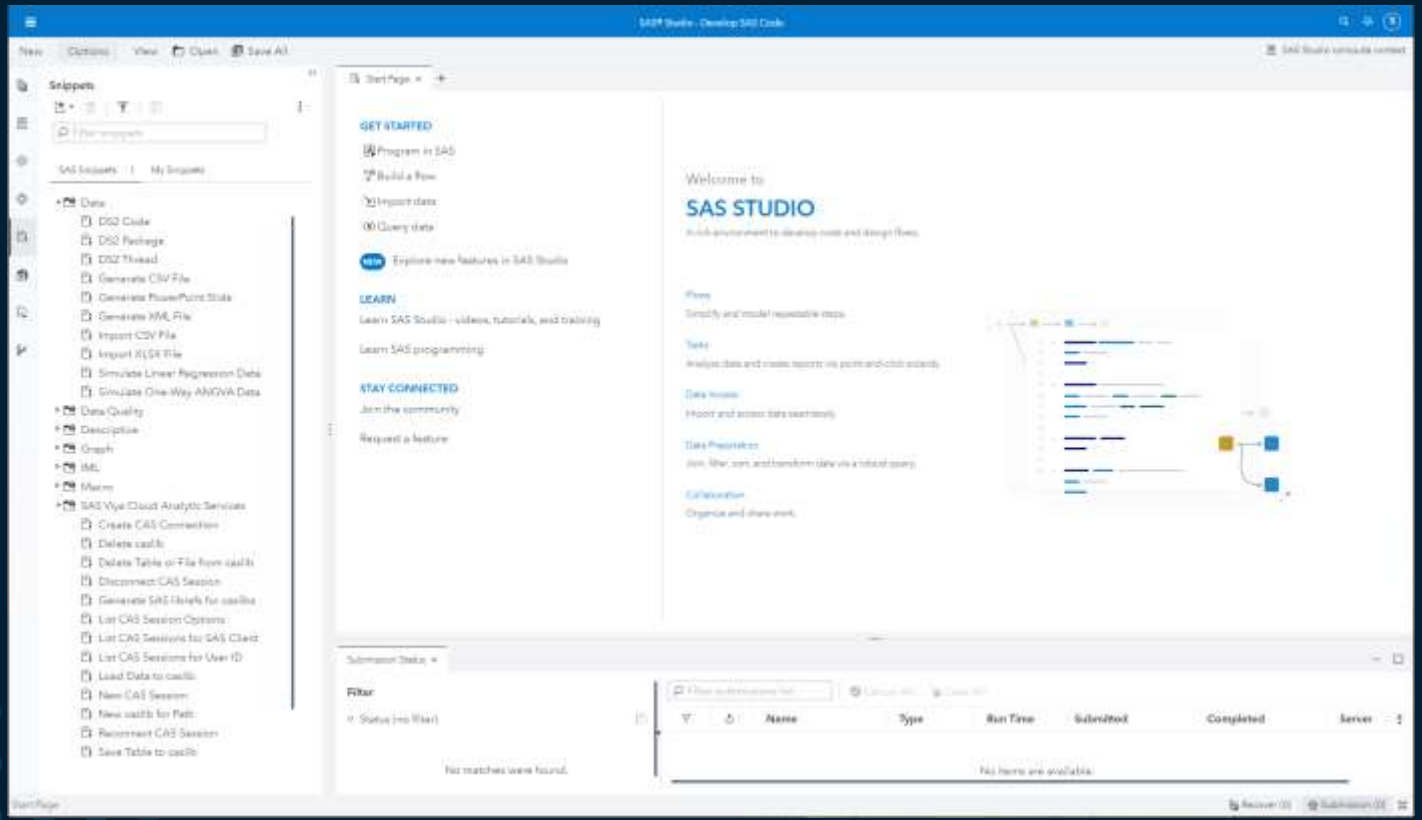
Built-In Tasks



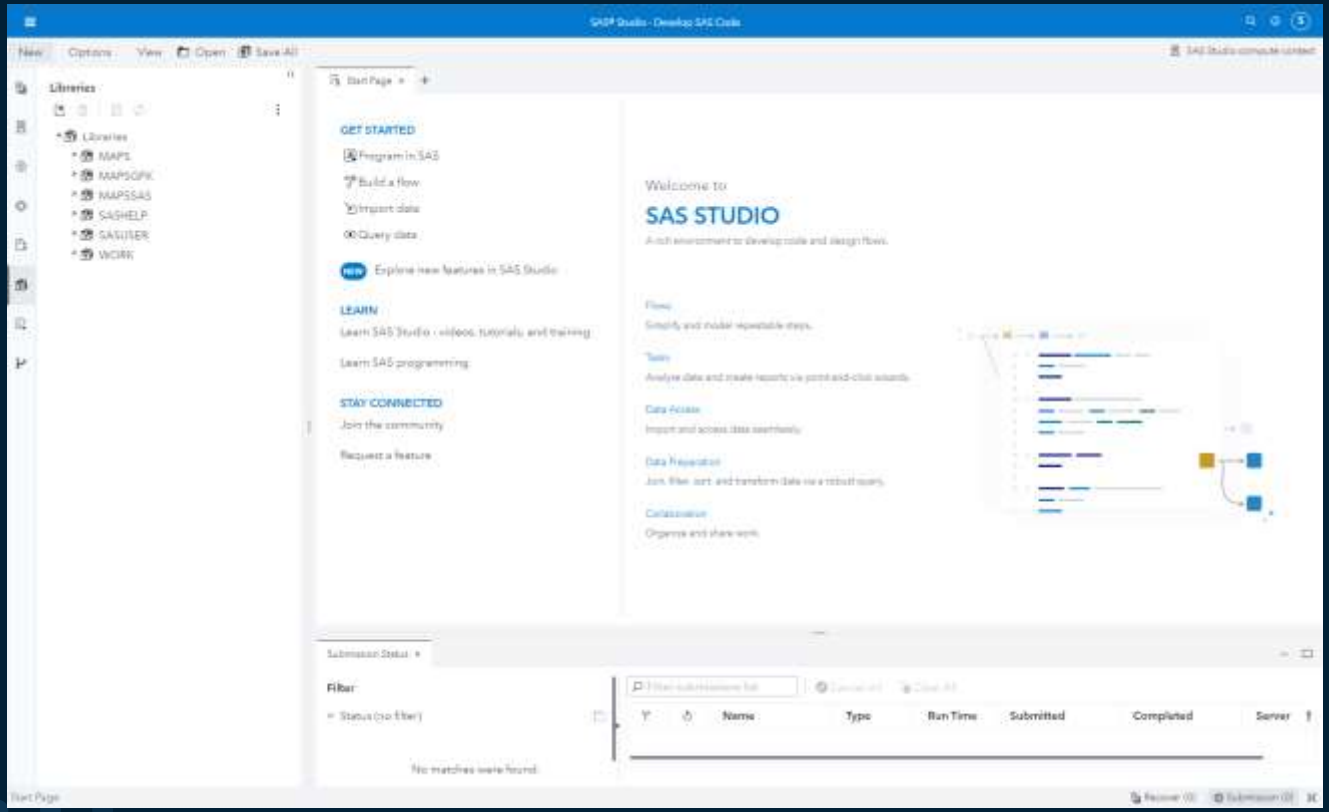
SAS Studio

Snippets



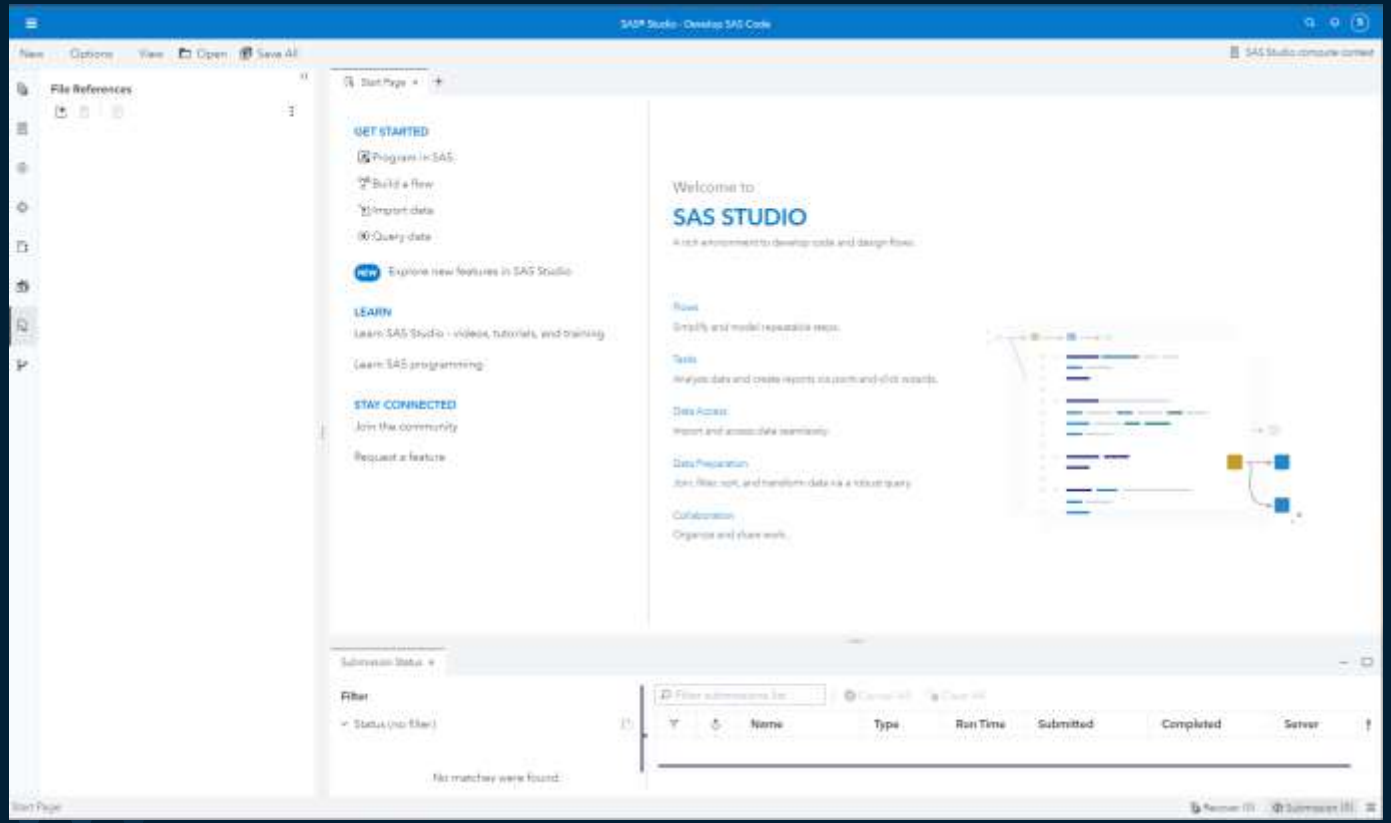
SAS Studio

Libraries



SAS Studio

File References



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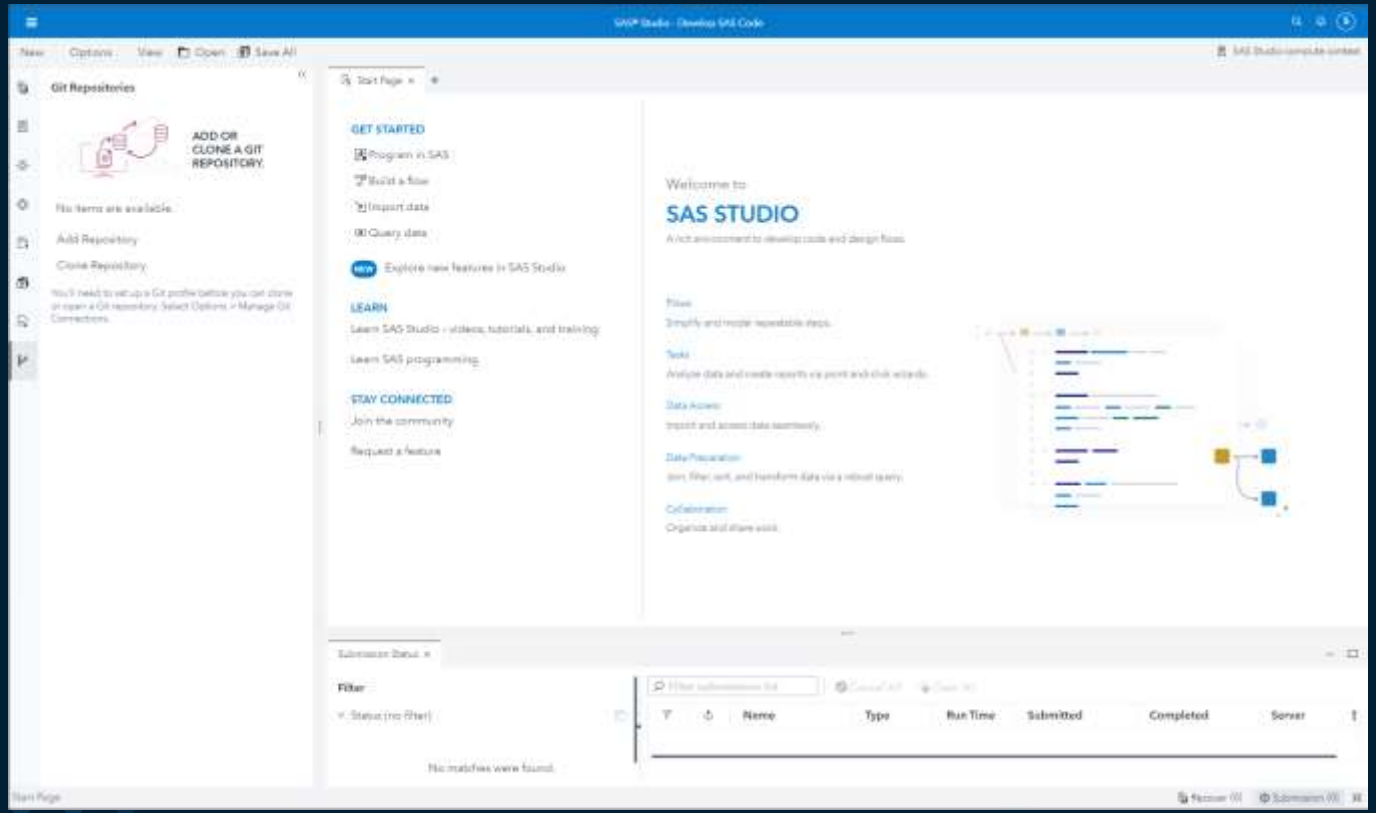
GIT Repositories



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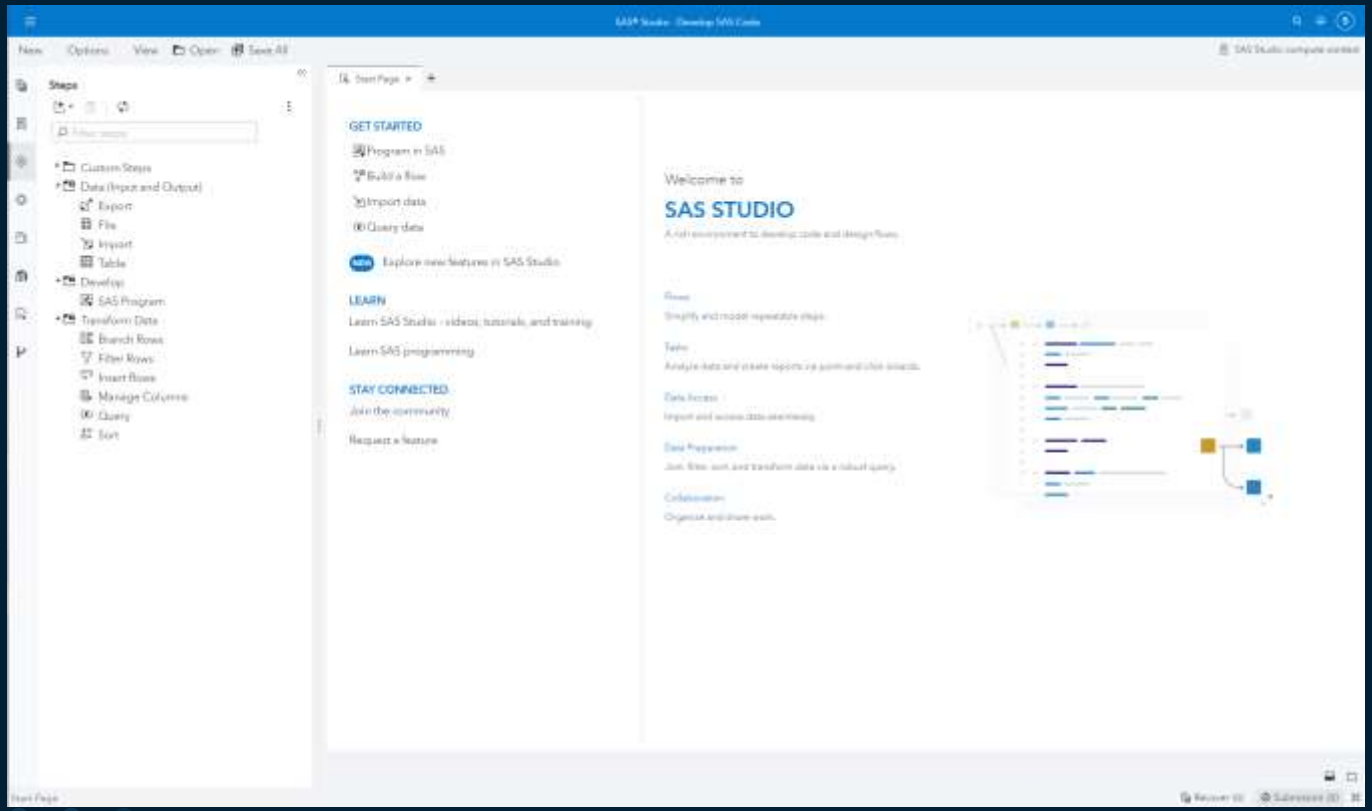
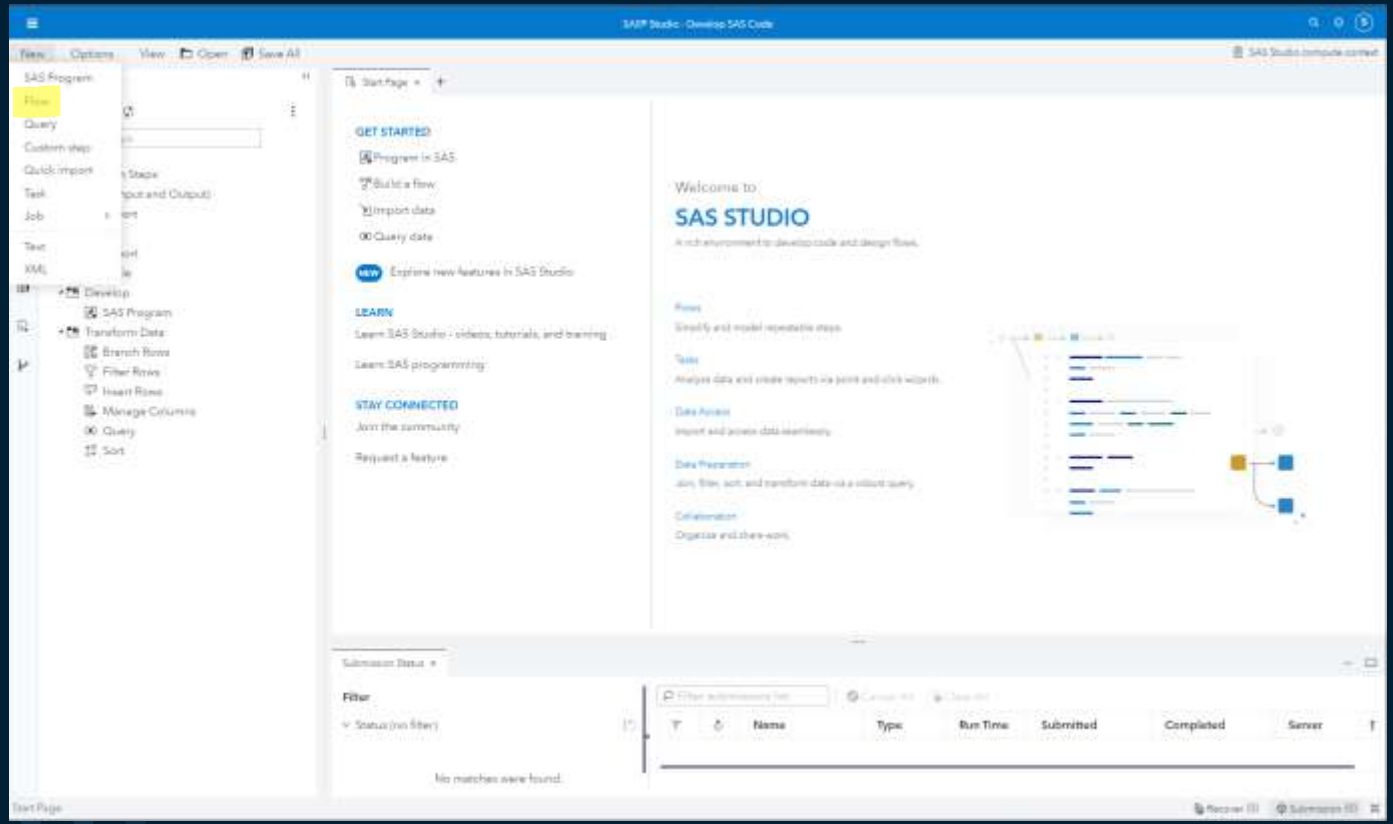
Steps



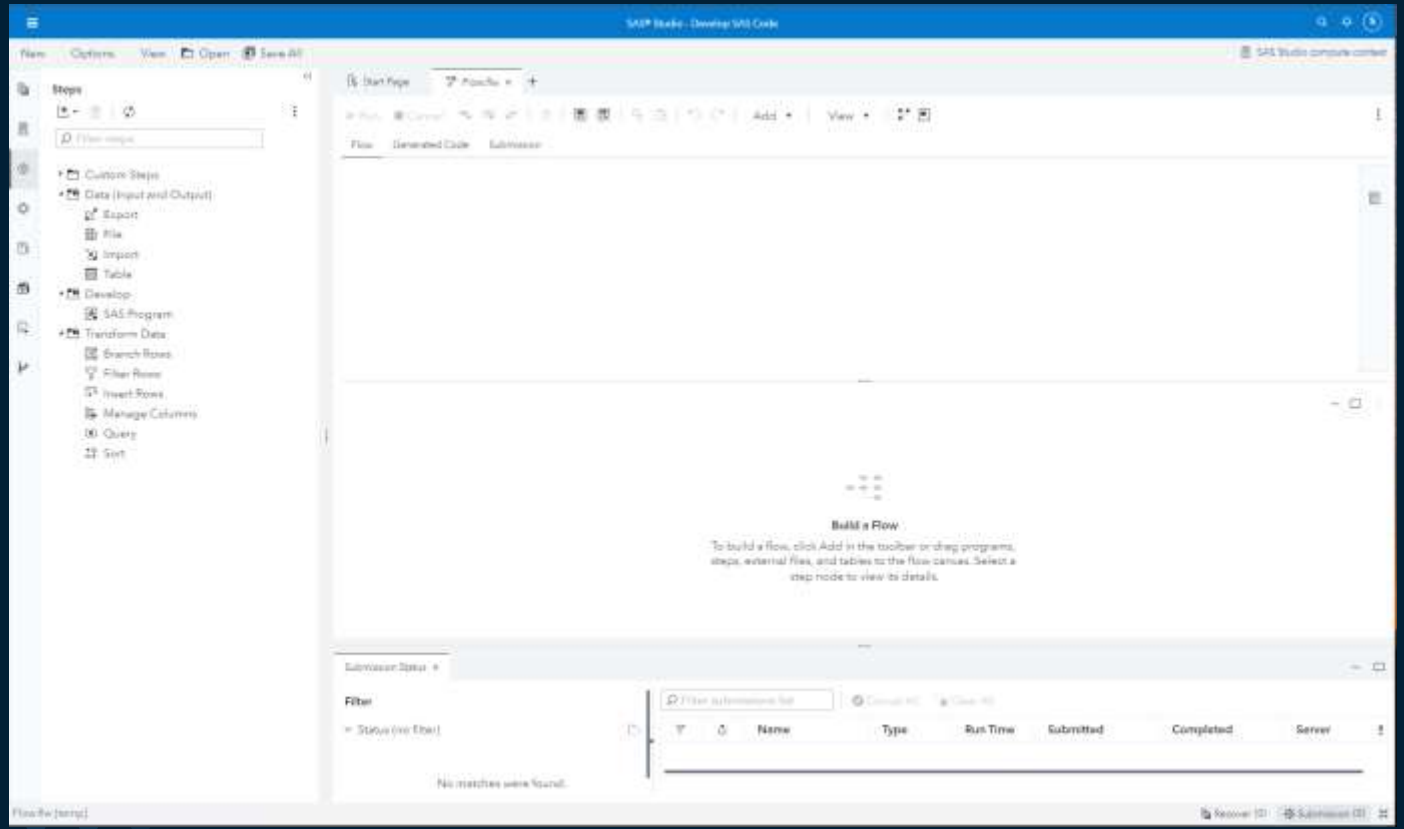
SAS Studio

Flow



SAS Studio

Flow



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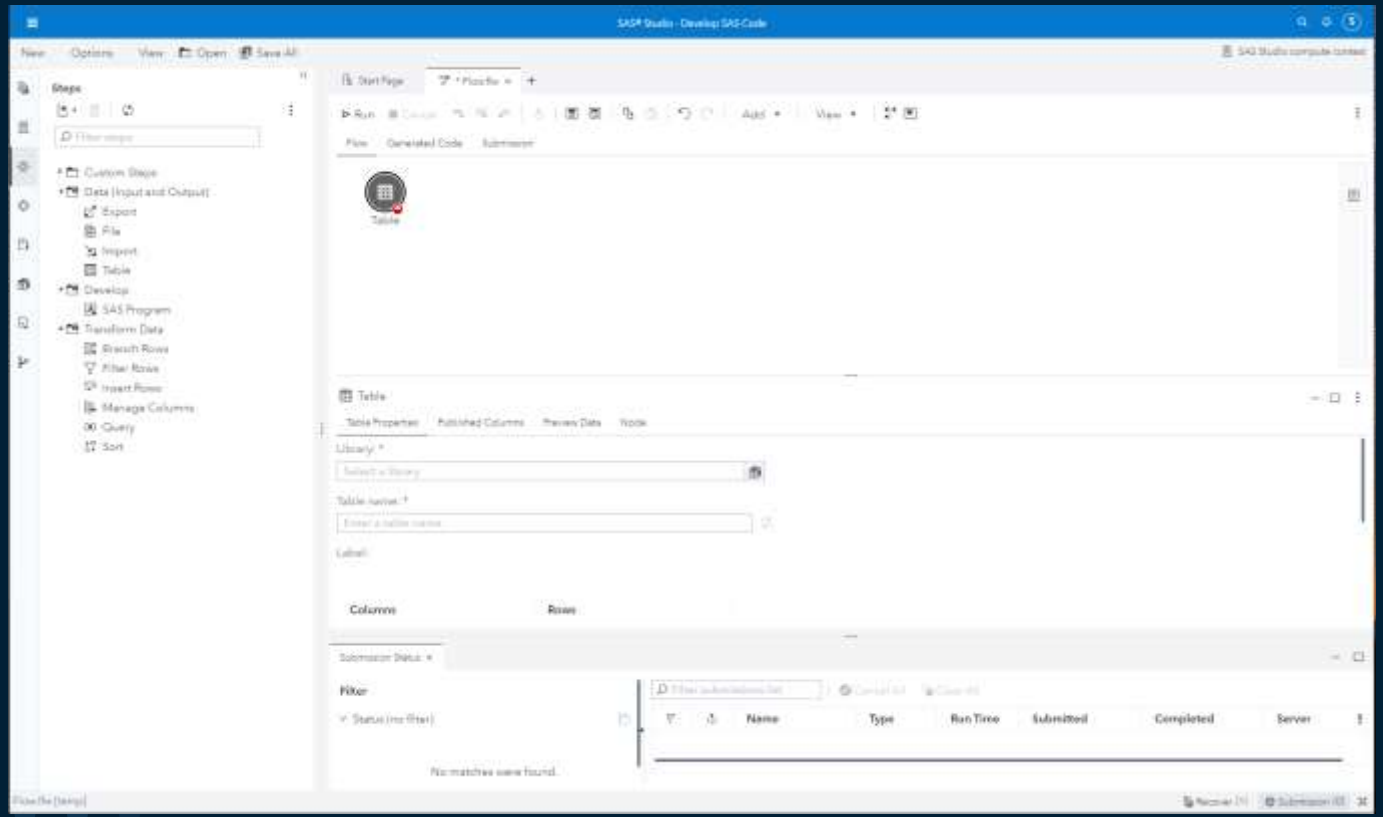
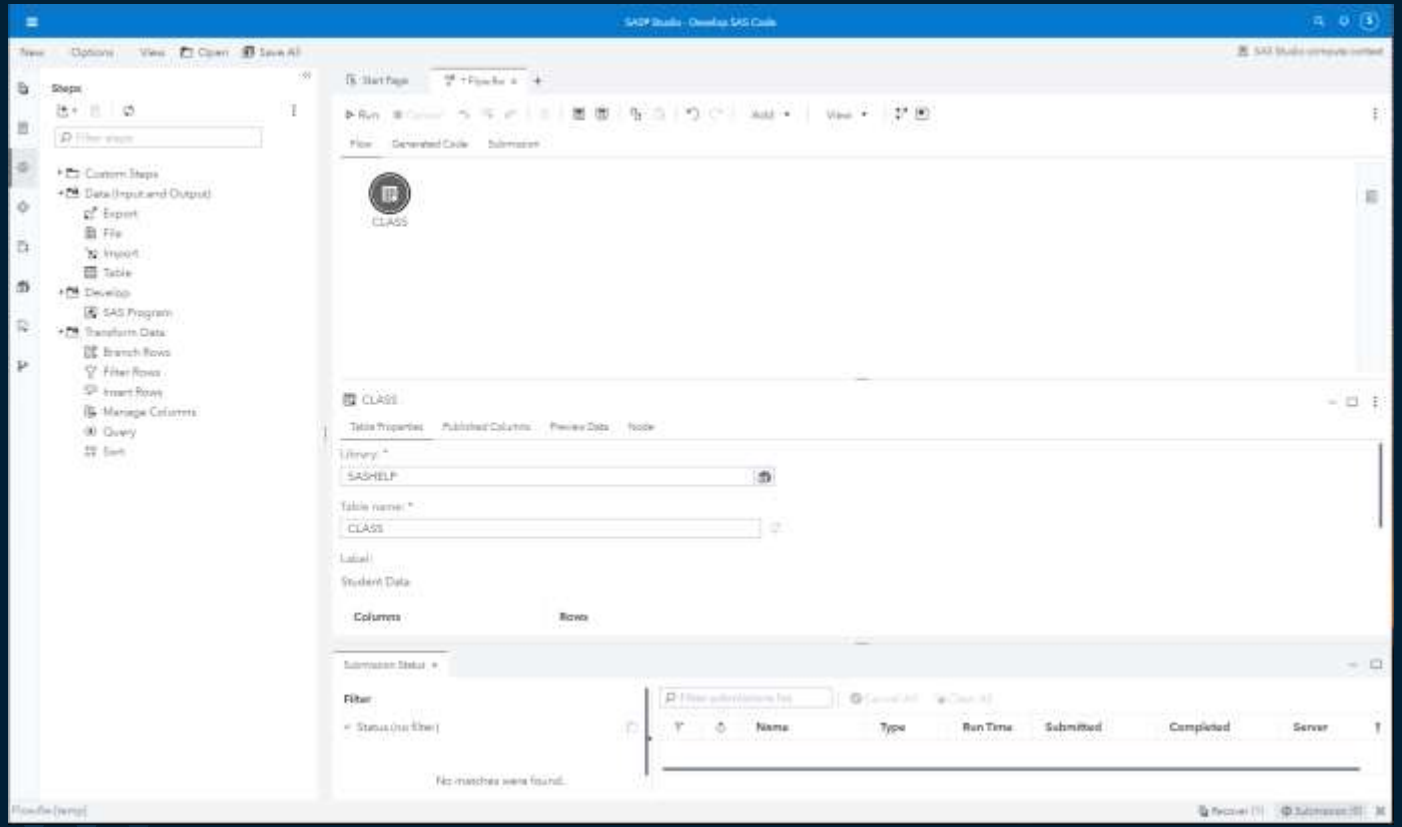
Add items to Flow



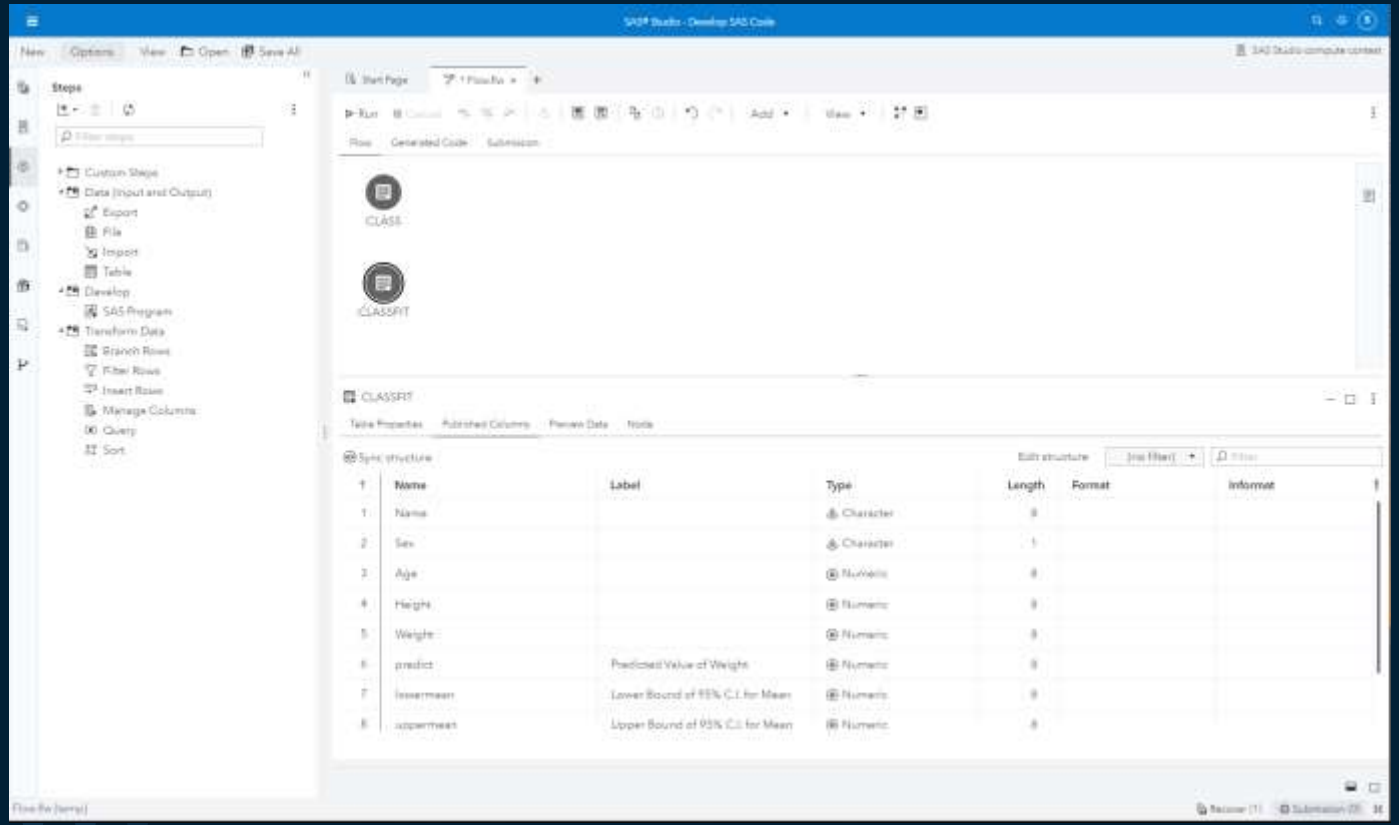
SAS Studio

Tables



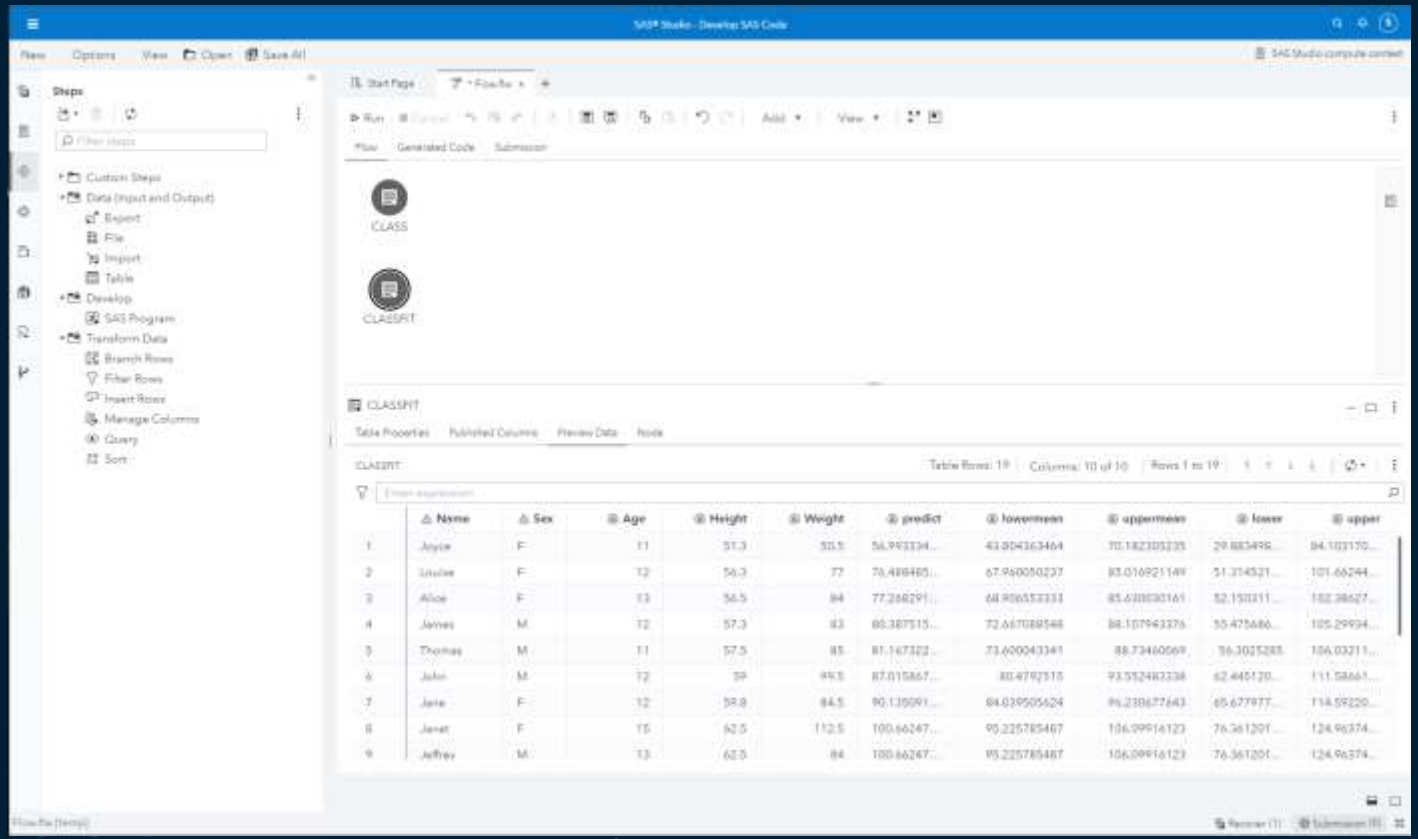
SAS Studio

Columns



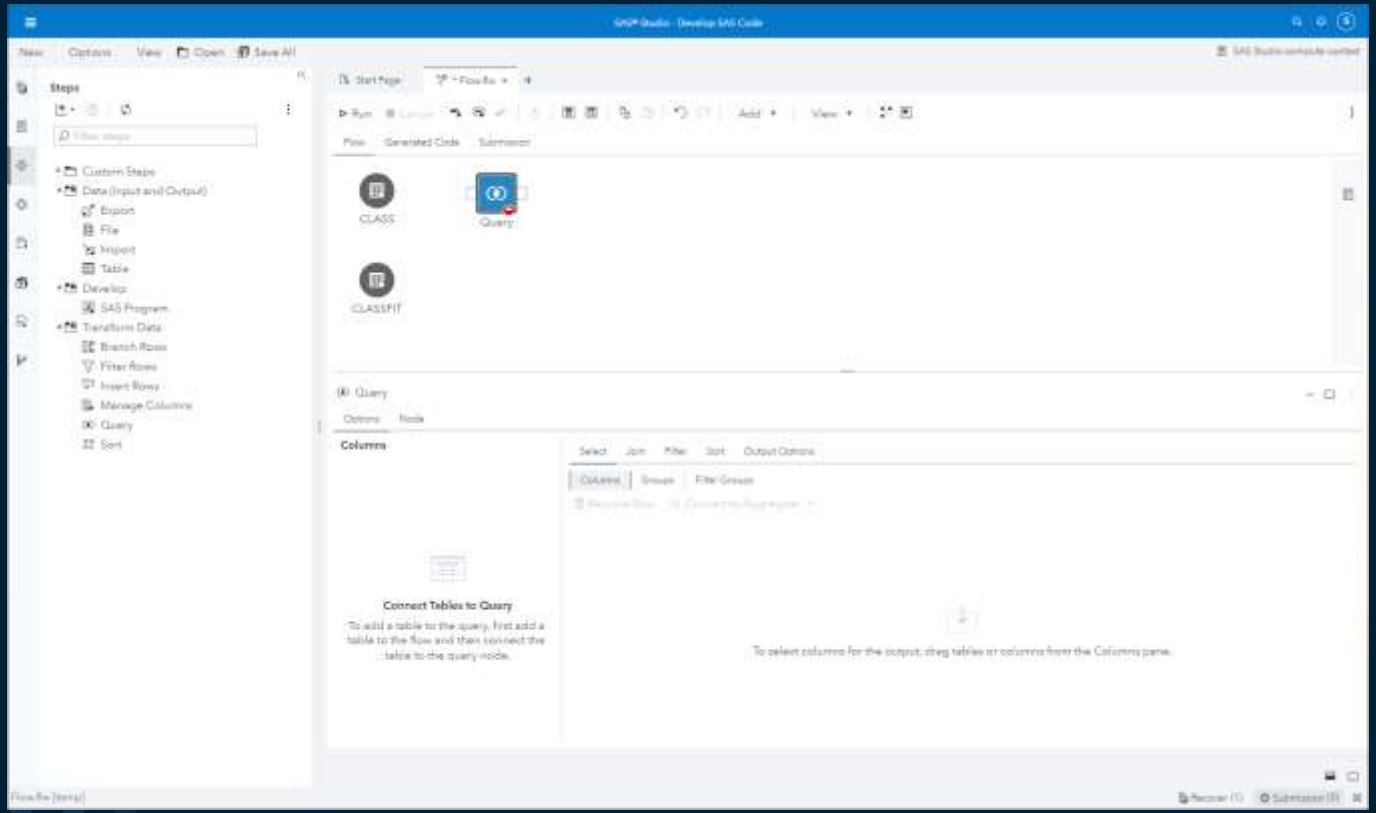
SAS Studio

Data view



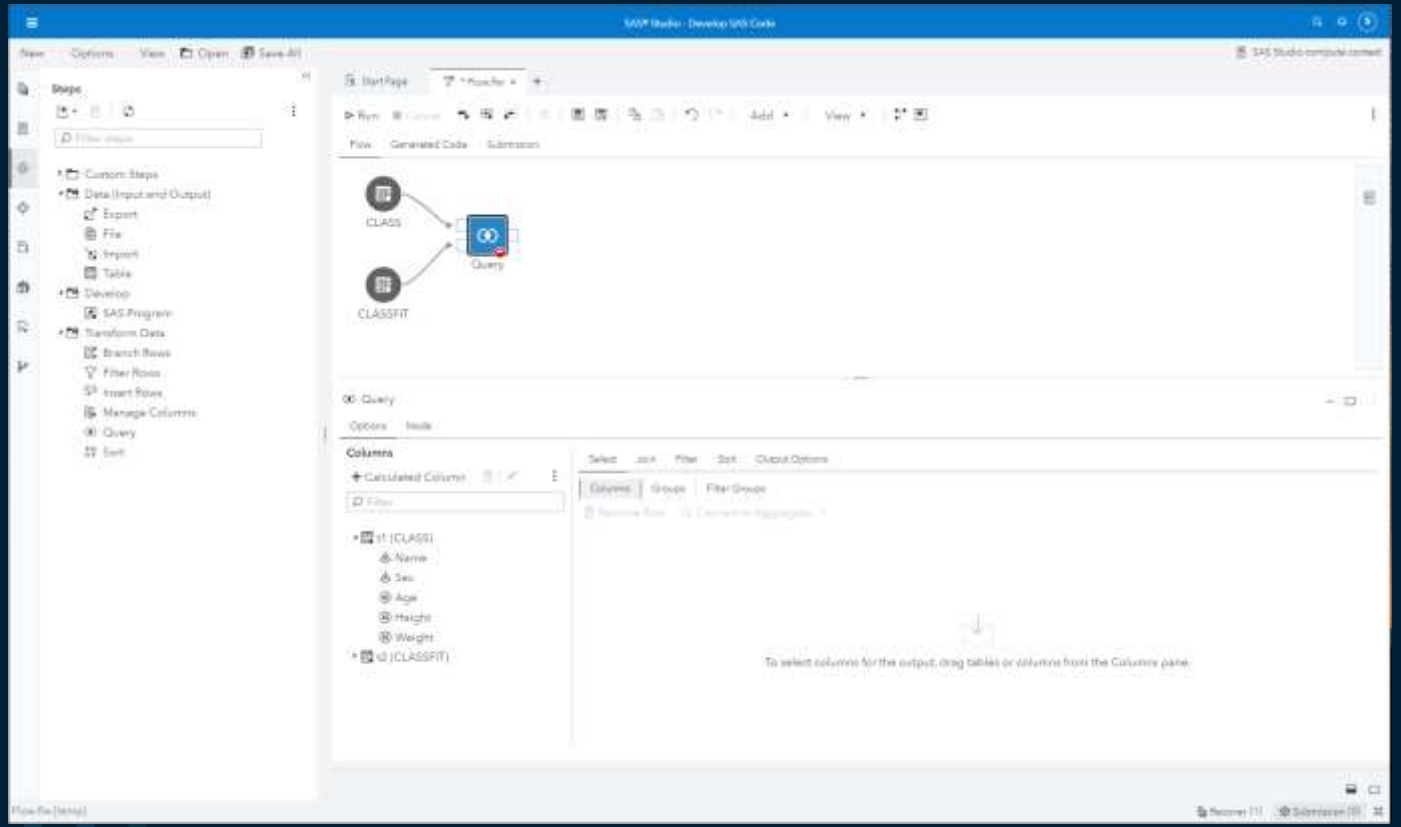
SAS Studio

Query



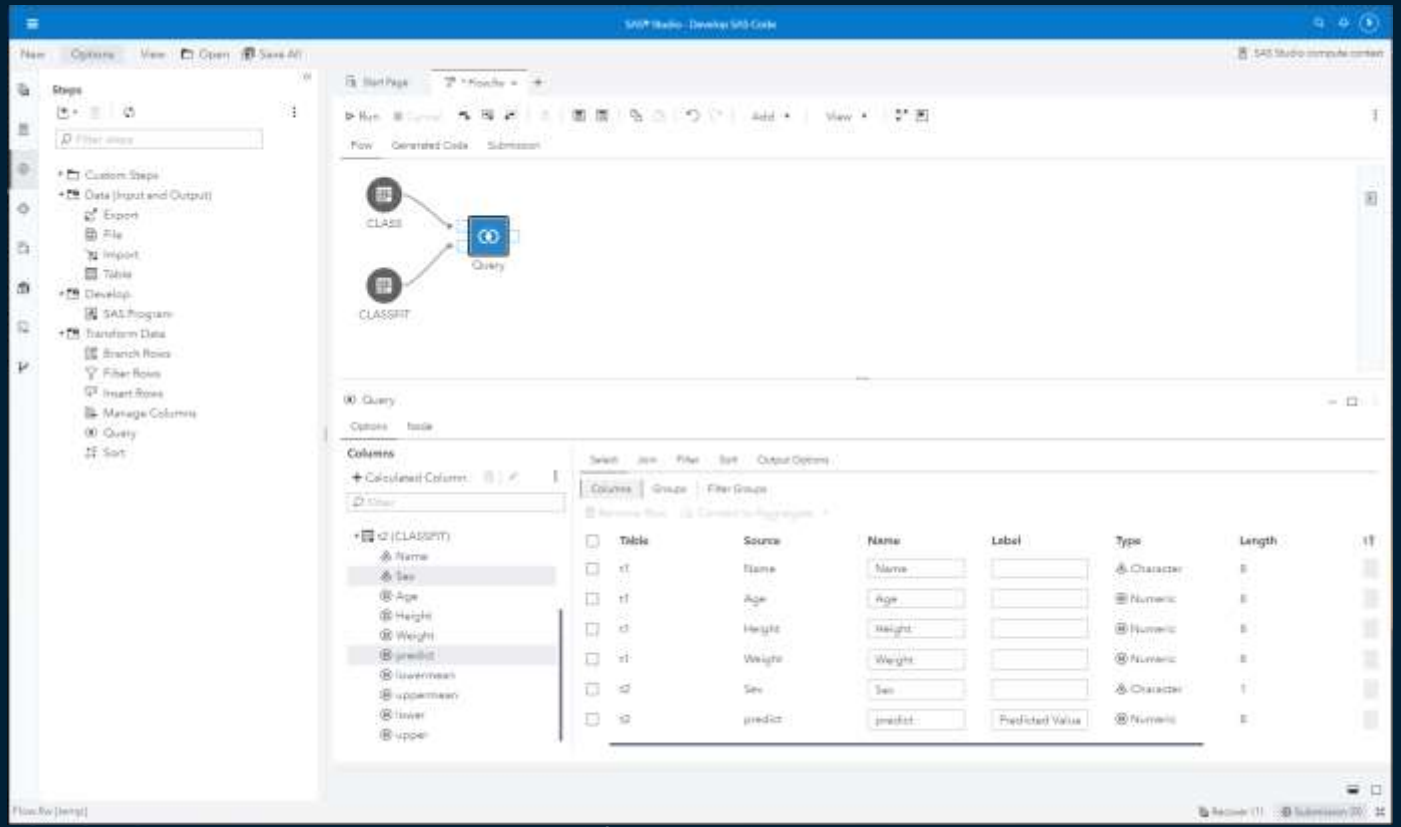
SAS Studio

Ports



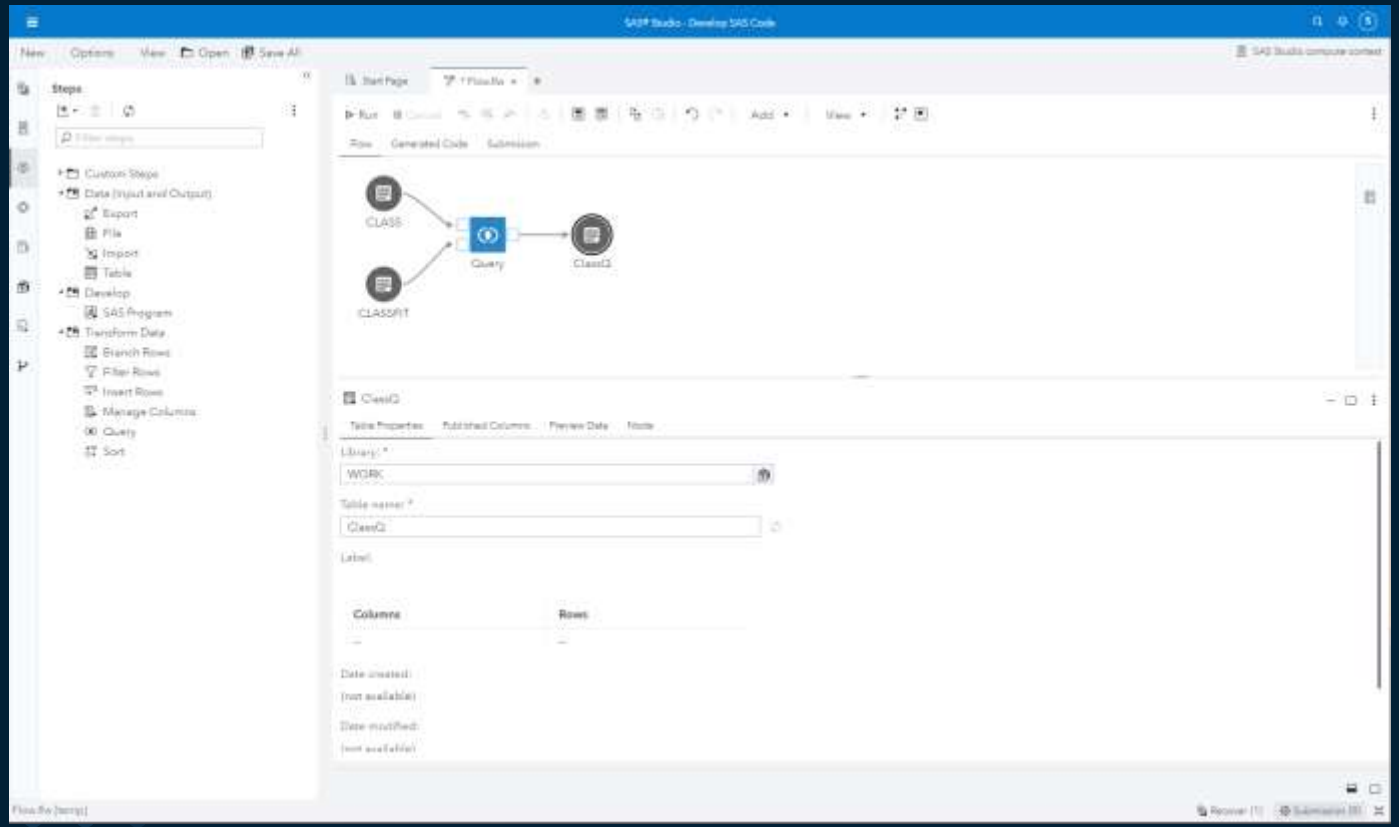
SAS Studio

Column



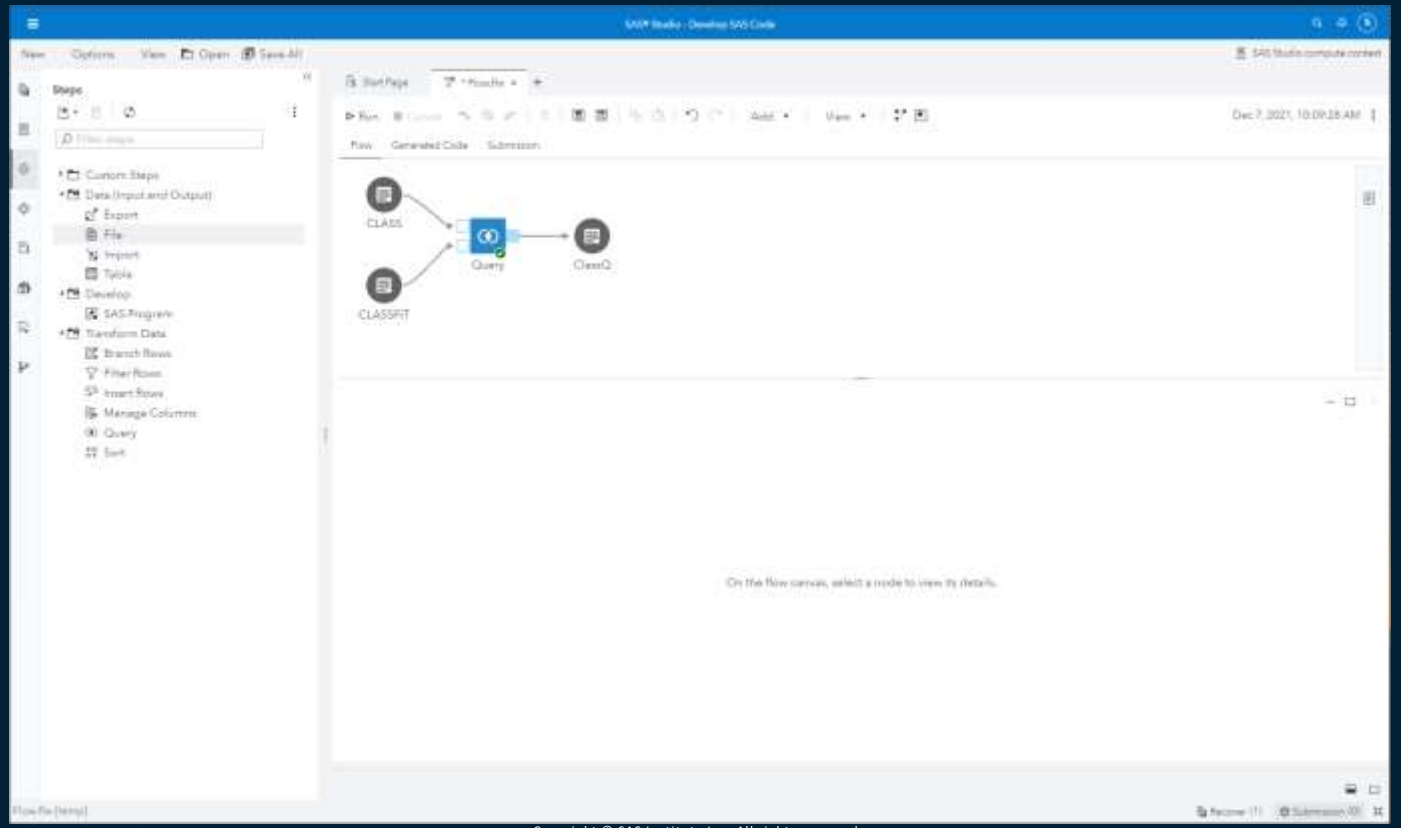
SAS Studio

Output Table



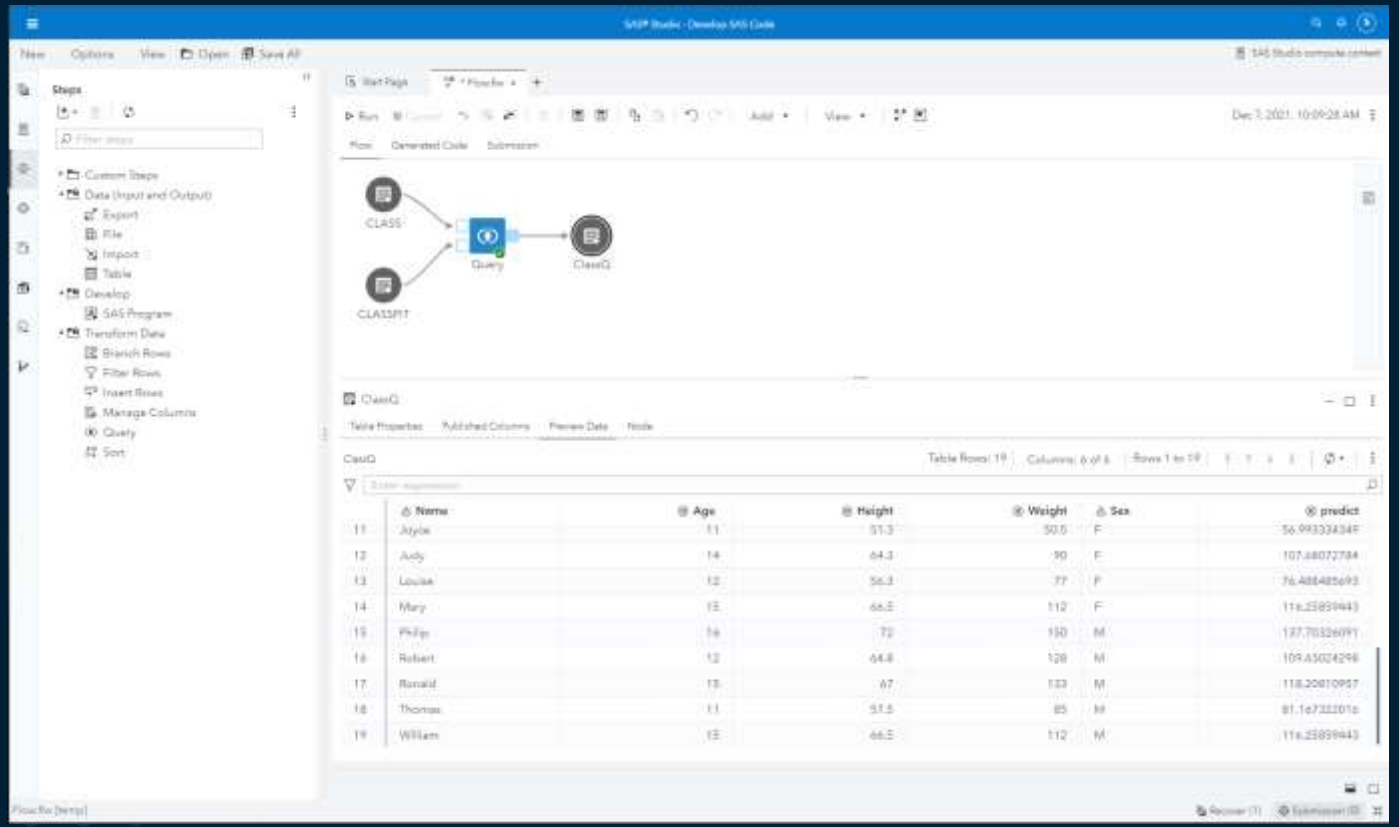
SAS Studio

Run the node/flow



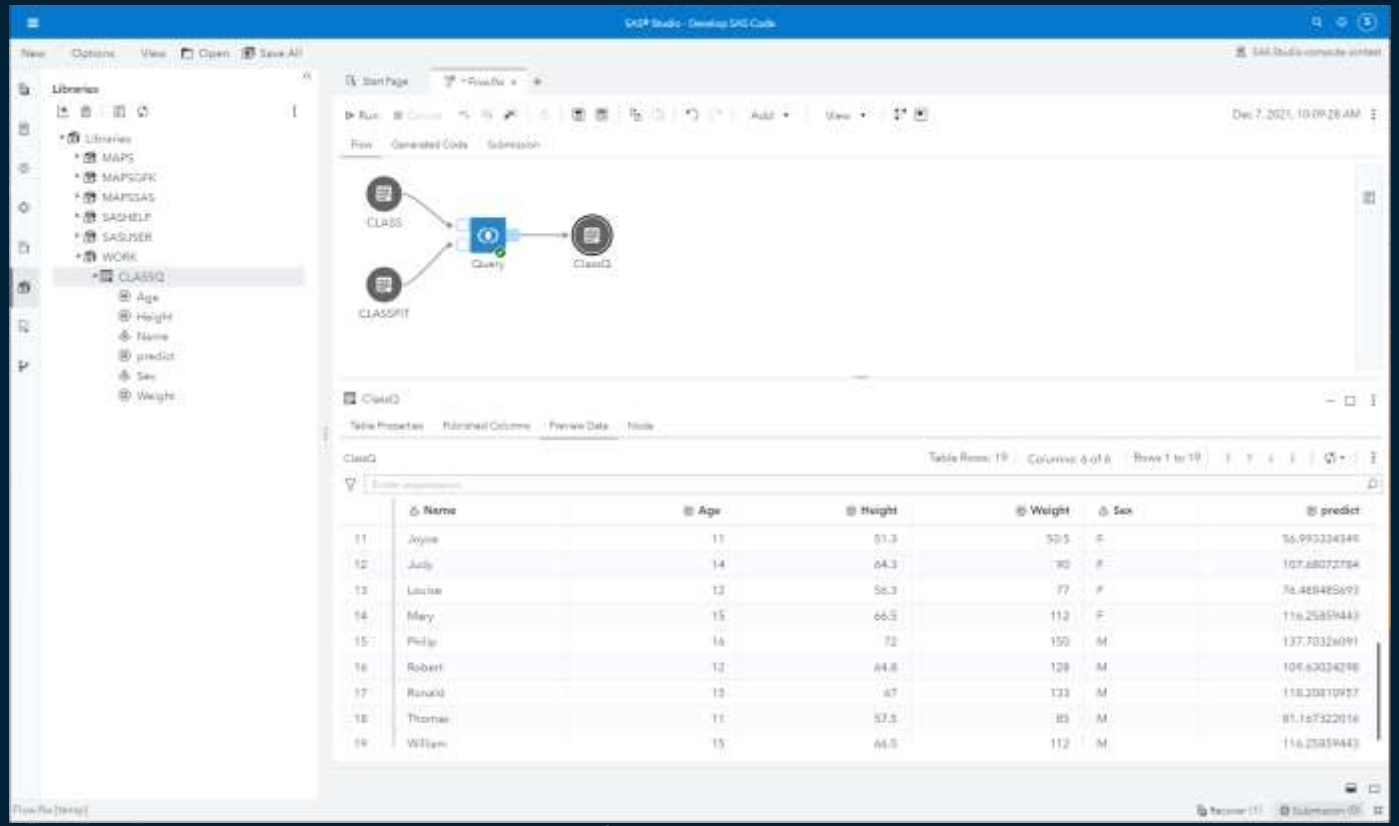
SAS Studio

Output



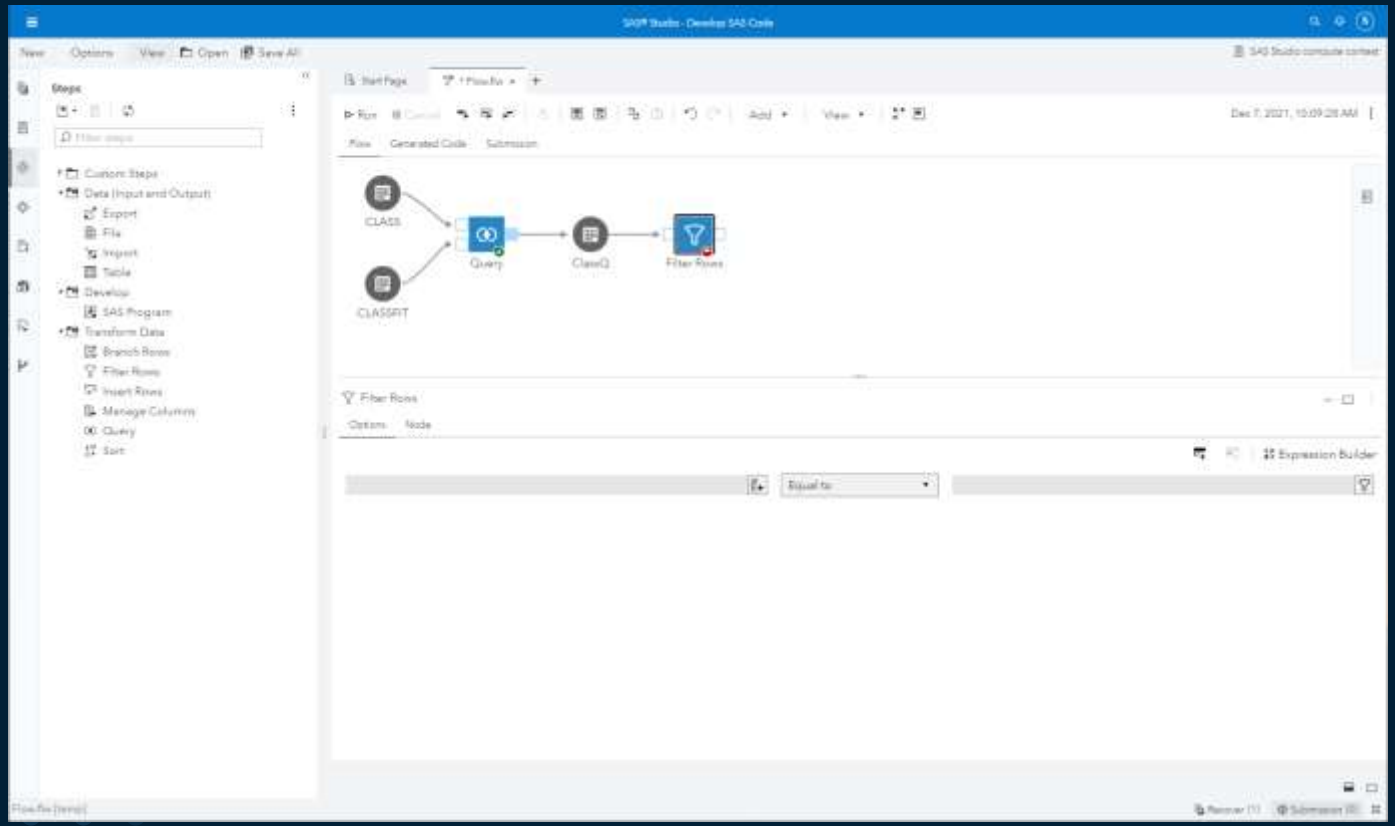
SAS Studio

Library/Table



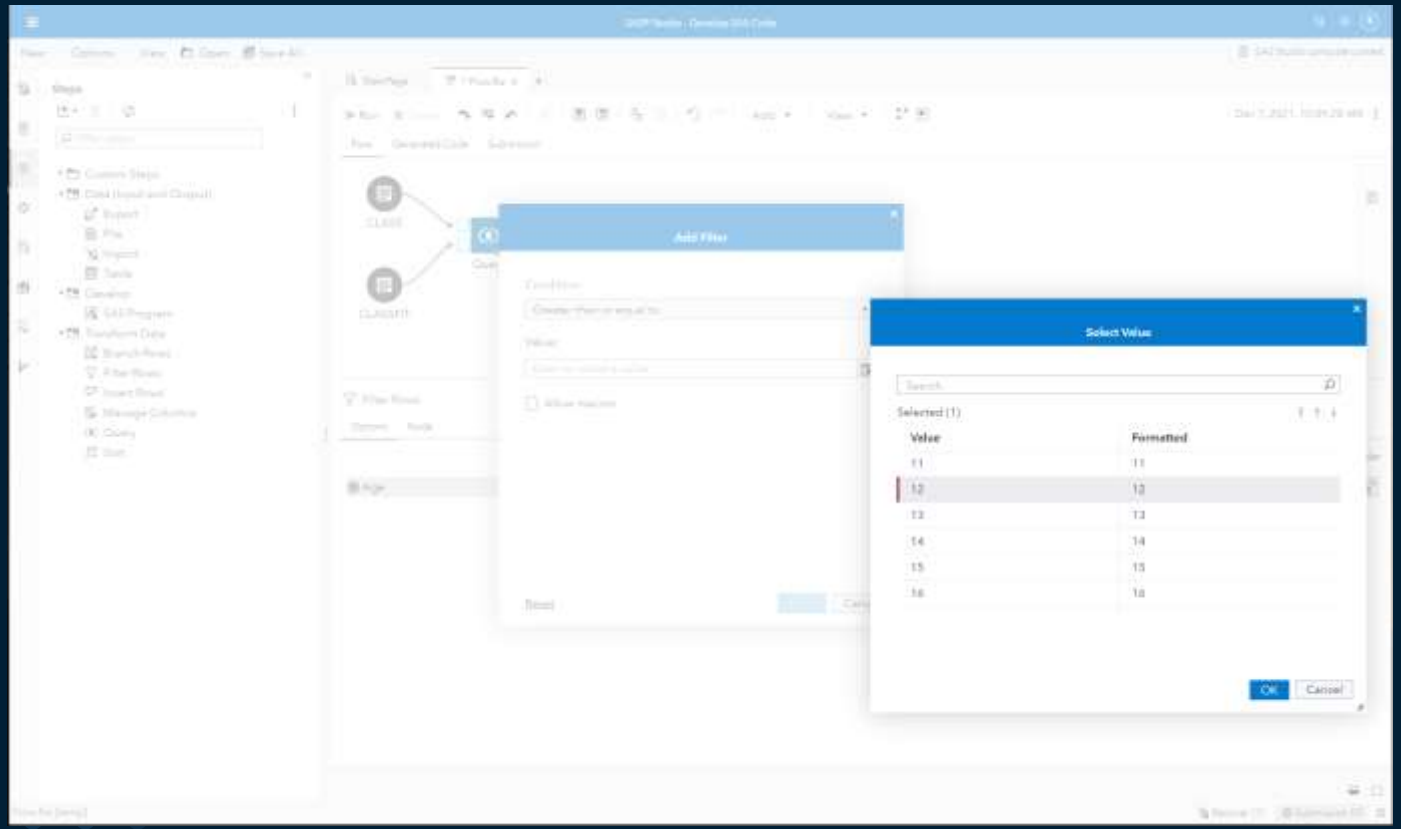
SAS Studio

Filter Rows



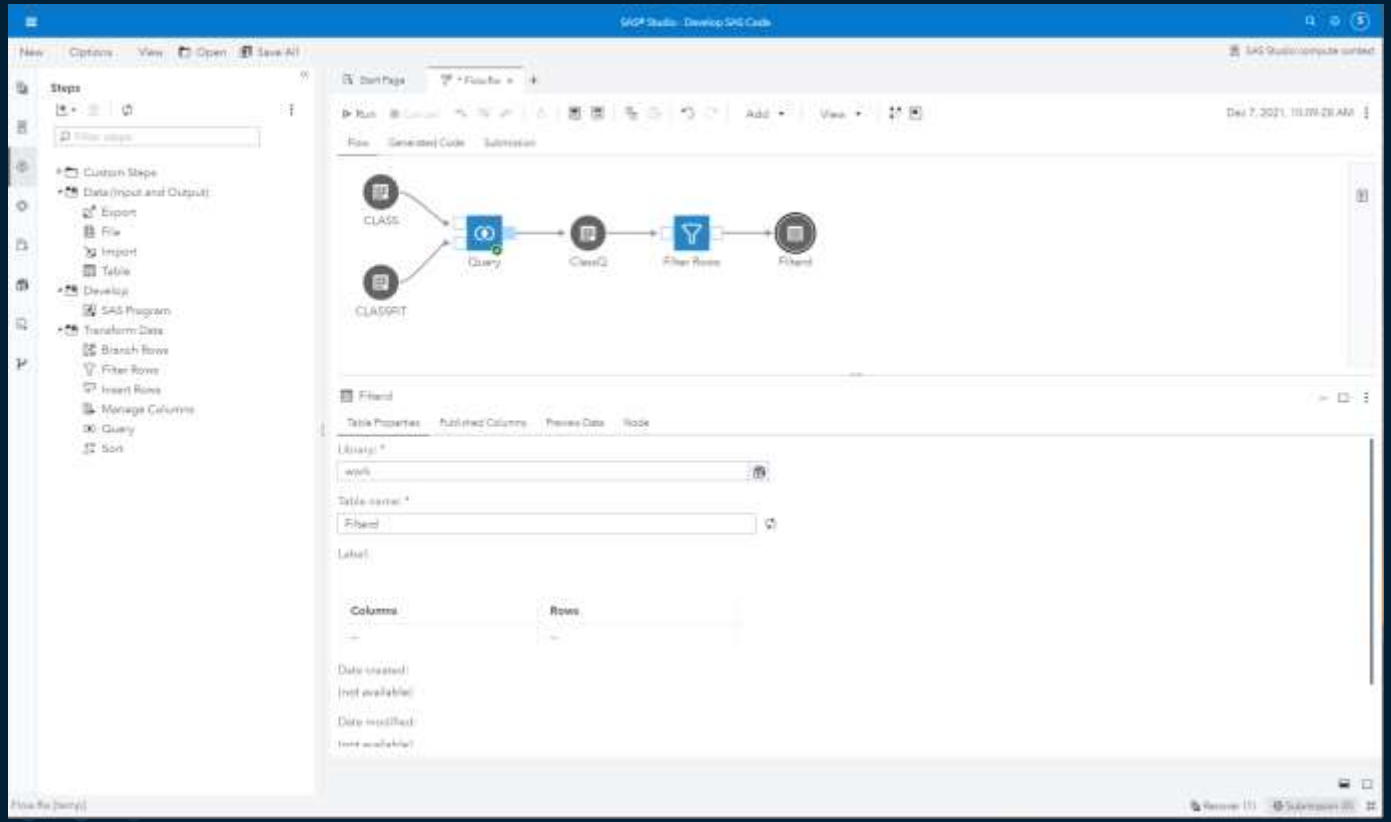
SAS Studio

Point-and-click Interface



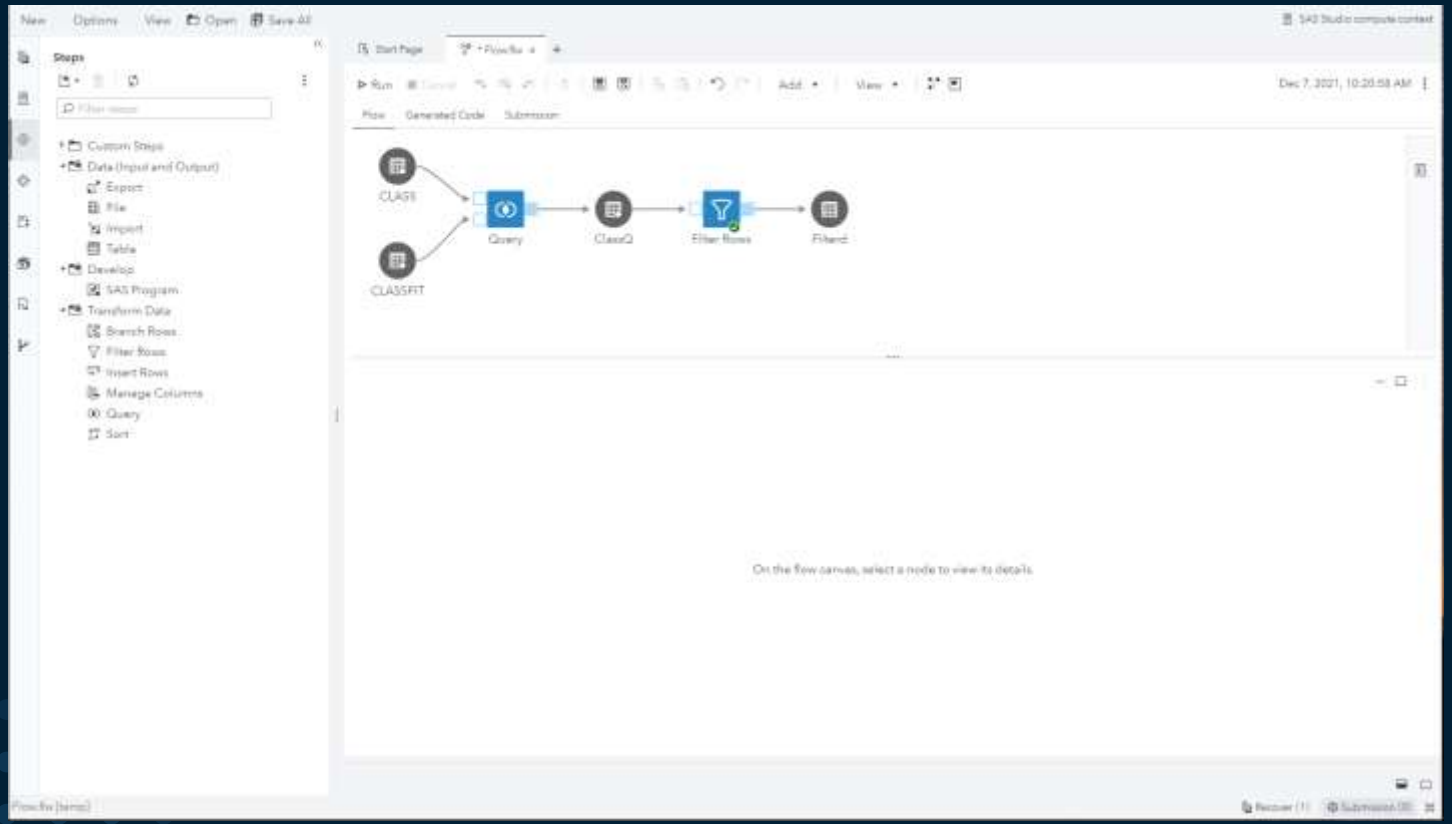
SAS Studio

Output



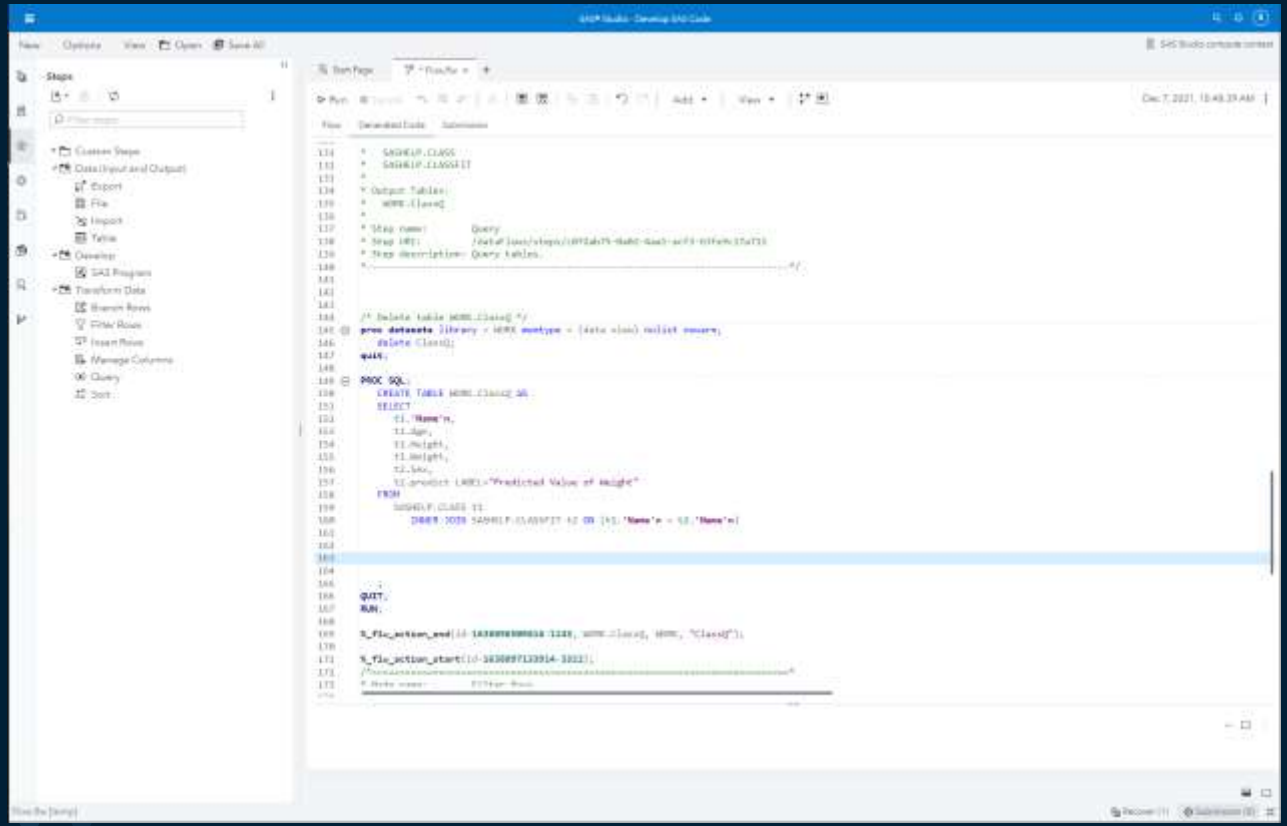
SAS Studio

Run Selectively



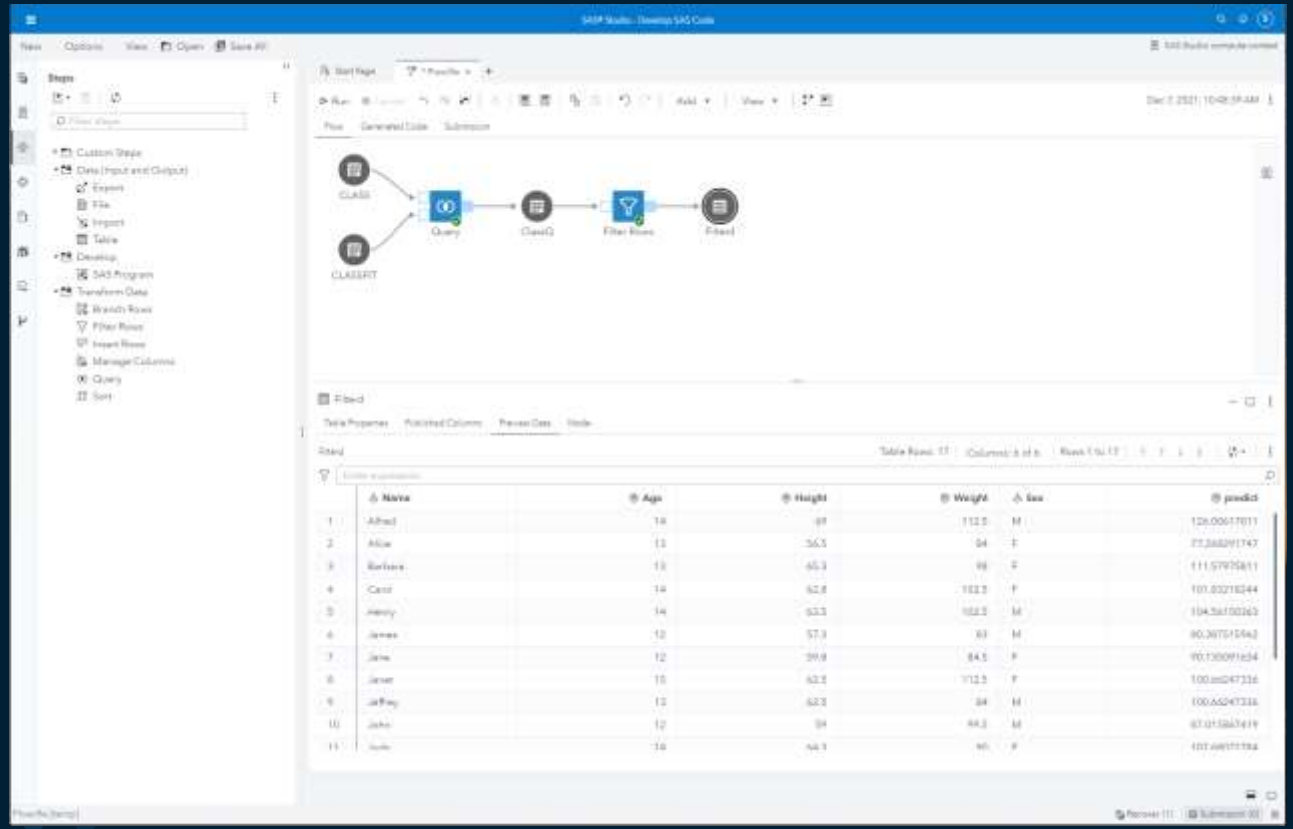
SAS Studio

Generated Code



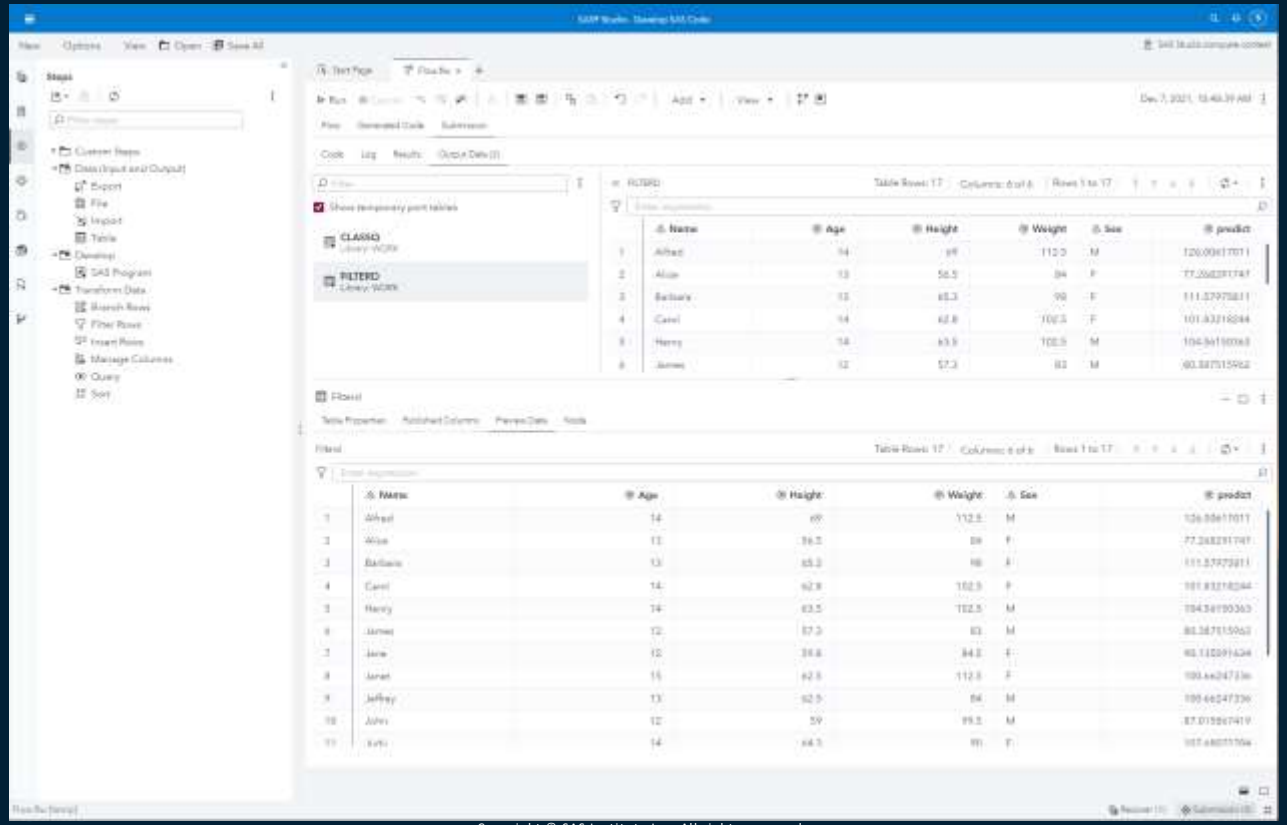
SAS Studio

Output



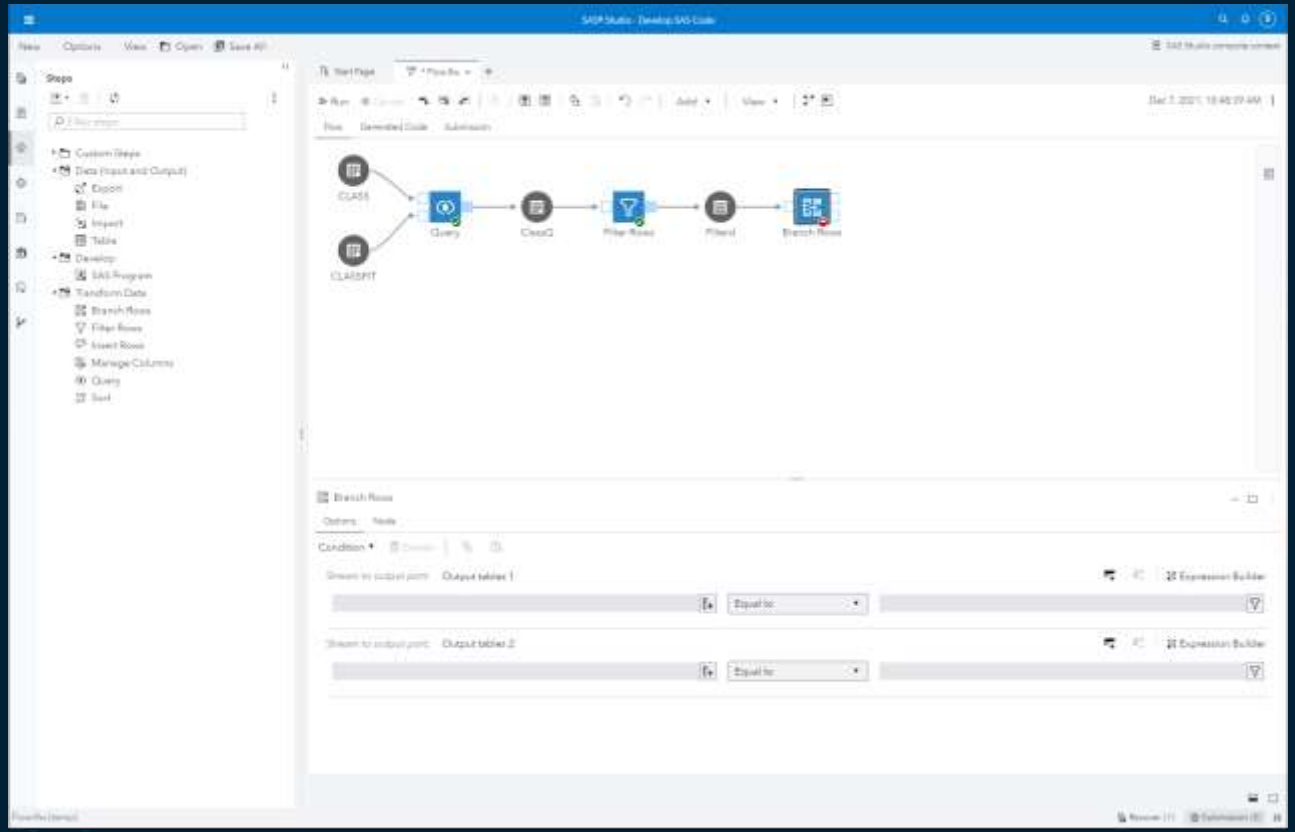
SAS Studio

Output table viewer



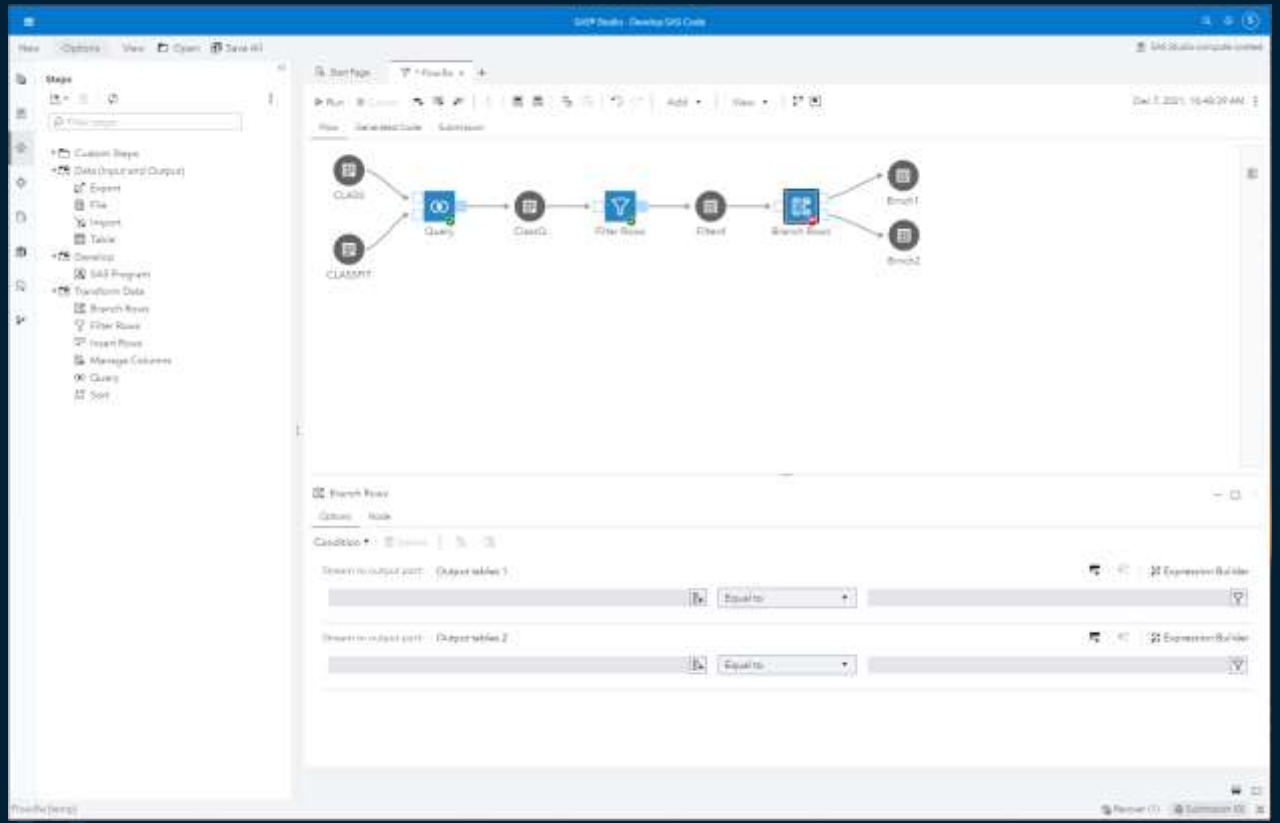
SAS Studio

Branch Rows



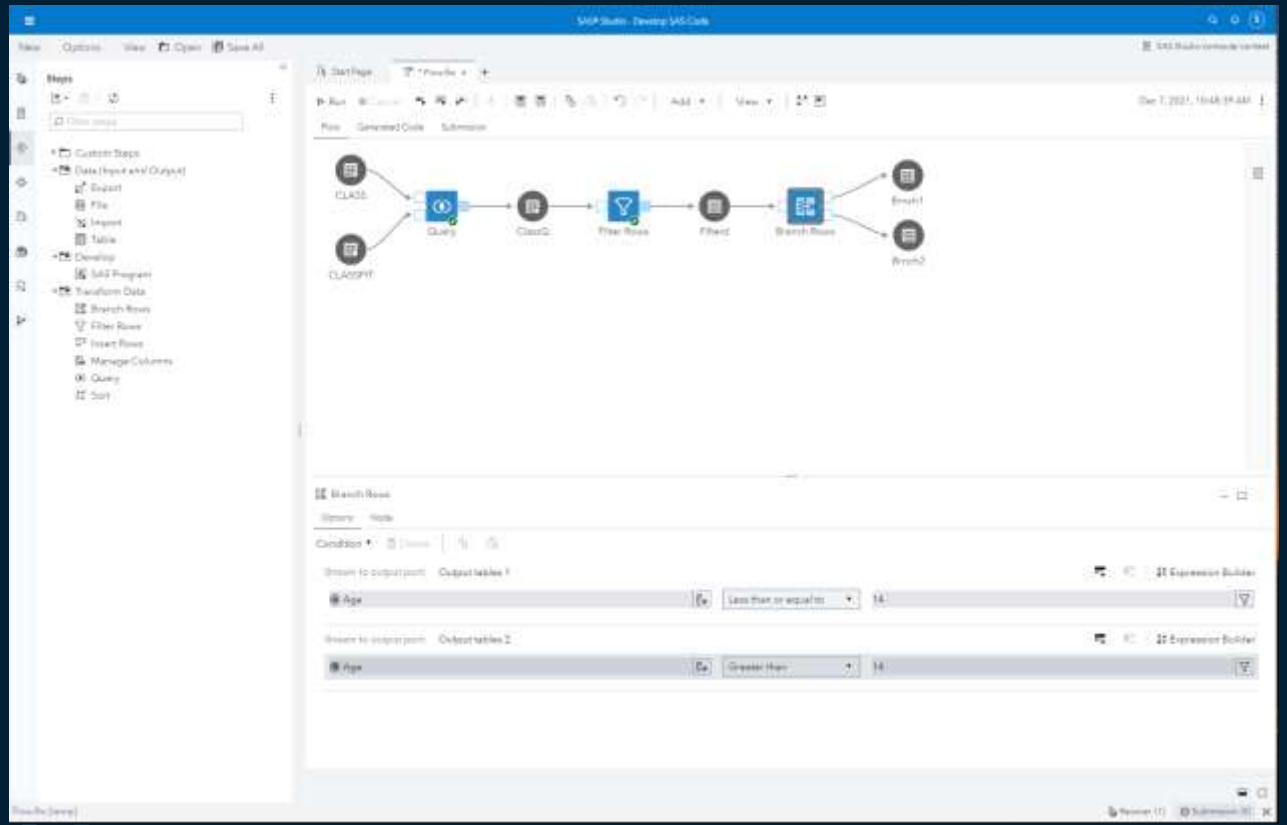
SAS Studio

Output



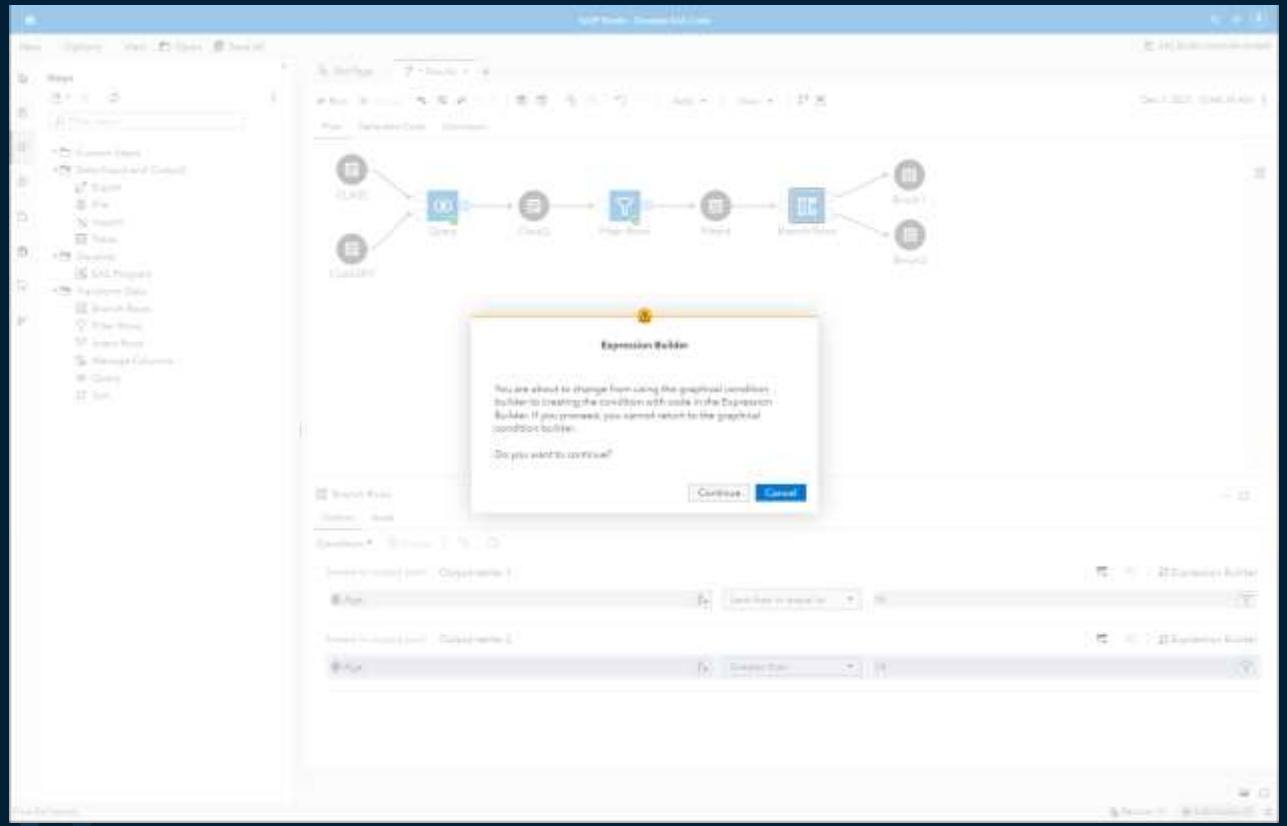
SAS Studio

Criteria



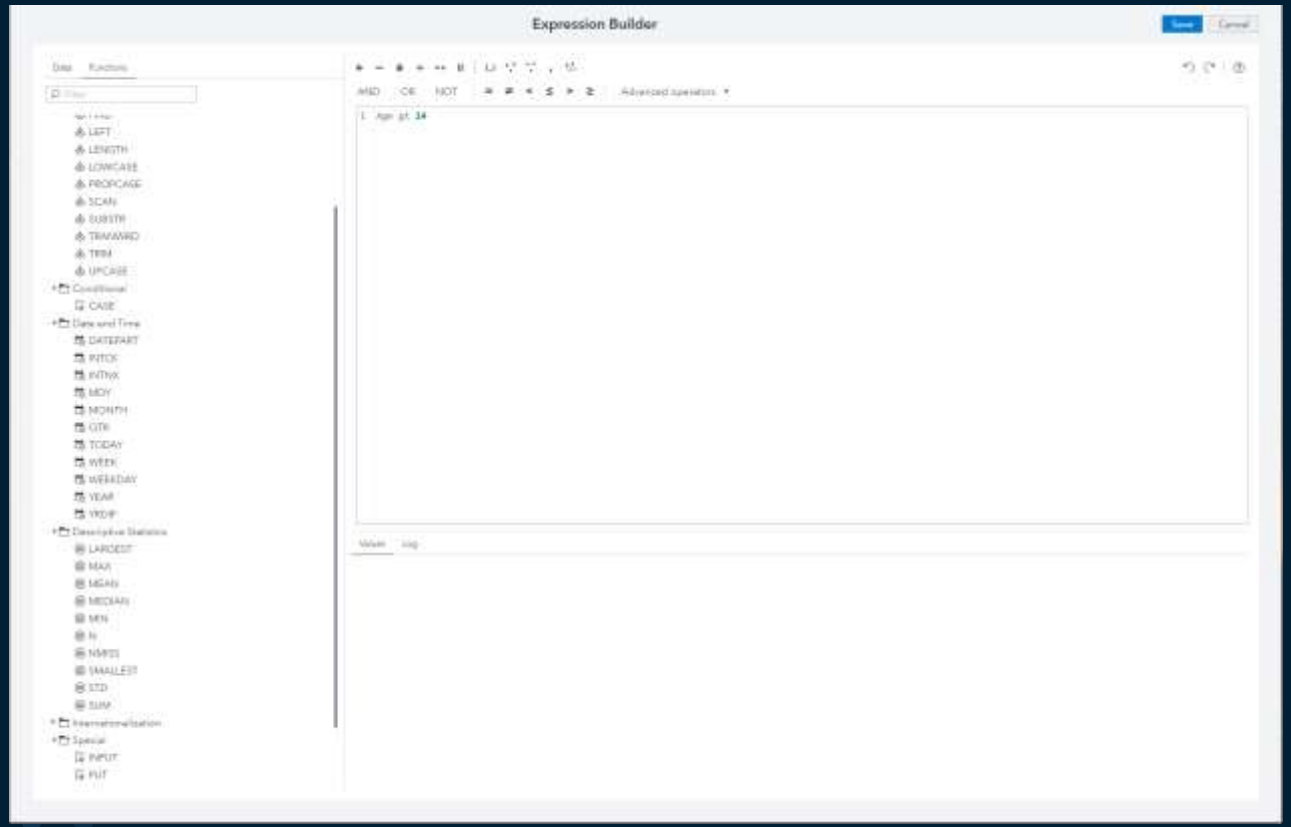
SAS Studio

Visual or via Expression Builder



SAS Studio

Expression Builder



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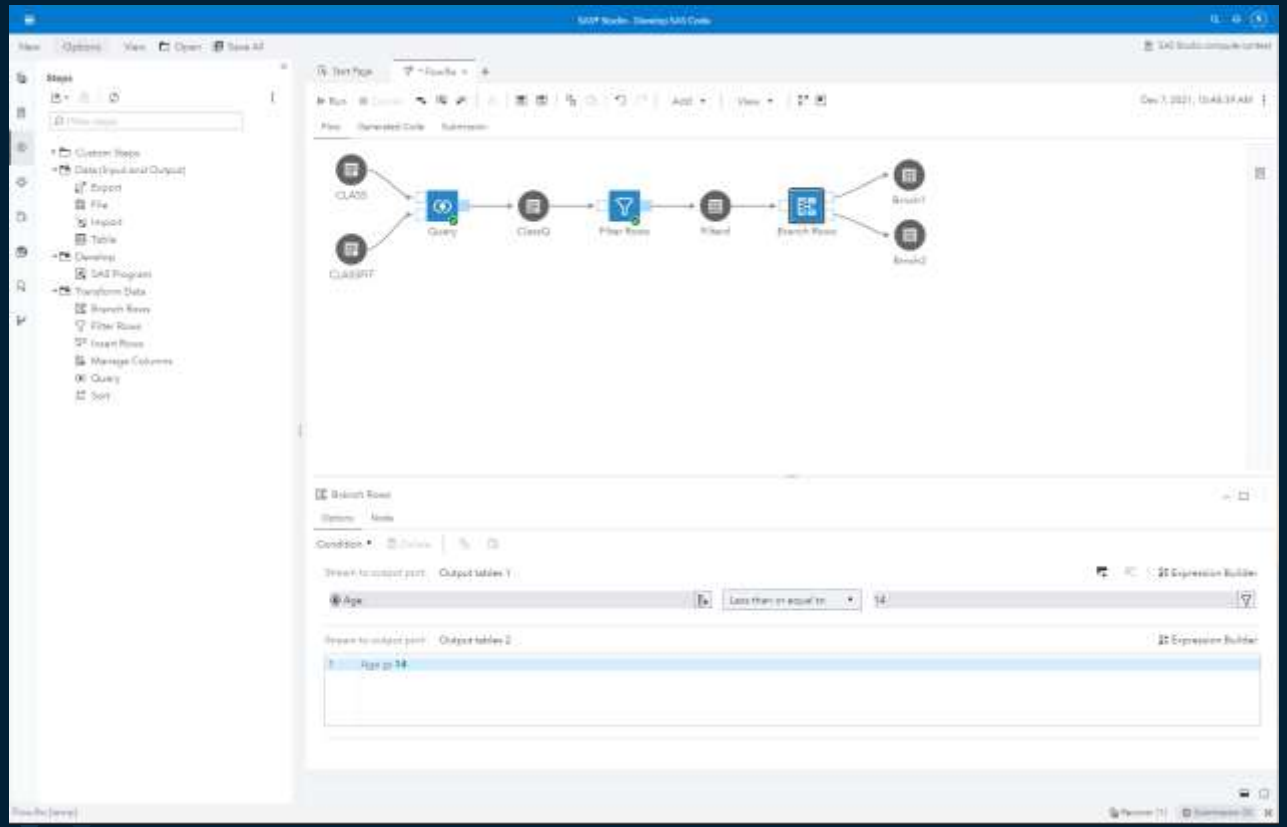
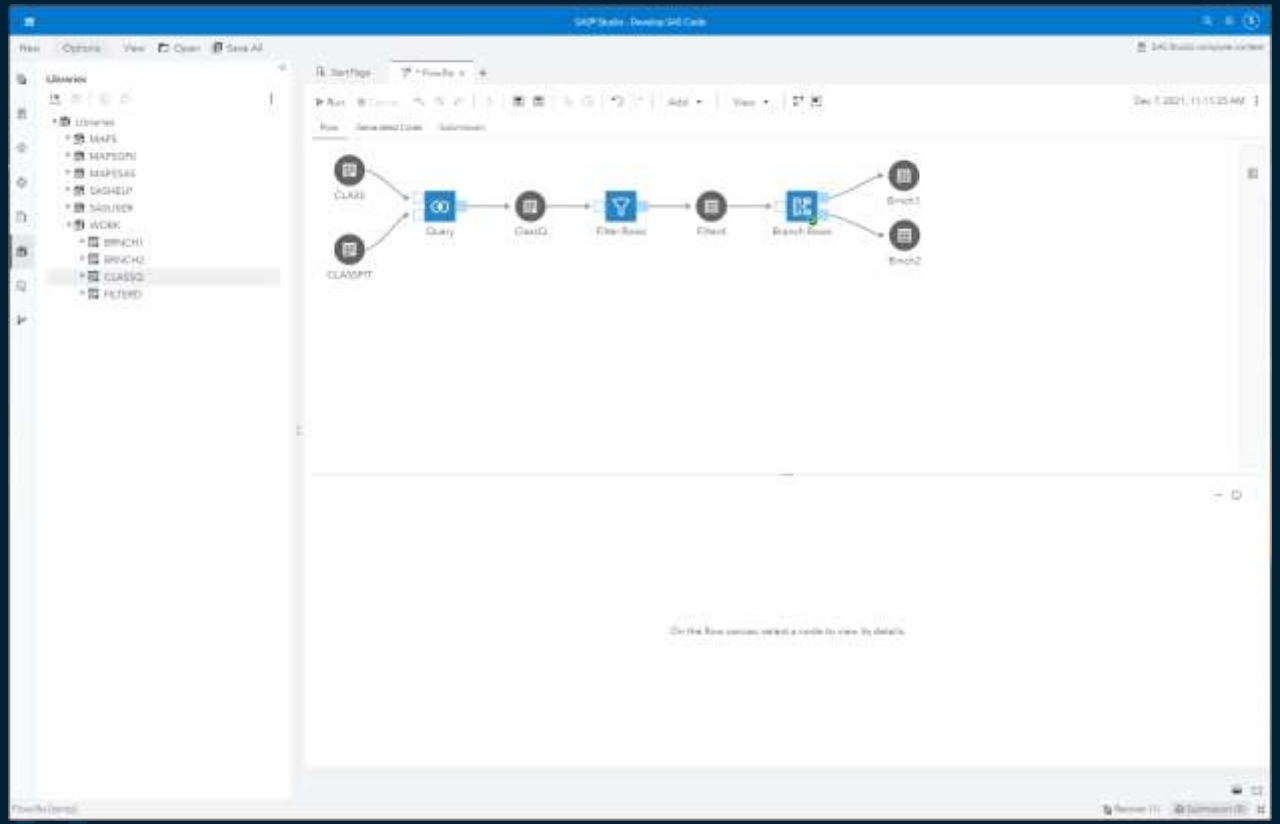


SAS Studio

Library listing



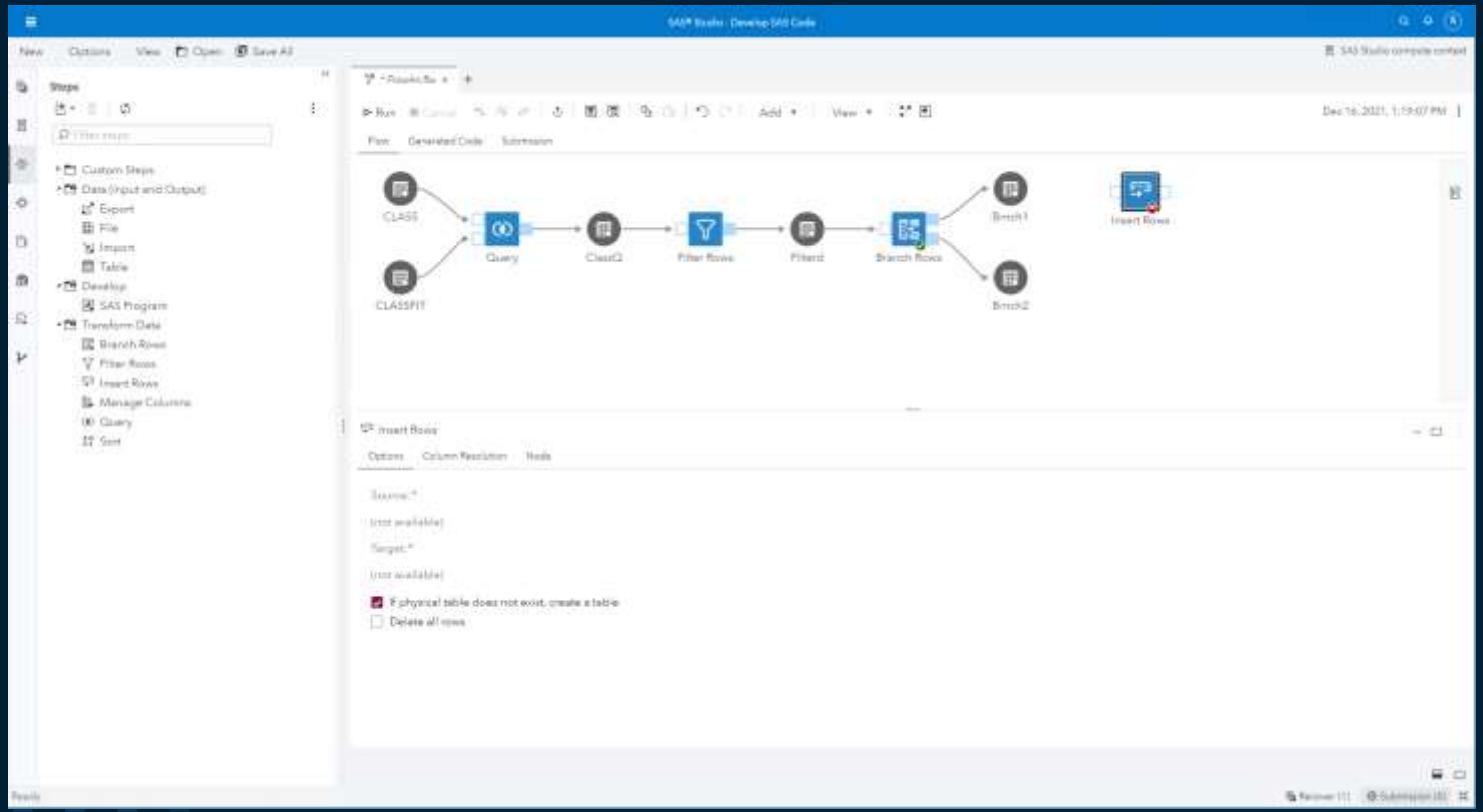
SAS Studio

Side note

- If you leave let your Studio session sit to long, it may reset
- If you forgot to save a flow (like it did!) be sure to check the Recover toggle on the lower right of the Studio interface – next to the Submission status
- In most cases your non-saved work will appear there.
- Select Recover, Apply and Close and your work should reappear!

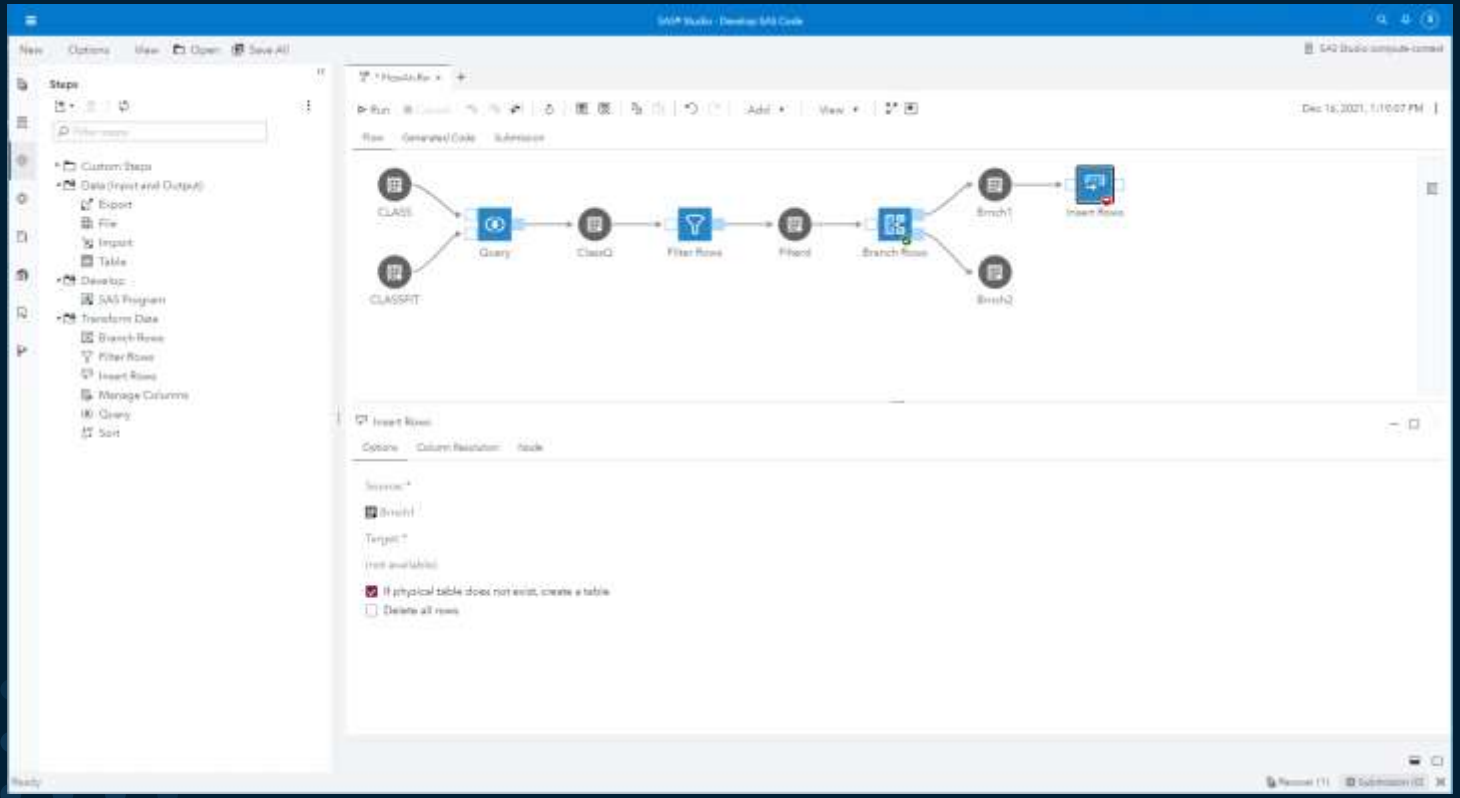
SAS Studio

Insert Rows



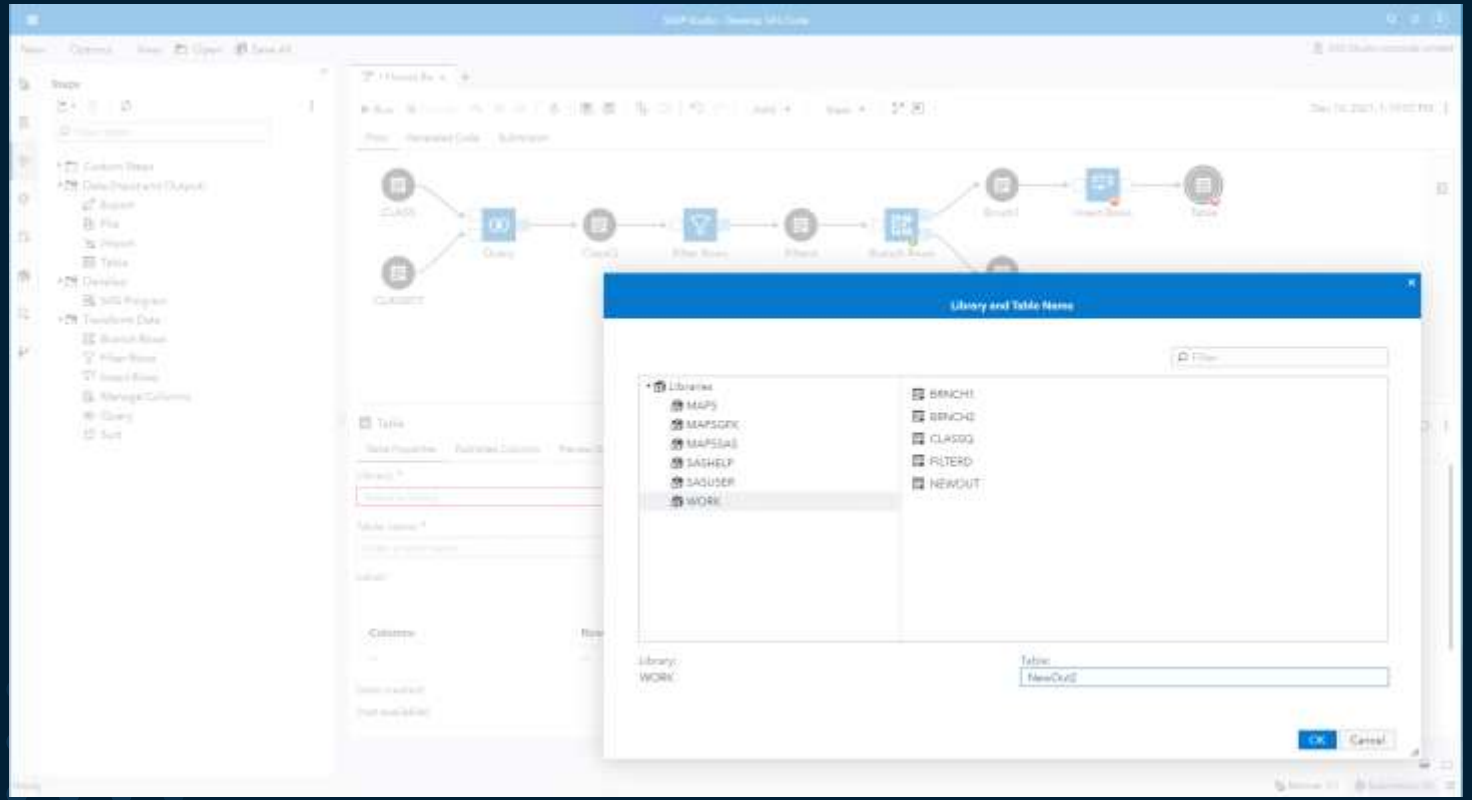
SAS Studio

Options



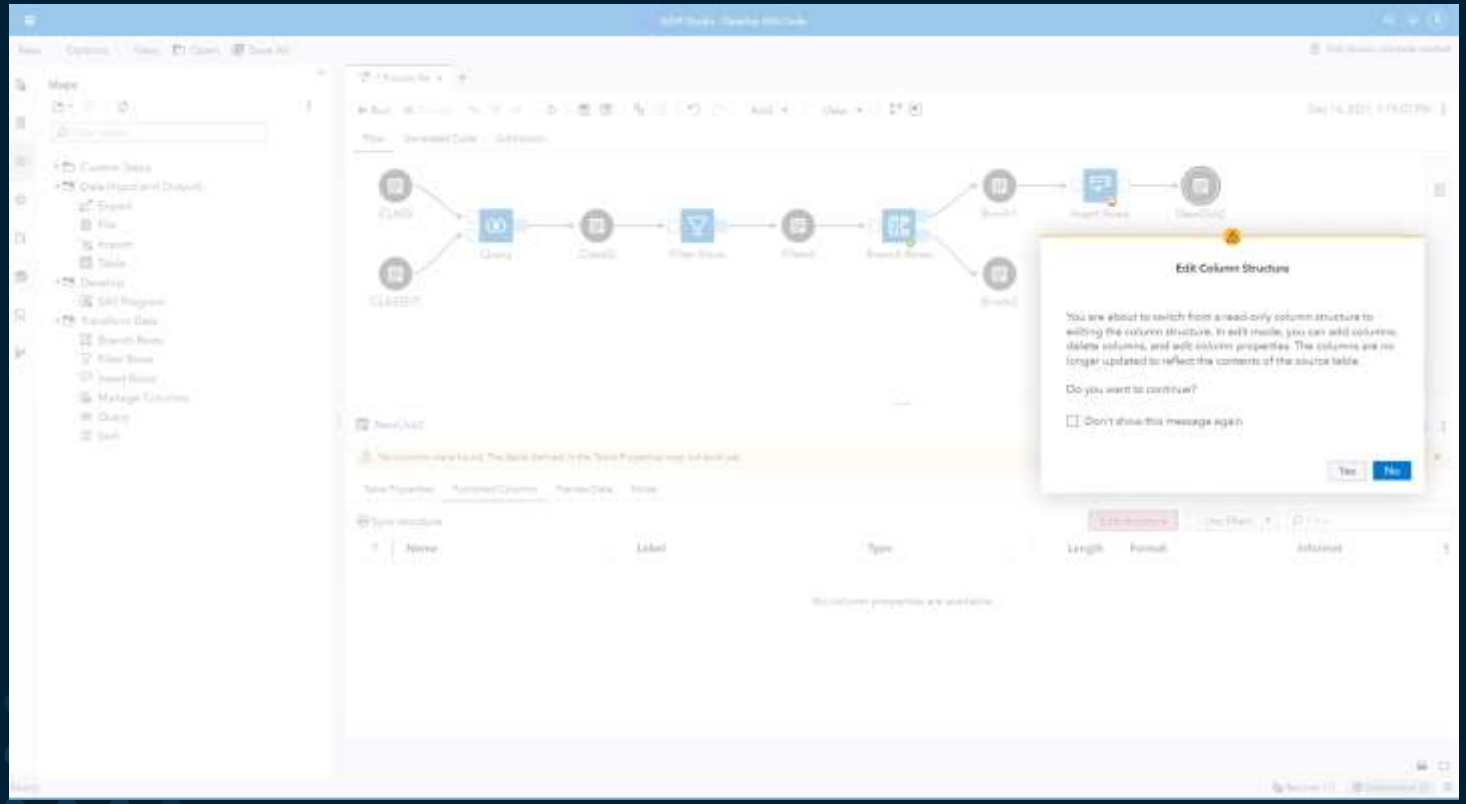
SAS Studio

Output



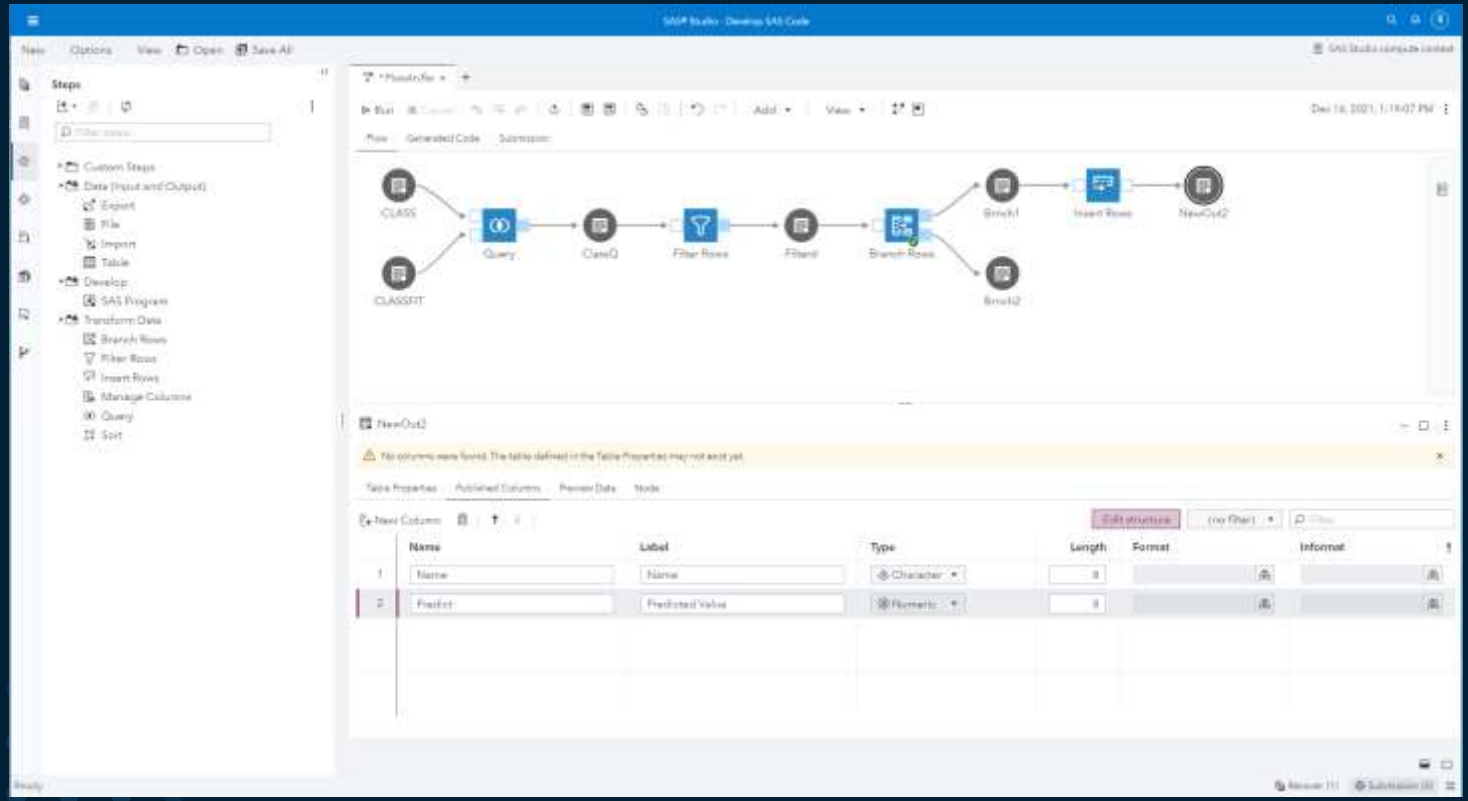
SAS Studio

Edit



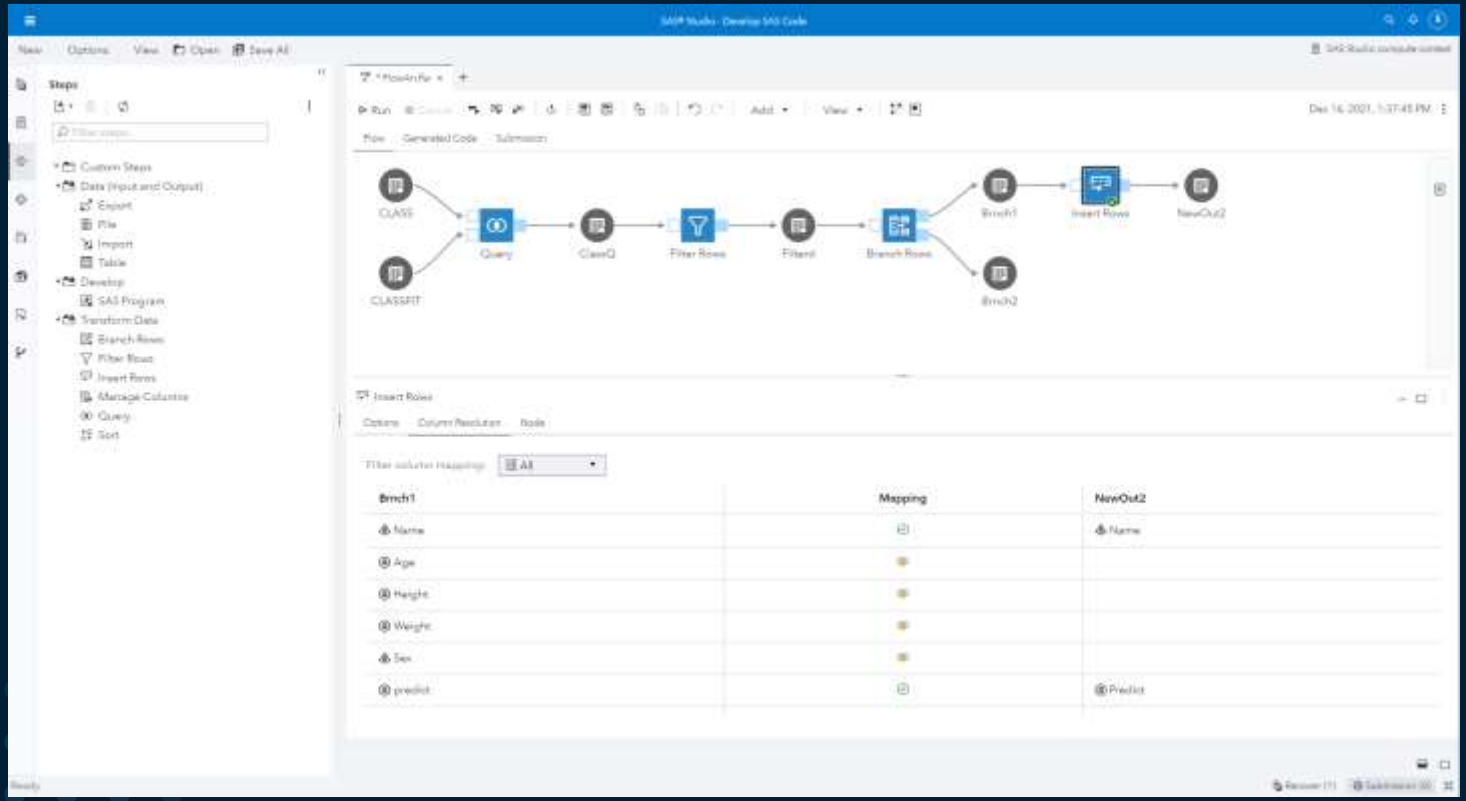
SAS Studio

Edited



SAS Studio

Resolution



SAS Studio

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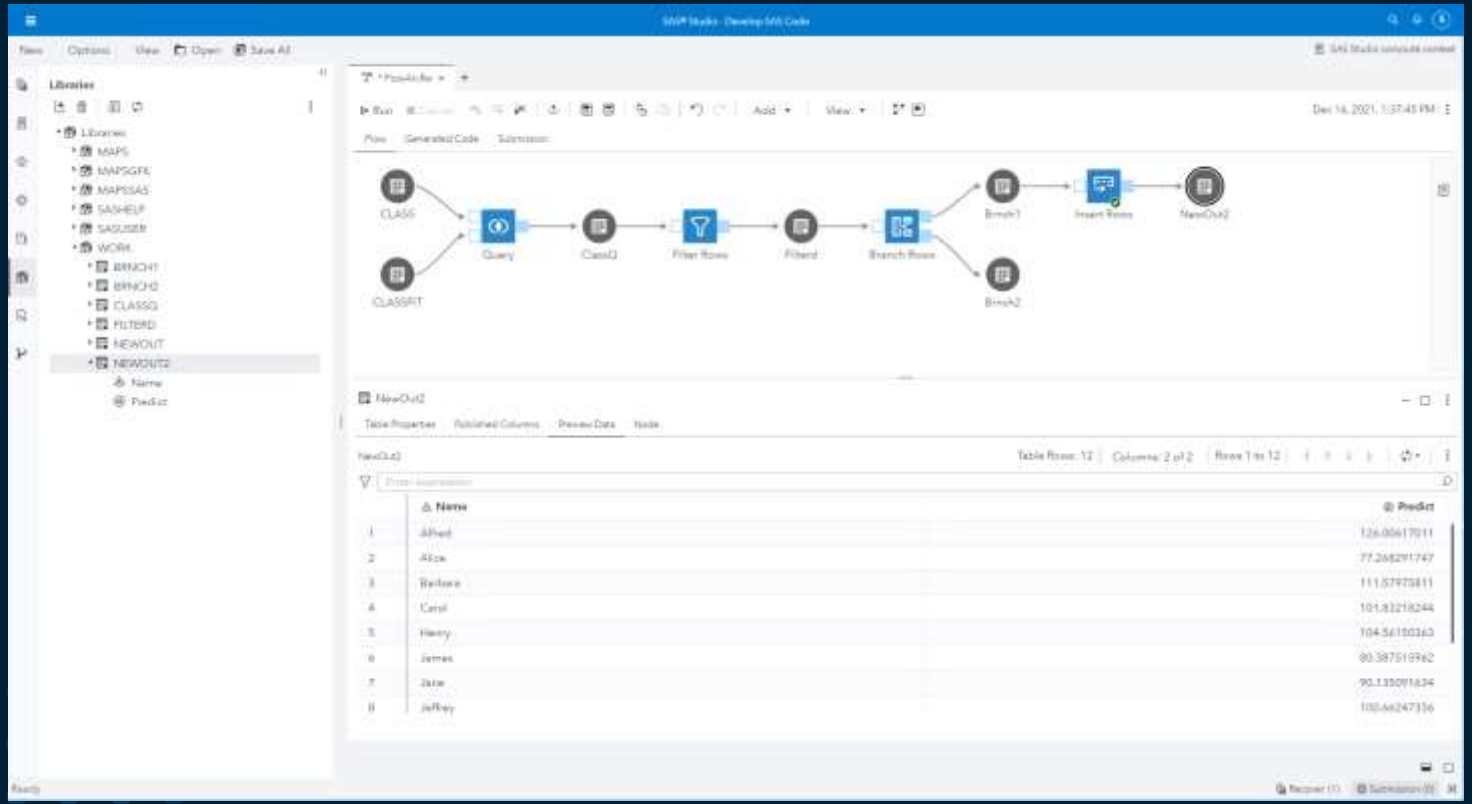
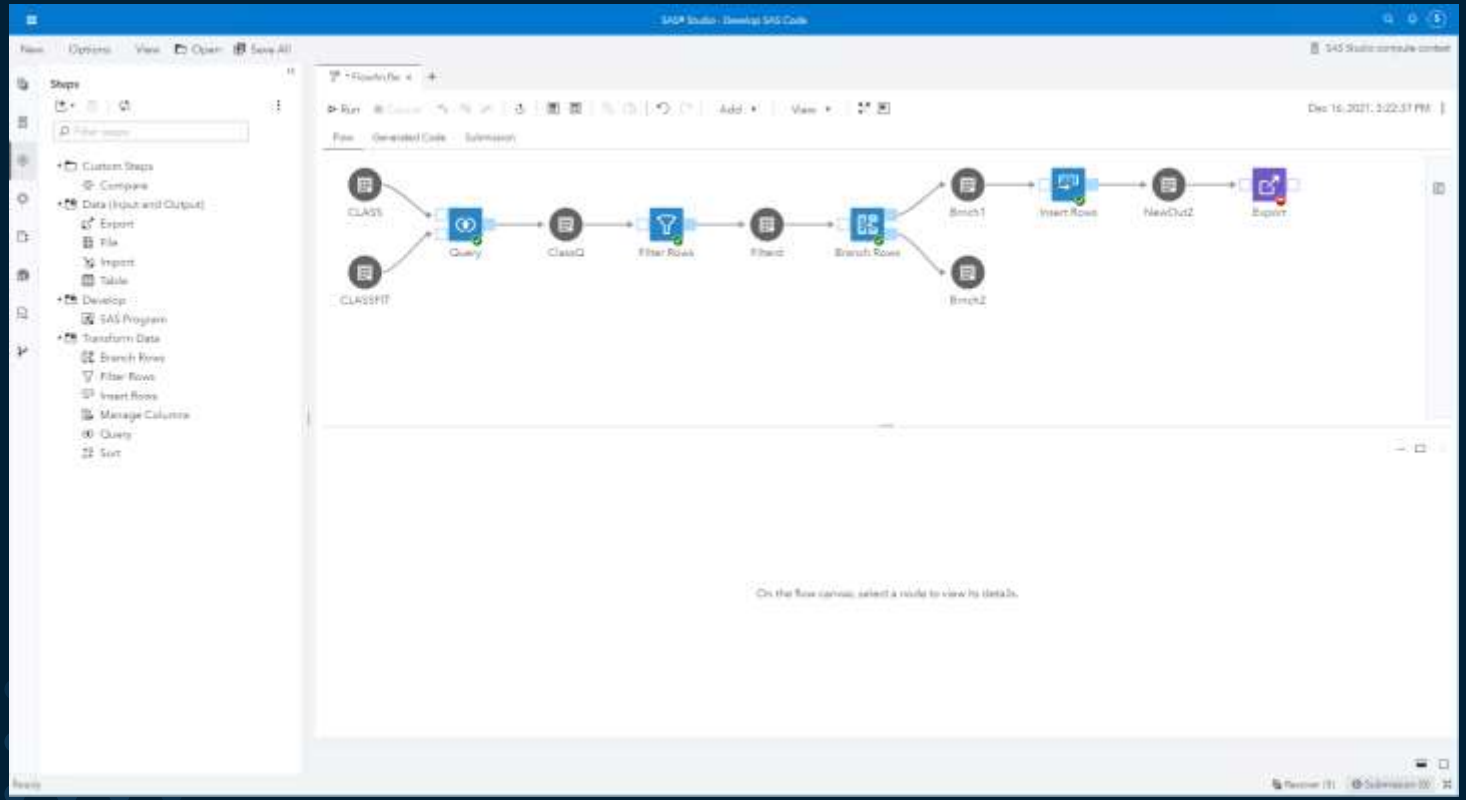


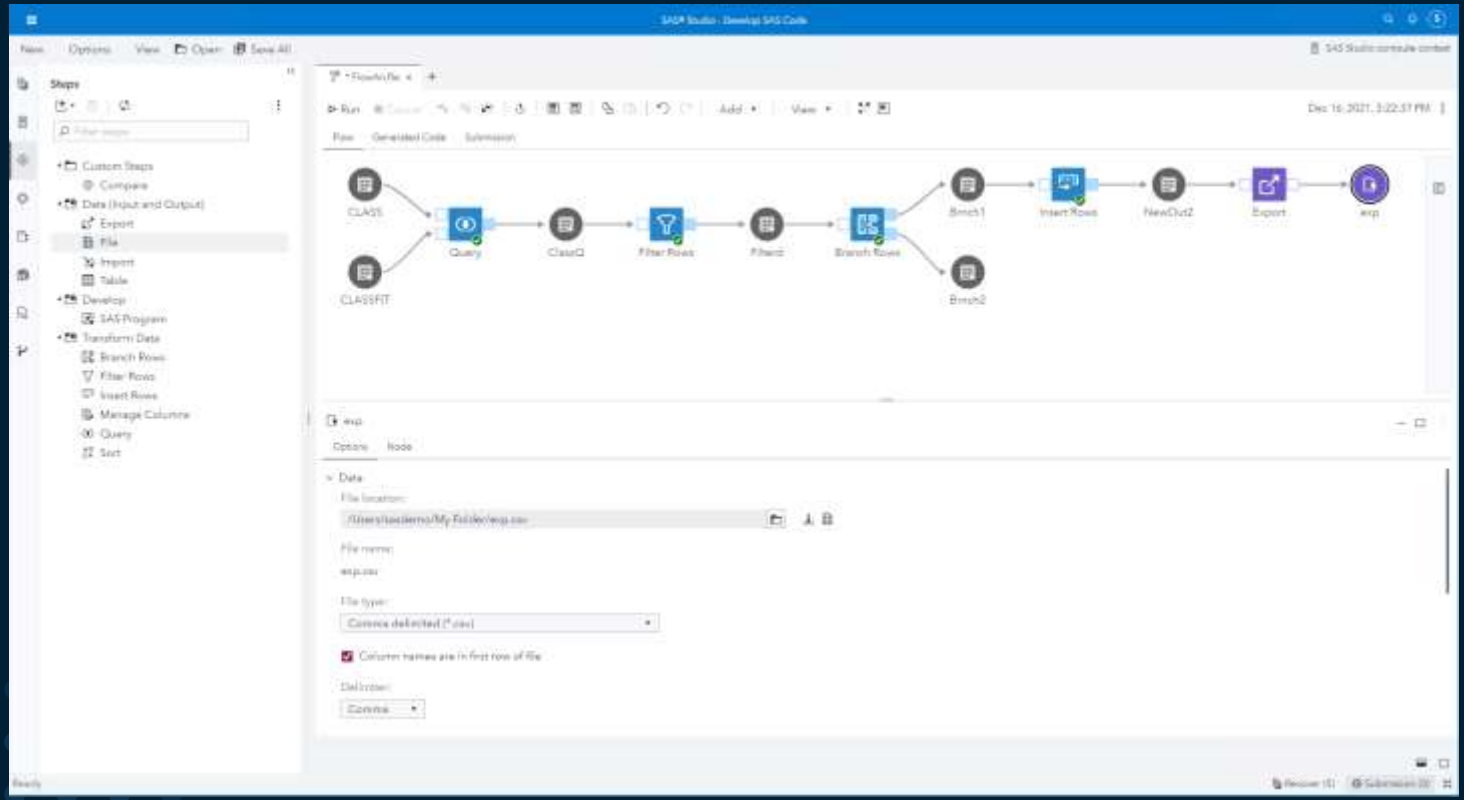
SAS Studio

Export



SAS Studio

Output



SAS Studio

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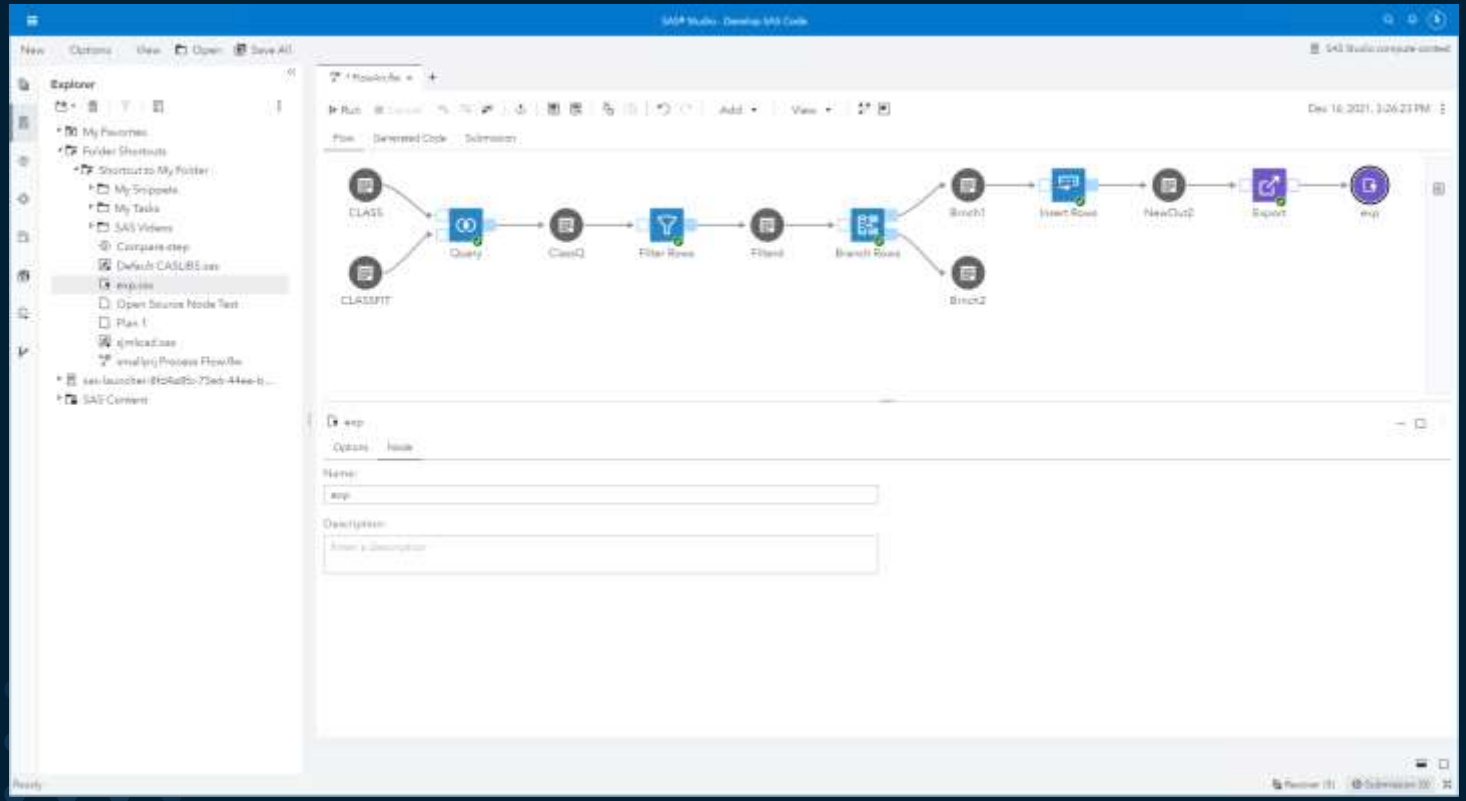
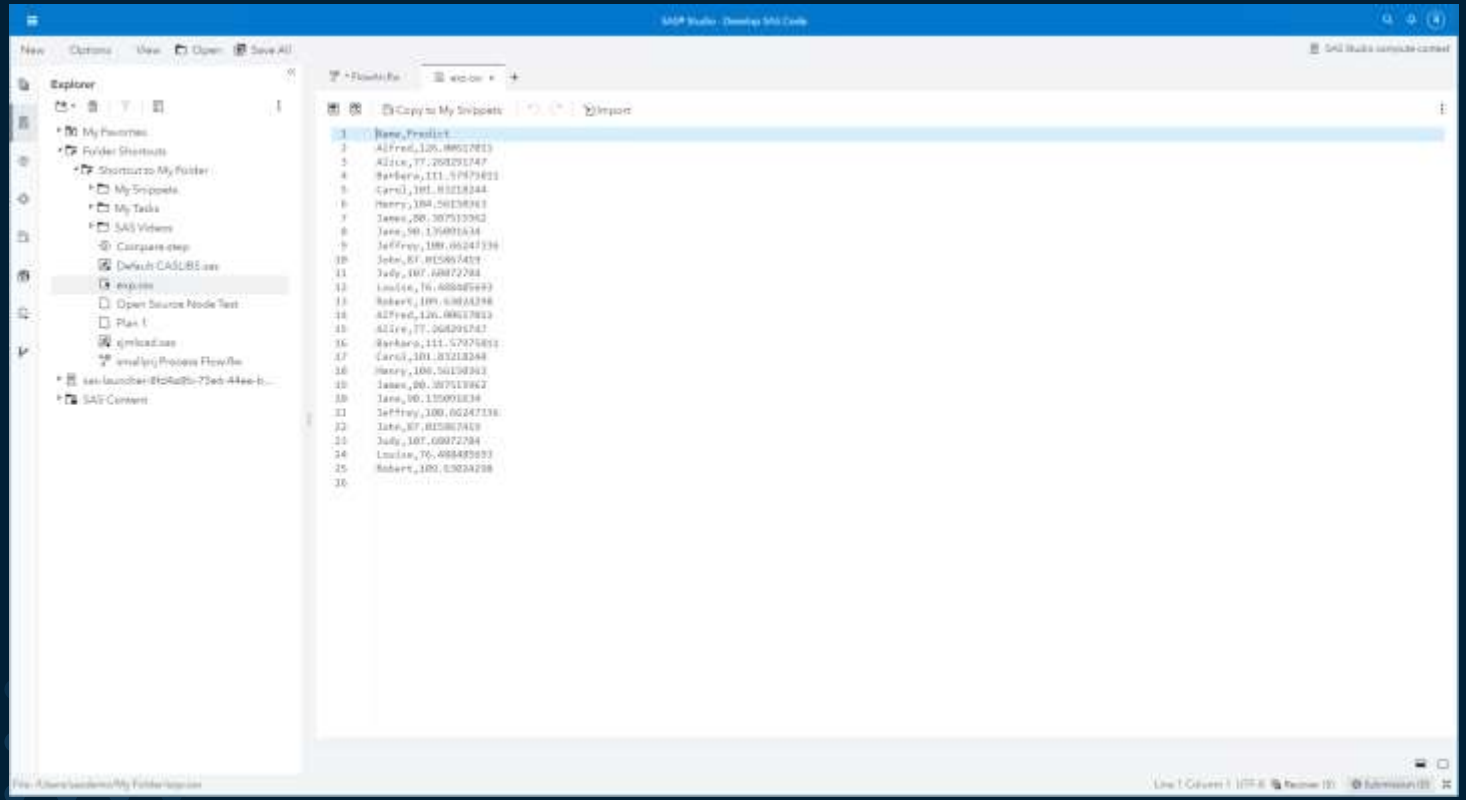


SAS Studio

CSV



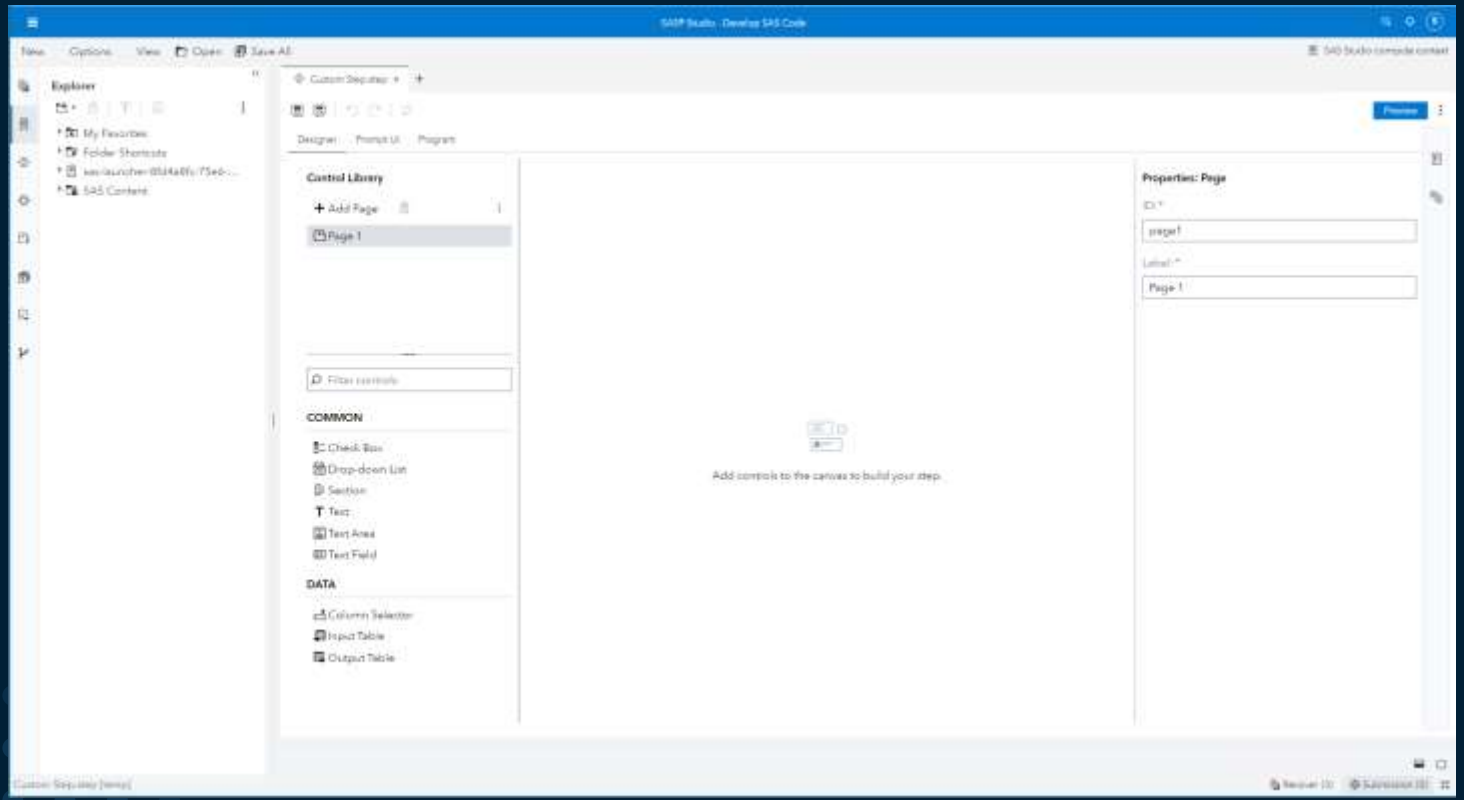
SAS Studio

Custom Steps

- Part of Studio Analyst
- Can create your own Steps via Drag-and-drop interface
- Three-part process
  - Designer
  - Prompt UI
  - Program
- More Custom Steps available on GitHub

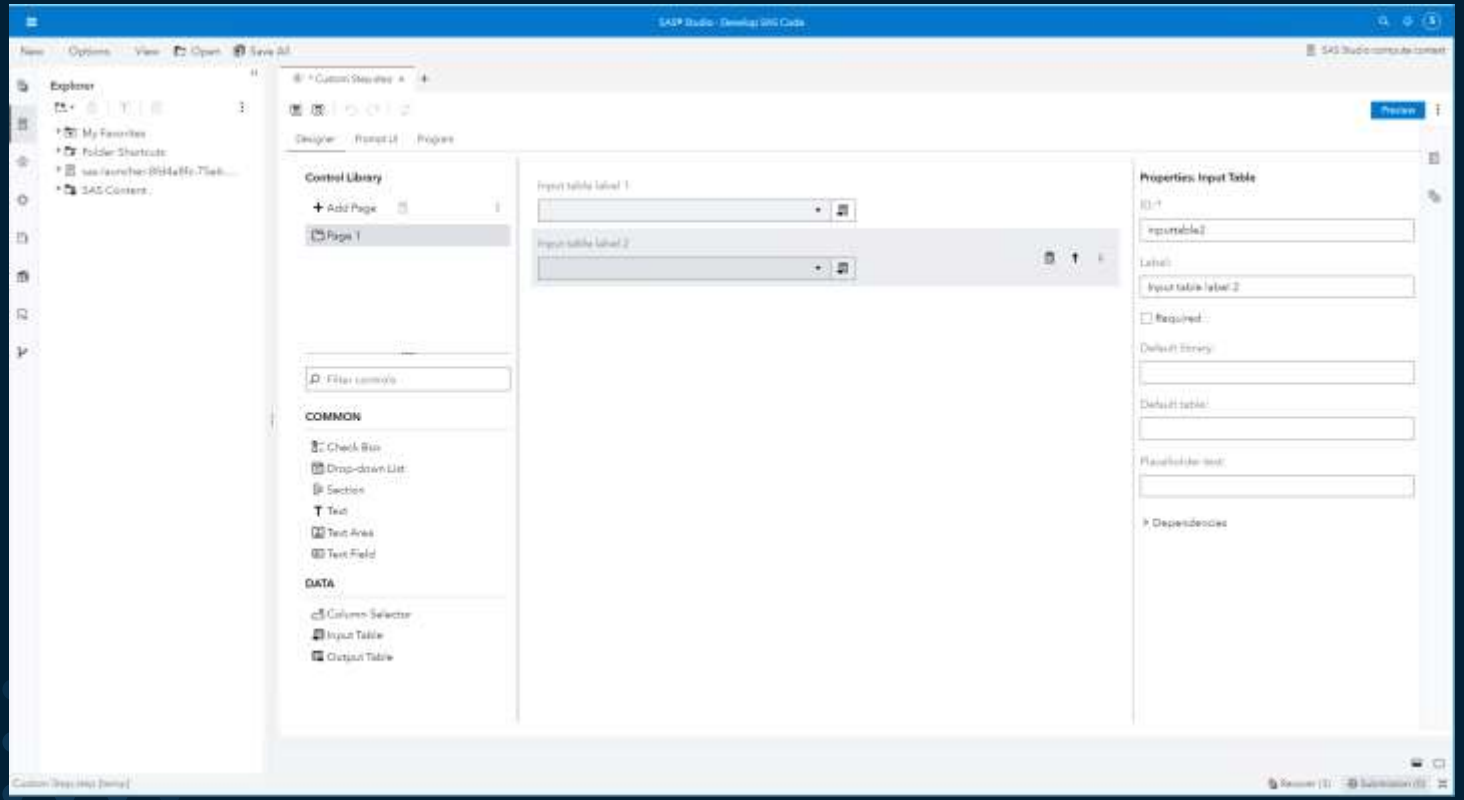
SAS Studio

Interface



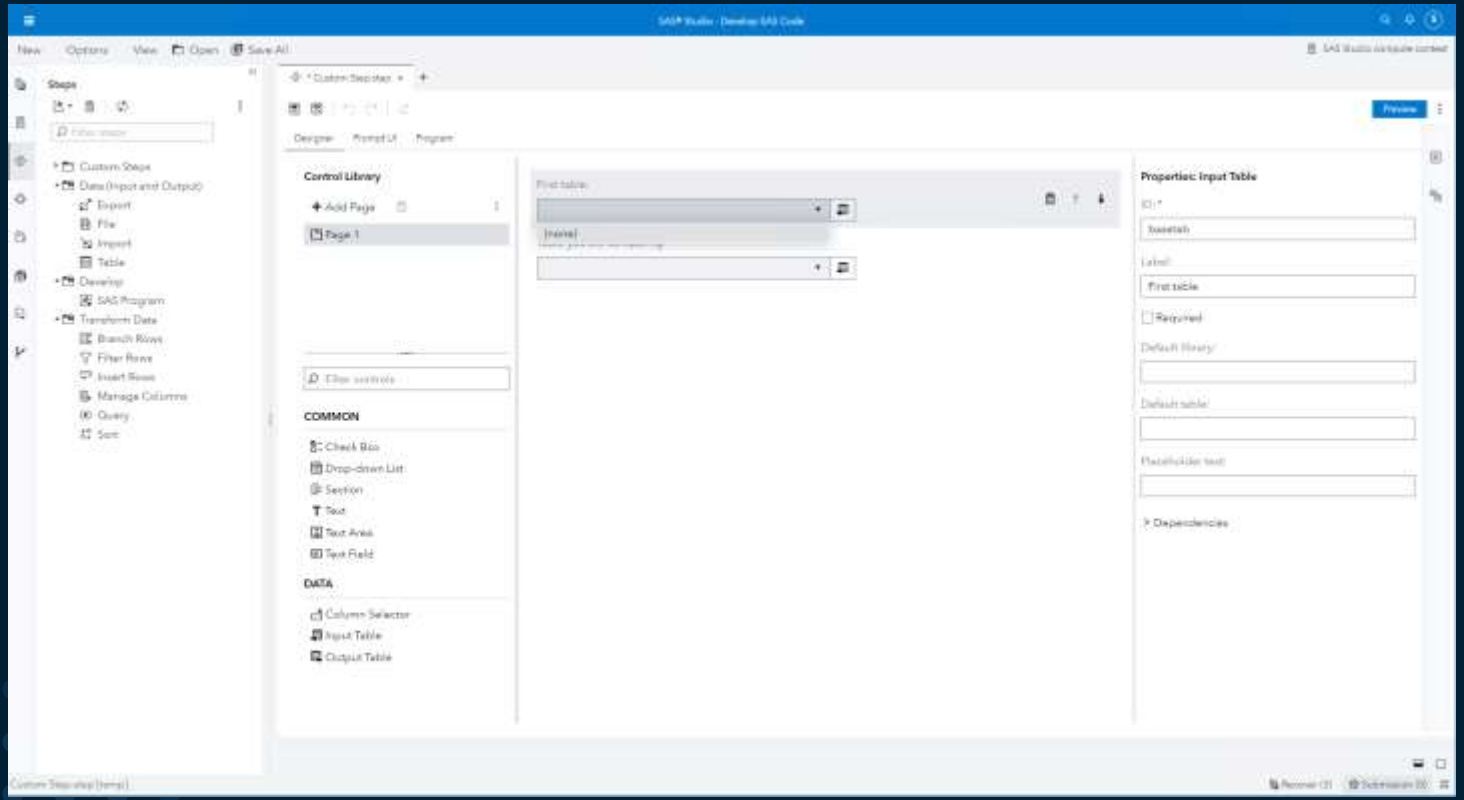
SAS Studio

Compare



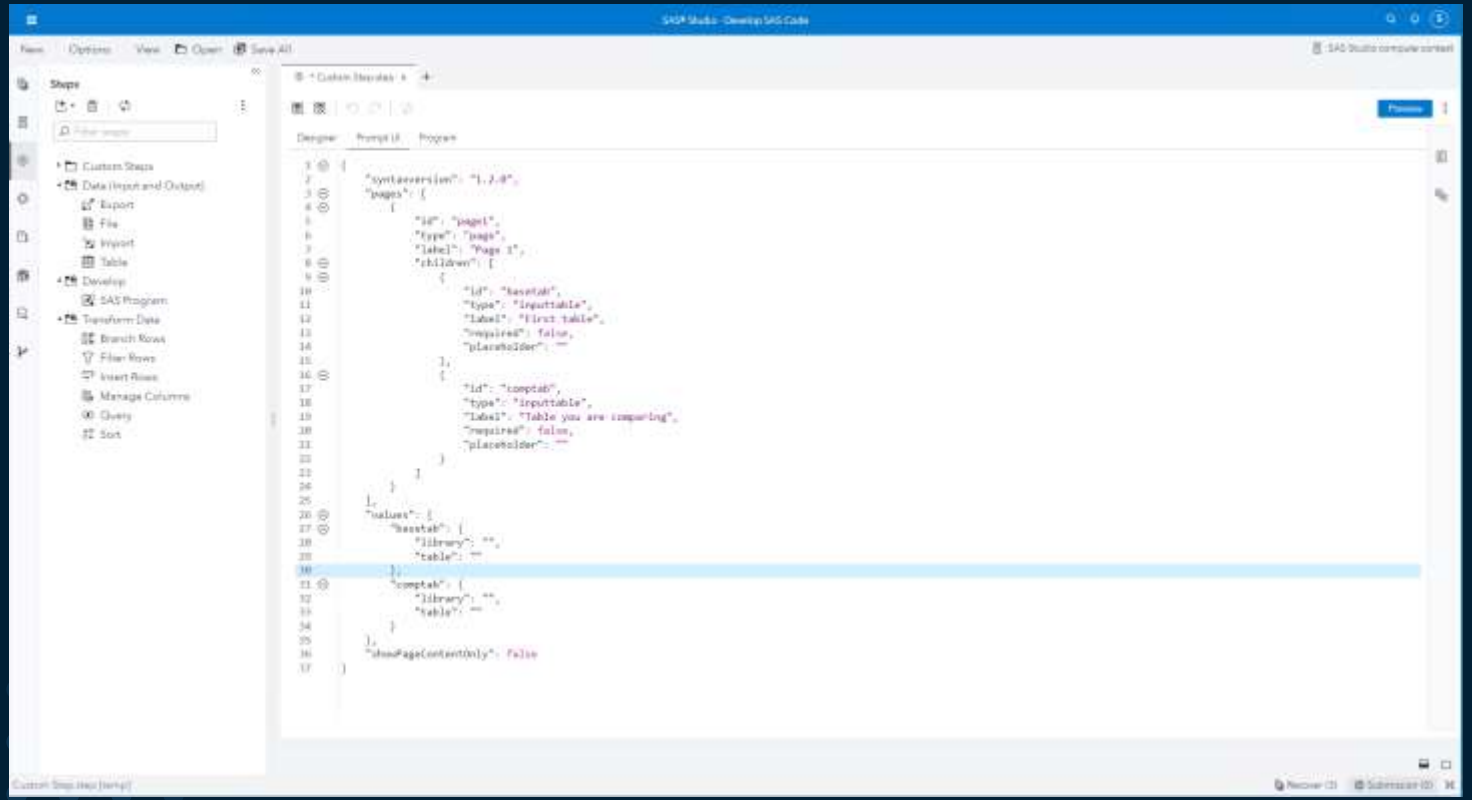
SAS Studio

Variables & Labels



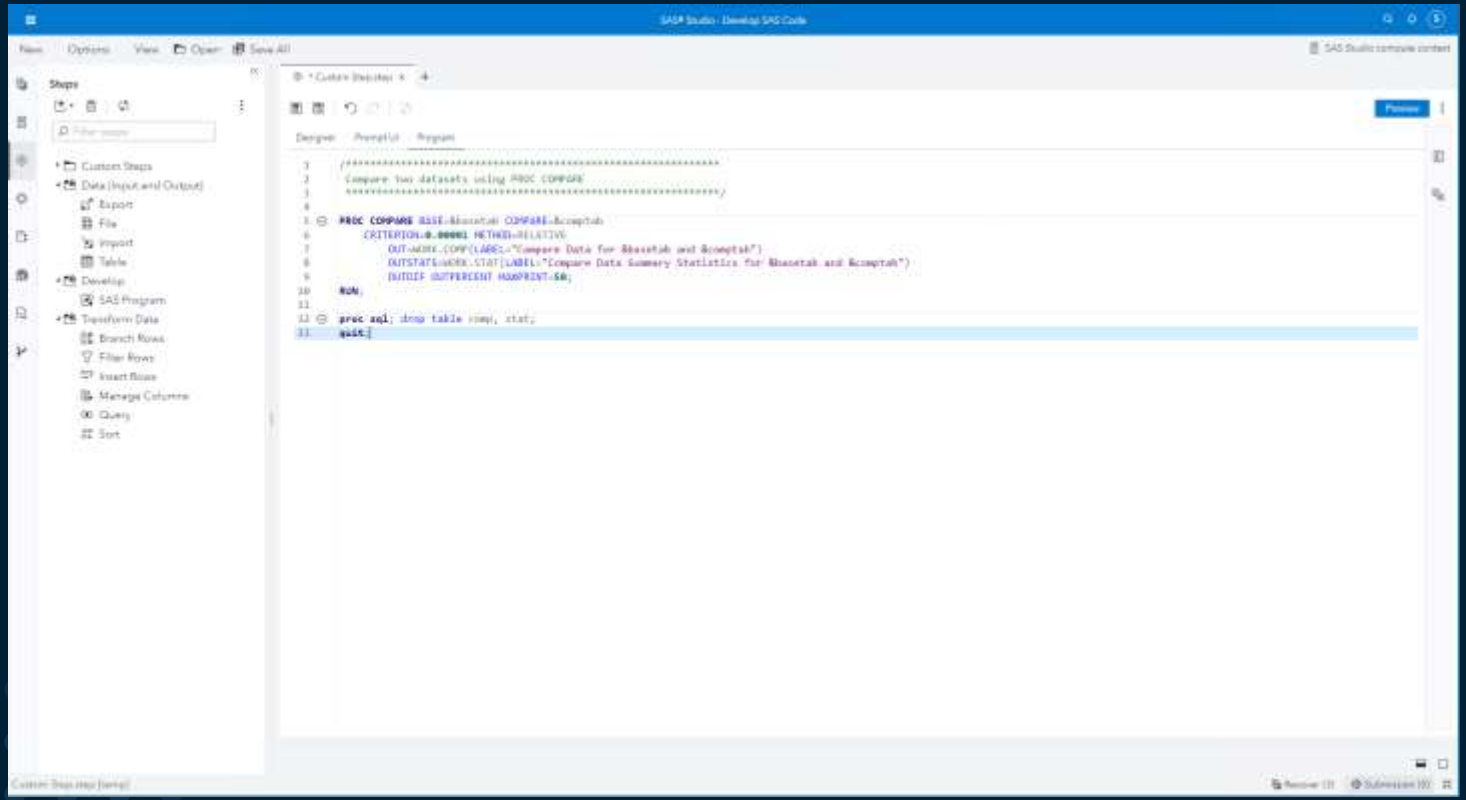
SAS Studio

UI



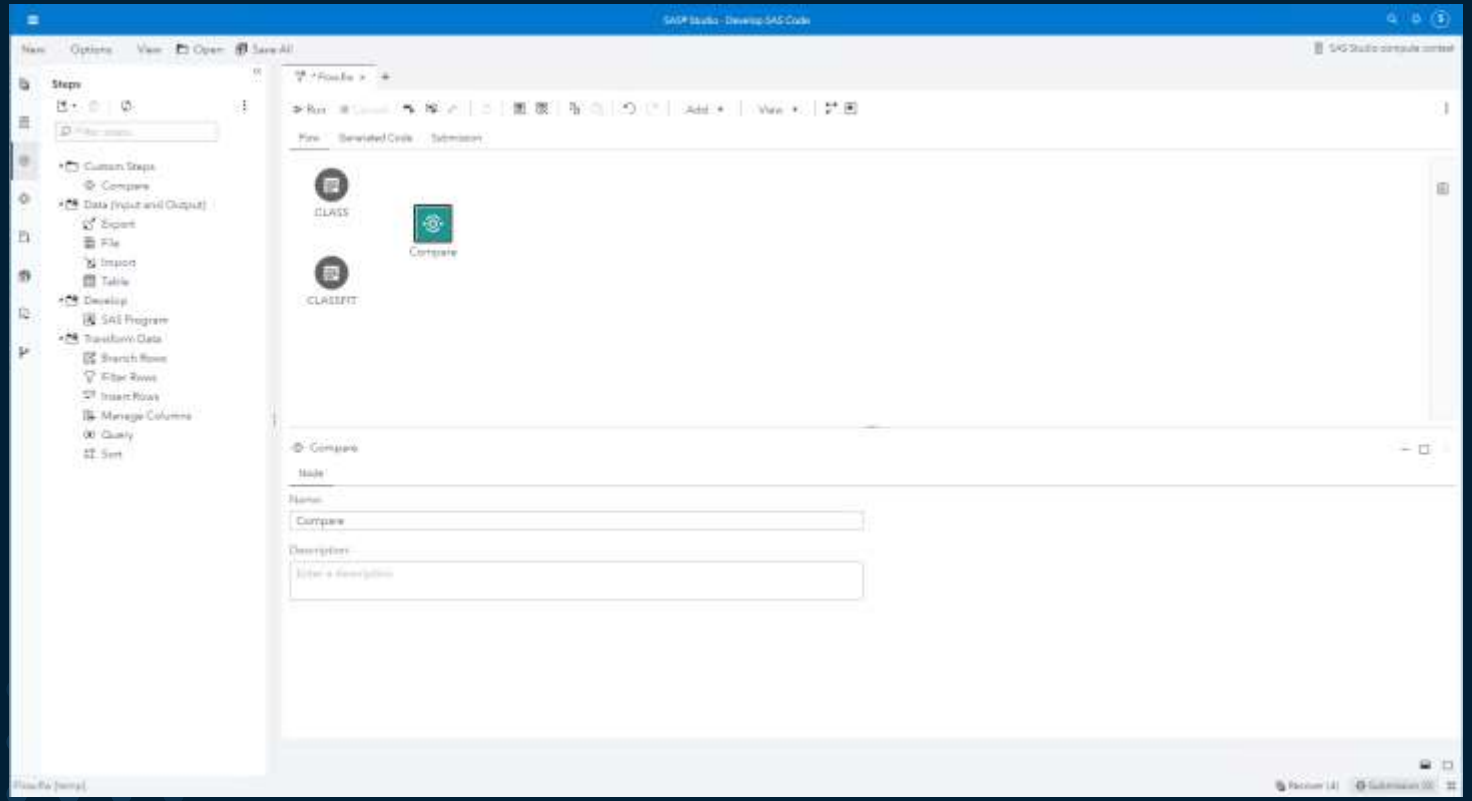
SAS Studio

SAS Code



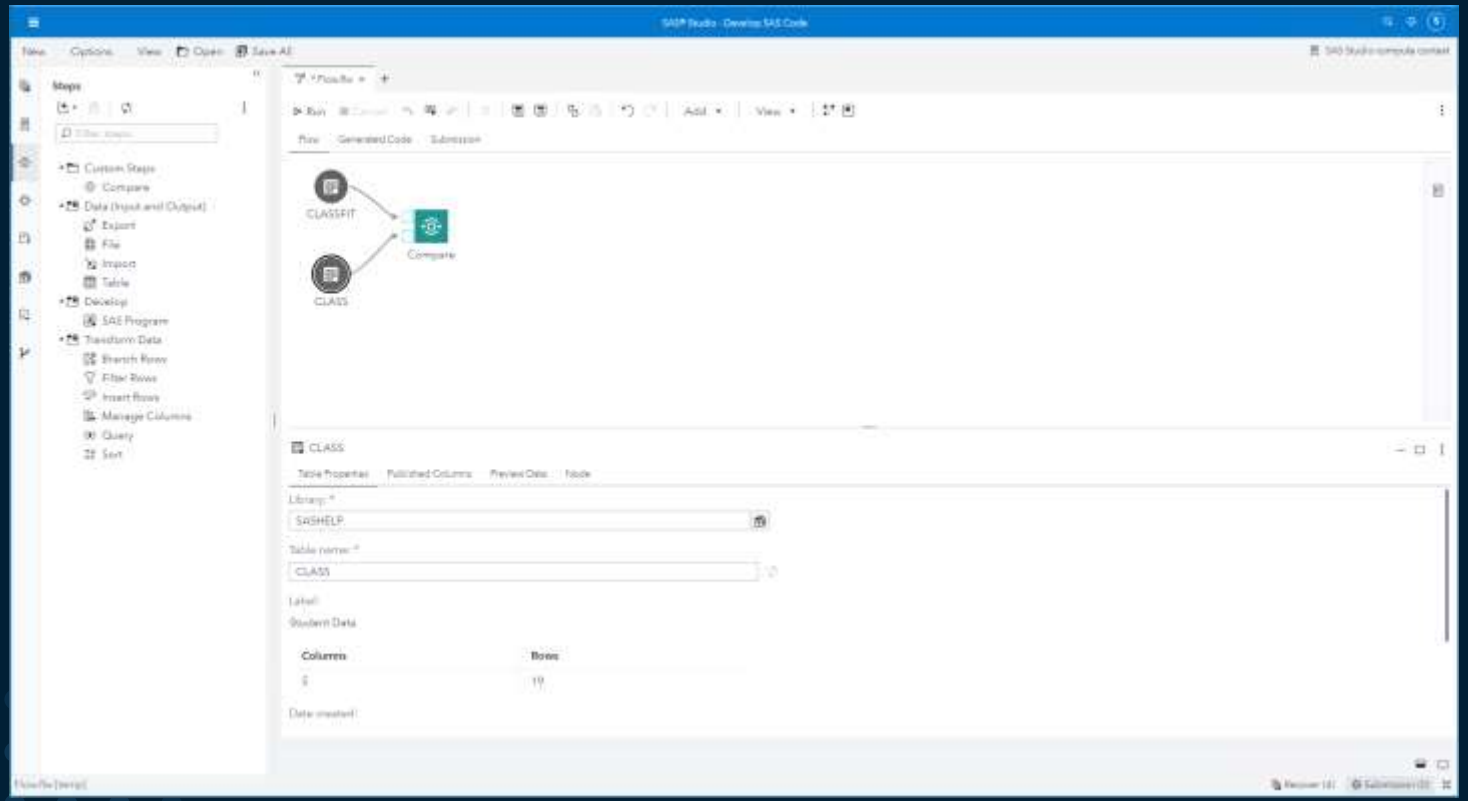
SAS Studio

Flow with New Custom Step



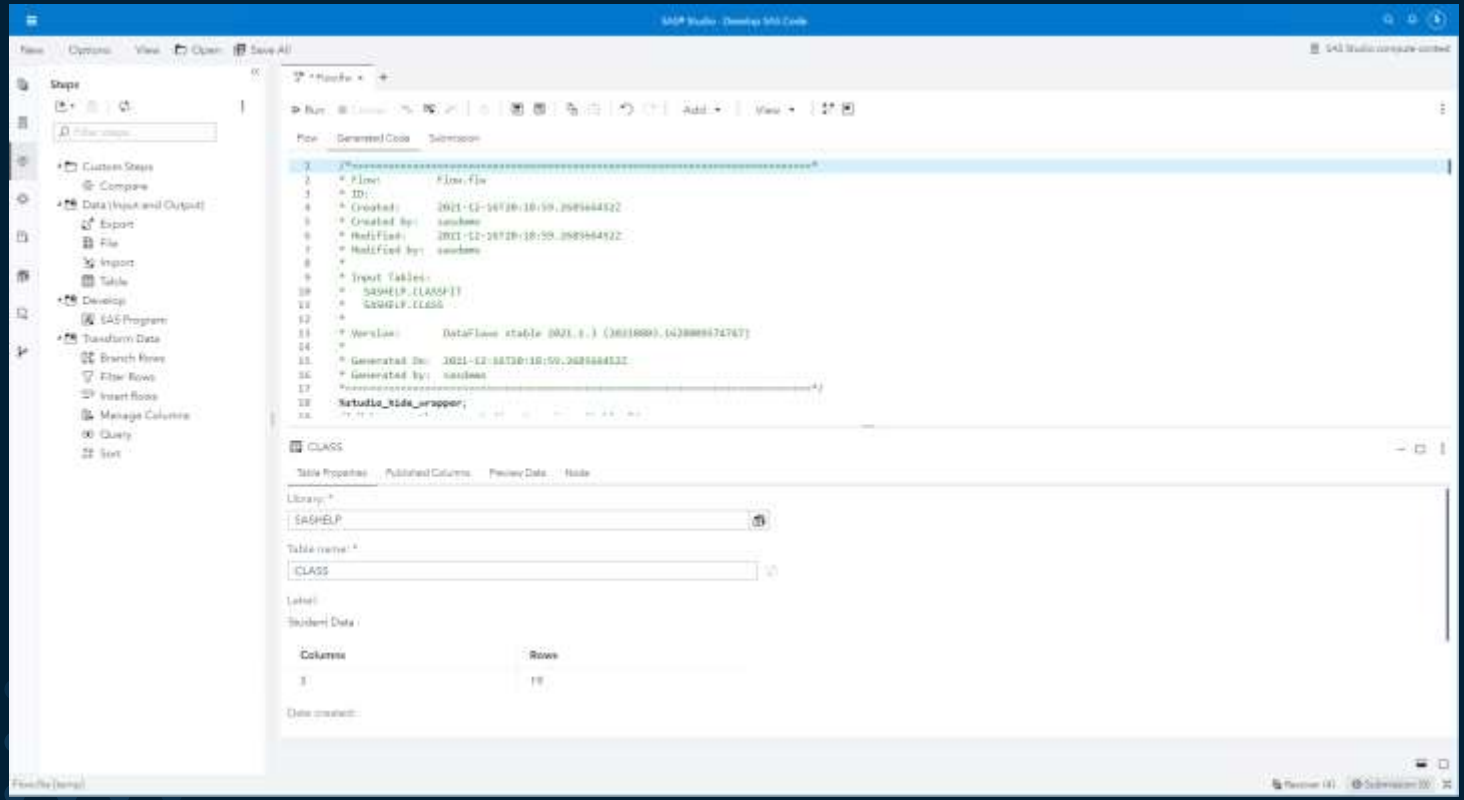
SAS Studio

Connect



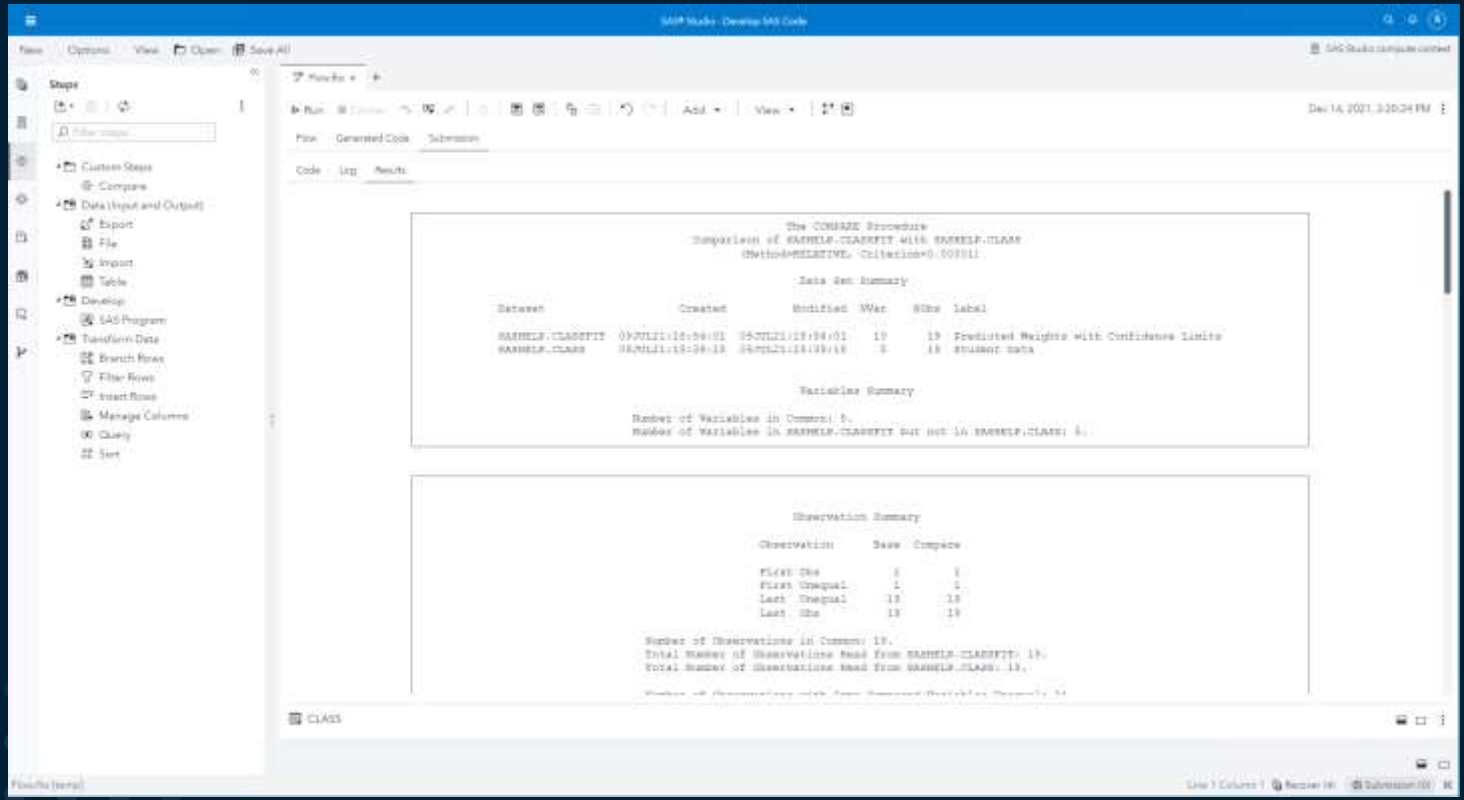
SAS Studio

Flow Code



SAS Studio

Output



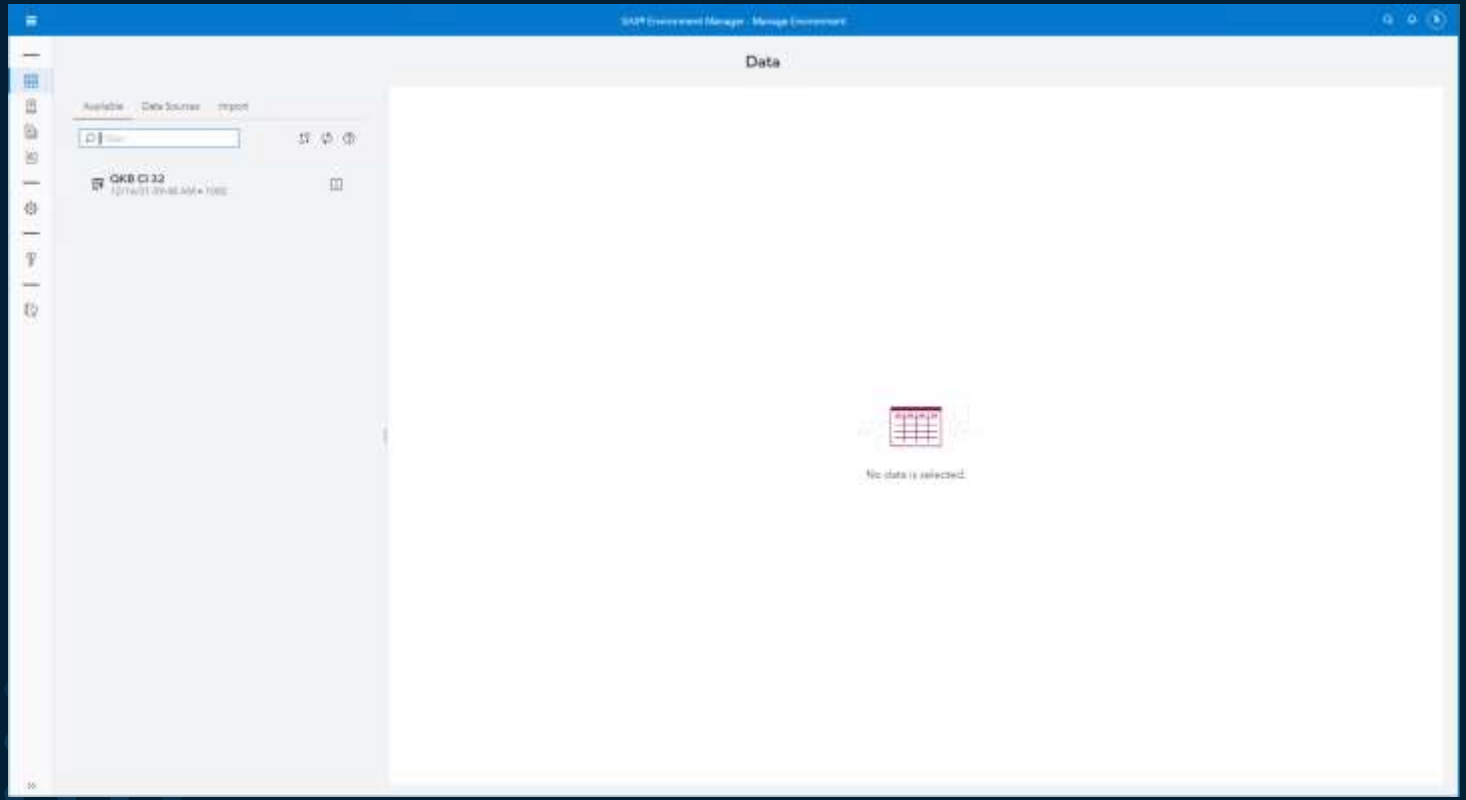
SAS Studio

Import Process Flows

- You can import a SAS Enterprise Guide project and have flows created
- For the most part, all Enterprise Guide tasks will be converted to SAS code node in the flow
- Most Query nodes will be converted to Flow Queries
- Tables will come over as tables
- A similar attempt will be made for Imports and Exports
- Currently the conversion is an Administrative function as it requires access to the SAS Environment Manager

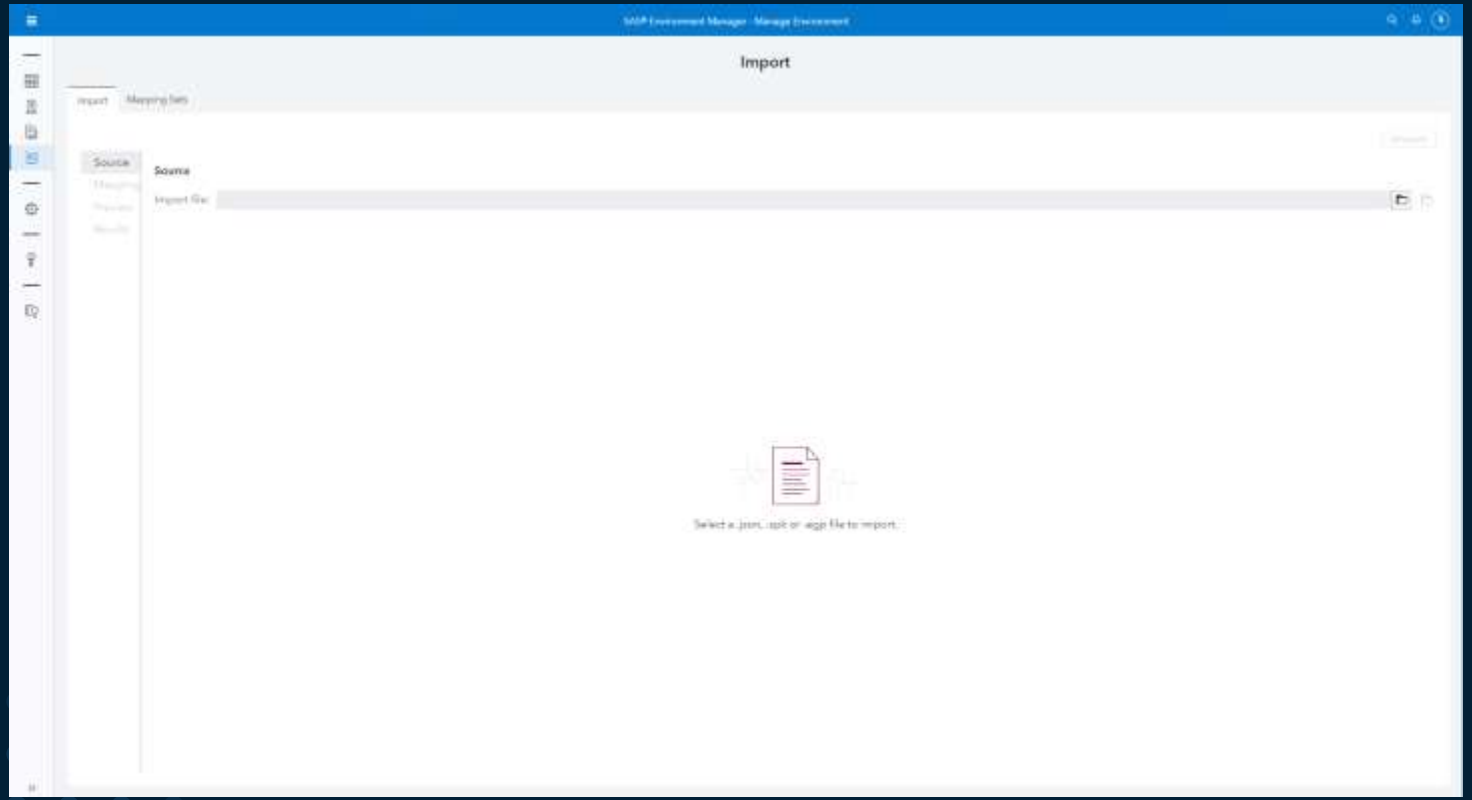
SAS Studio

SAS Environment Manager



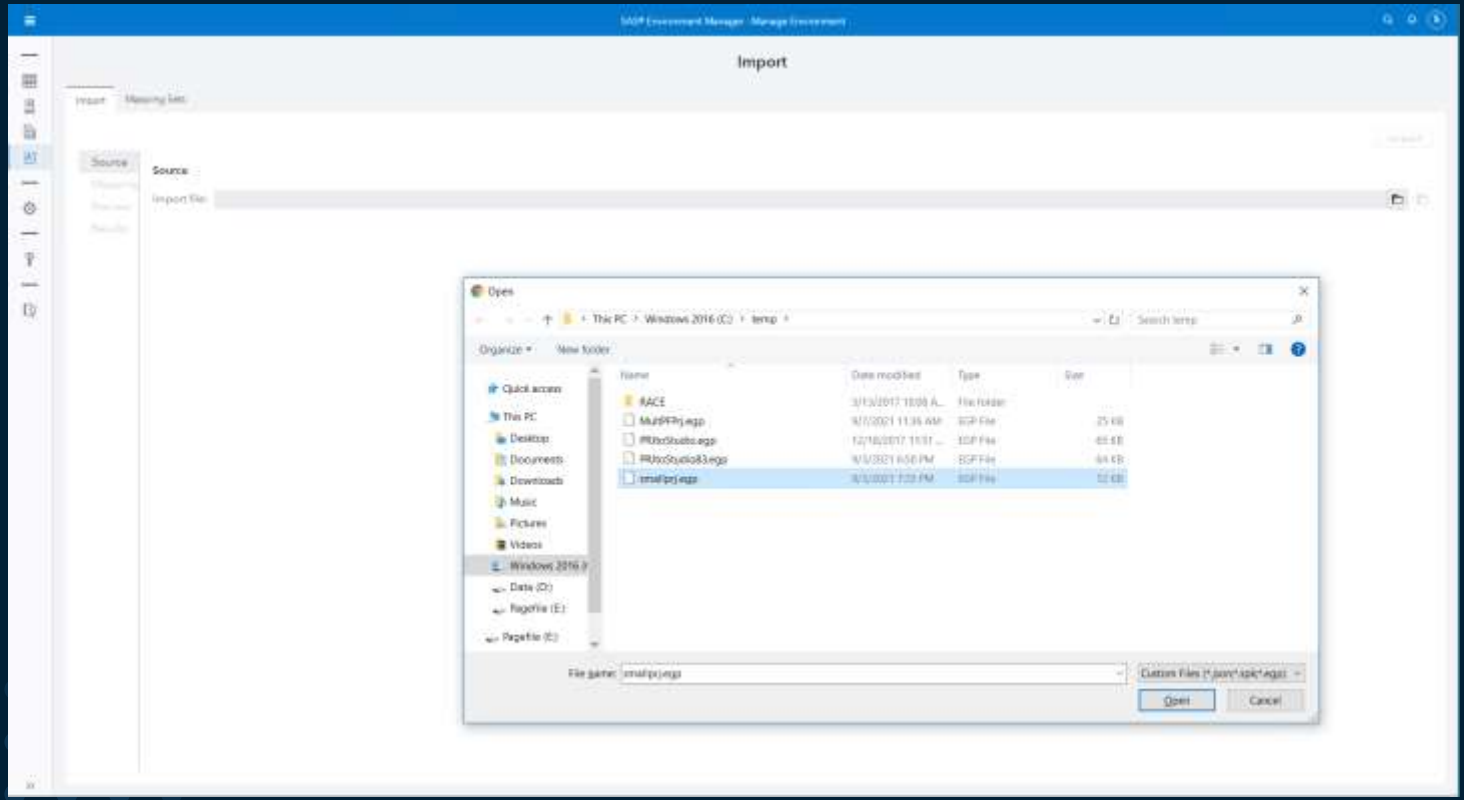
SAS Studio

Import



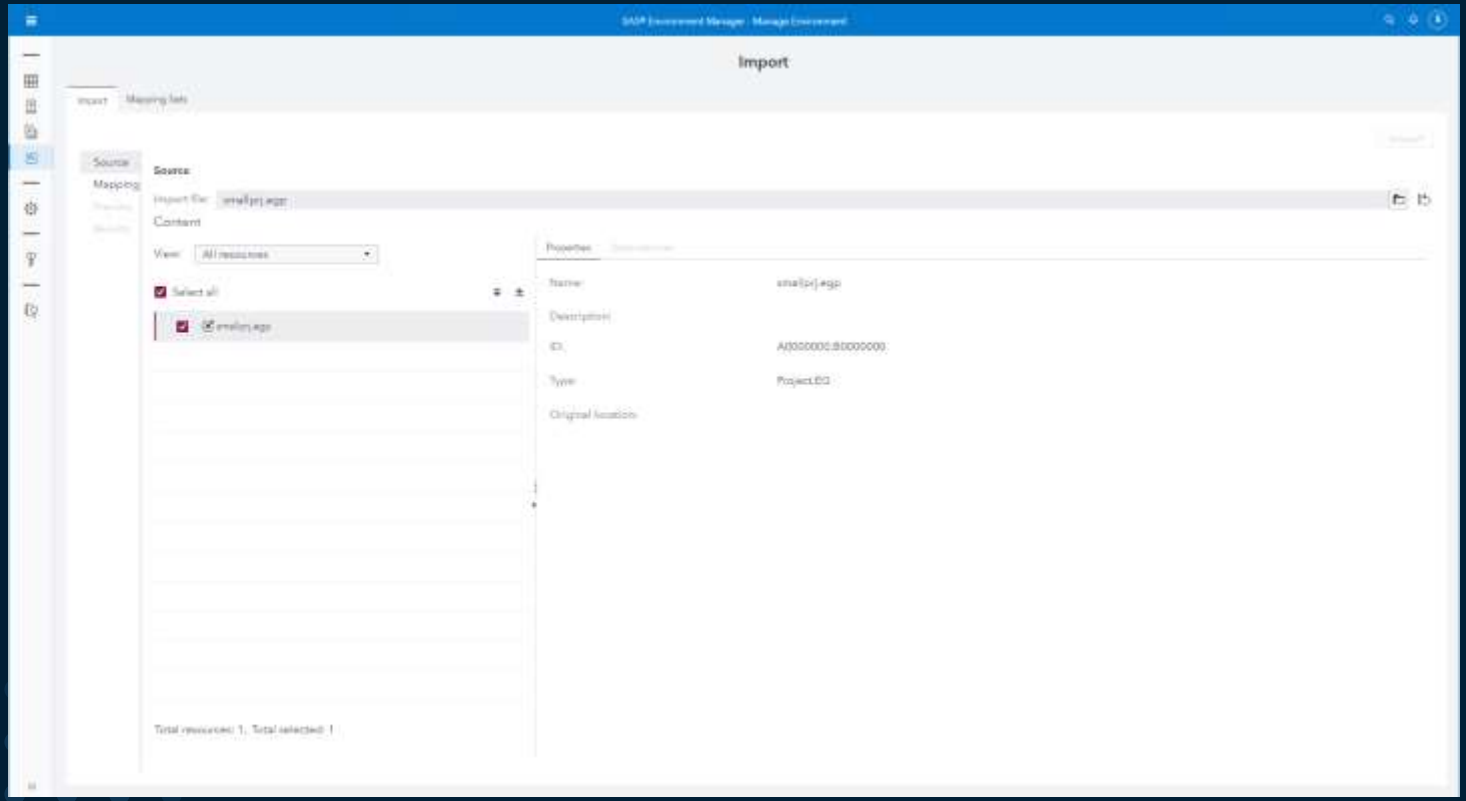
SAS Studio

Select



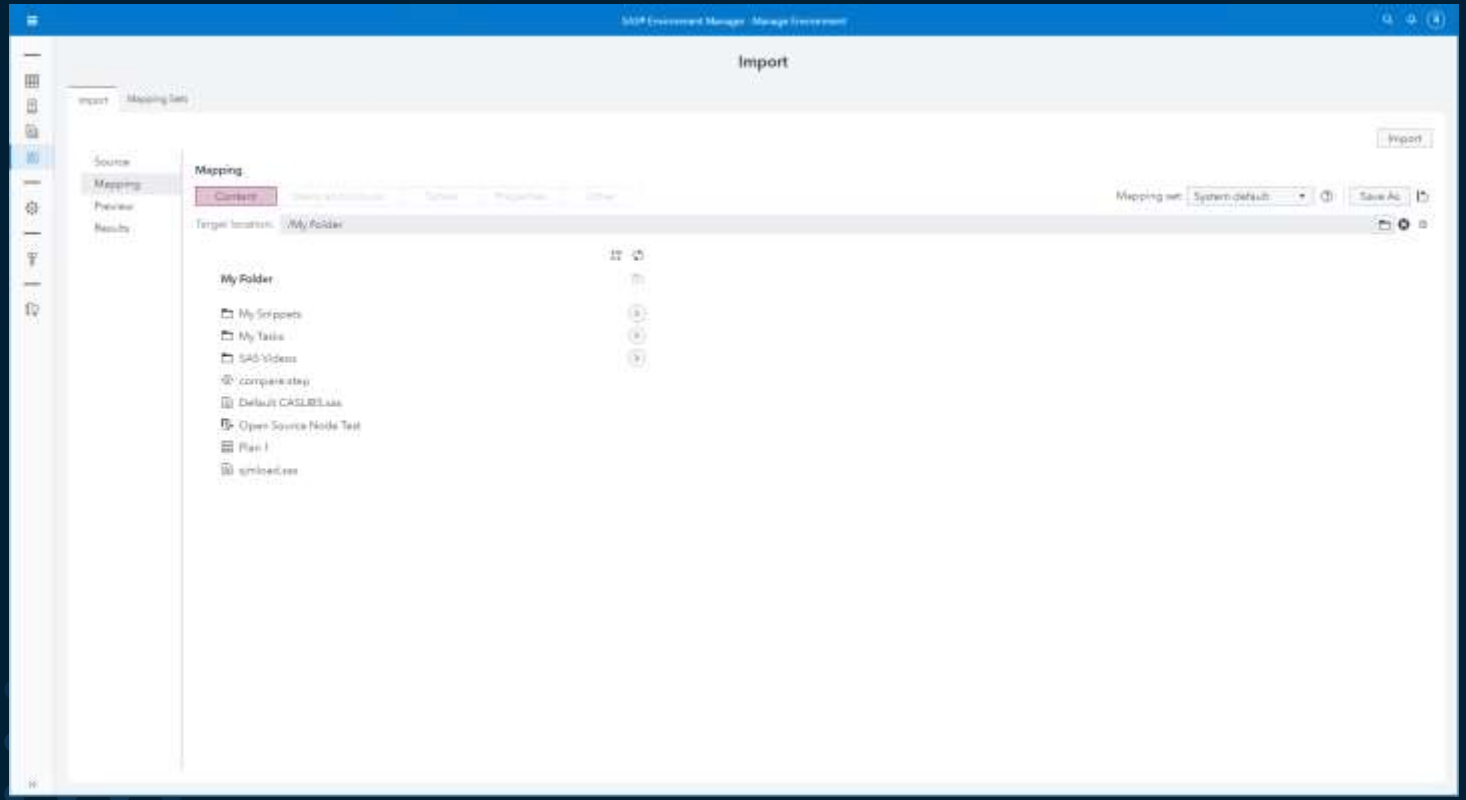
SAS Studio

Selected



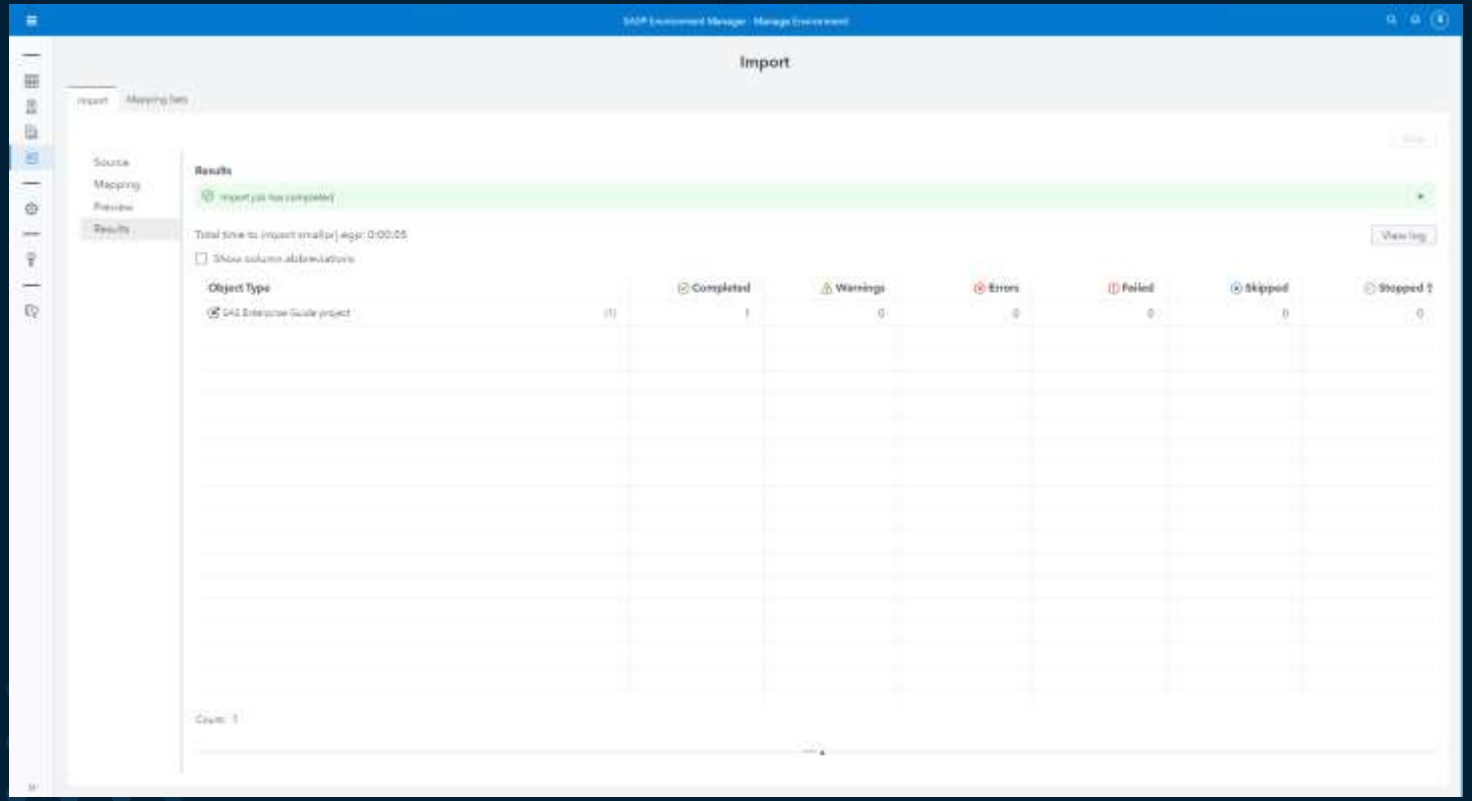
SAS Studio

Import



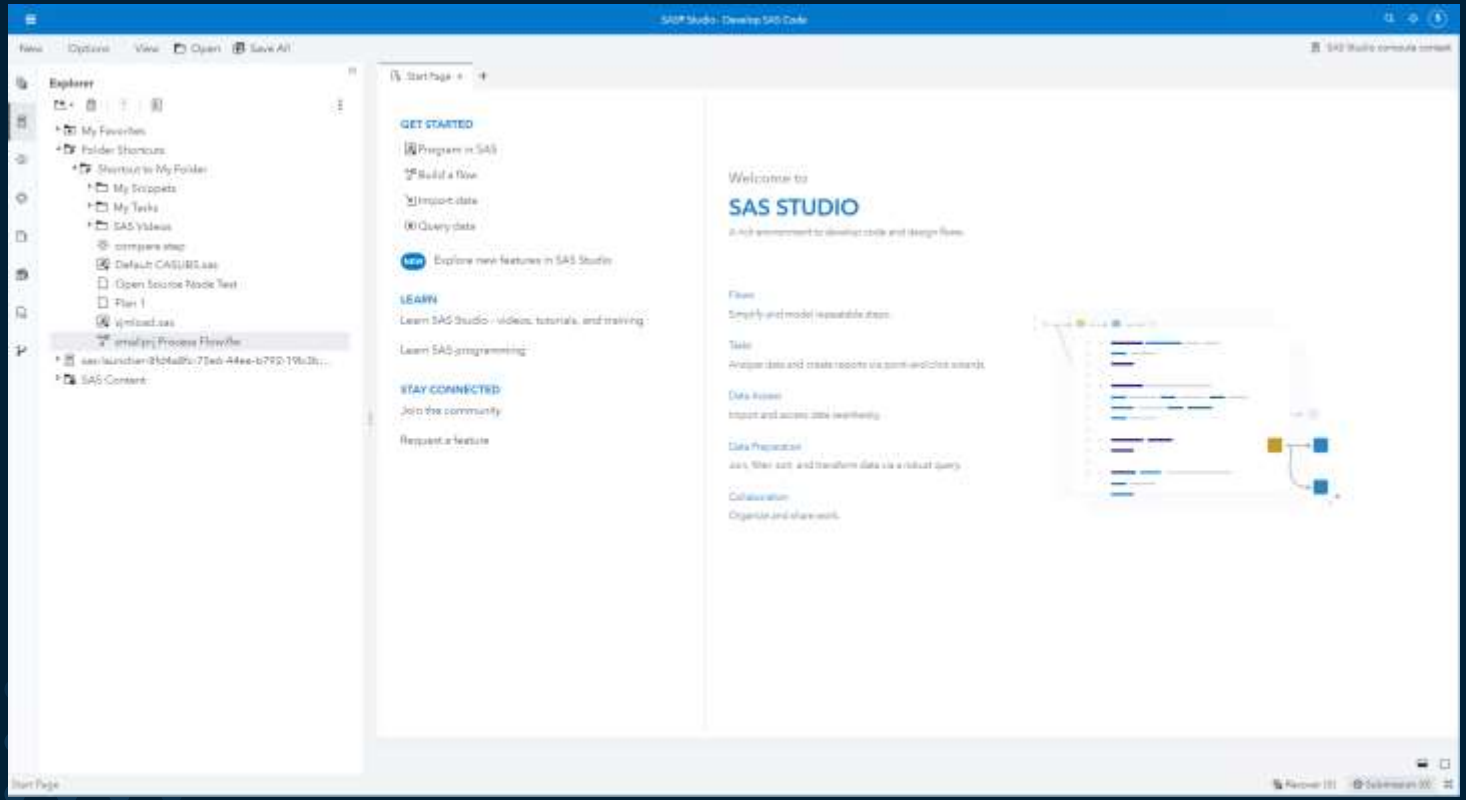
SAS Studio

Completed



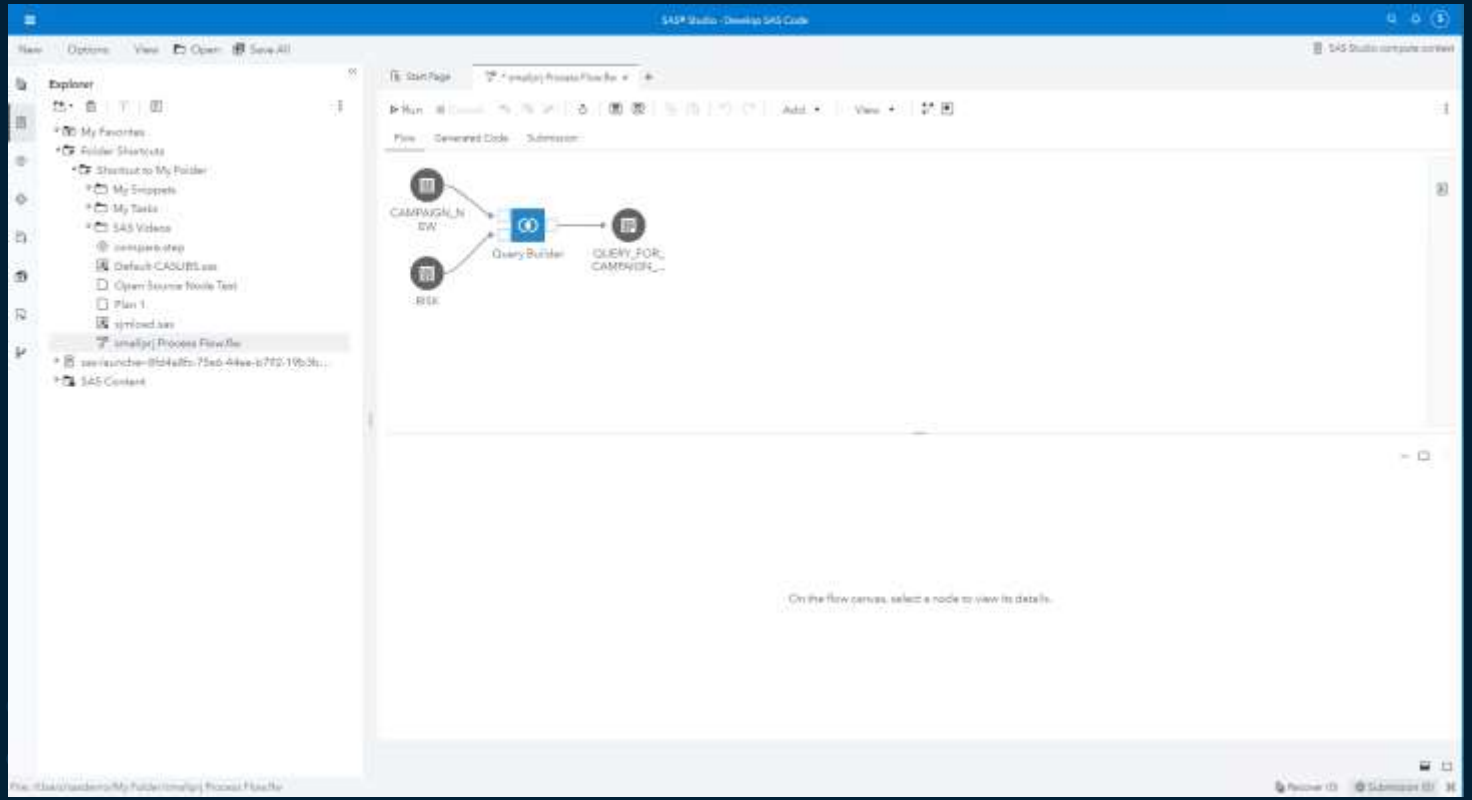
SAS Studio

New Flow



SAS Studio

Open



SAS Studio

Conclusion

- SAS Studio is being improved frequently with monthly releases of Viya
- SAS Studio Analyst
  - Three new steps to manipulate data
  - Custom Steps expand functionality above what SAS provides
- SAS Enterprise Guide projects can be imported into Viya
  - Accomplished via SAS Environment Manager
  - More and expanded options are coming soon

Thank you for your time and for using SAS!
Stay safe and be well!

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