



Build a SAS Studio Flow

- [Exercise Description](#)
- [SAS Viya Logon Info](#)
- [Create a SAS Studio Flow](#)
 - [Join the Table and Imported File](#)
 - [Run and Preview Results](#)
 - [Add Output Table Step to Flow](#)
- [Exercise Completed](#)

Exercise Description

SAS Studio flows provide a visual, drag-and-drop interface within SAS Studio that allows users to build, manage and execute complex analytics workflows without writing code. In this hands-on workshop, you'll learn to build a flow using steps to access, prepare and analyze your data.

You will create a SAS Studio flow that uses SAS data and an imported text file. You will join the data sets and write the output to a SAS Library.



SAS Viya Logon Info

Use the *Google Chrome* browser and select the **SAS Drive** bookmark.

ID: **student** Password: **Metadata0**

Select **No** when prompted about accepting *Admin* privileges.

Create a SAS Studio Flow

1. Select  Viya Menu Selector → **Develop Code and Flows** to open *SAS Studio*.
2. Select **New** → **Flow**.
3. Select  Steps Pane to view the **Steps** pane.


 Create Flow

4. Double-click the **Table** step in the *Data (Input and Output)* section of the *Steps* pane to add it to the flow canvas.
5. In the **Table Properties** section select the following:
 - Library: **SASHELP**
 - Table name: **CARS**





6. Select **Preview Data** to view a subset of the rows from the table.
7. Select **Node** to name the step in the flow.
8. Add *Description* to **CARS Table from SASHELP library**.



9. Select  Explorer pane to open the **Explorer** pane.
10. Navigate to **Files → Home → workshop → SIWSTF**.
11. Drag the file **Car_Make_Info.csv** on to the flow canvas.




12. Select  Add Step → **Import** to add the *Import* step to the flow canvas.
13. Use the mouse to connect the the *Car_Make_Info* file step to *Import* step.
14. Select  Rearrange Flow to rearrange the steps in the flow.



15. In the *Options* section for the *Import* step, select **Analyze** to generate the columns for the connected file.



16. Select  Save to save the flow.
17. Navigate to **SAS Content → Public**.
18. Enter **Car_Make** for the *name* and click **Save**.



Join the Table and Imported File

1. Add the **Query** step in the *Transform Data* section of the *Steps* pane to the flow canvas and connect it to both the **CARS Table** step and the **Import** step. This creates two input ports for the *Query* step.


✎ You can drop the **Query** node on the right-hand side of the **CARS Table** node in flow canvas to auto-connect them and then manually connect the *Import* step to it.

2. **Rearrange** the flow and **save** it.

3. Select the following columns on the *Select* tab:

Table	Source	Name	Label
t2	PARENT_COMPANY	Parent_Company	Parent Company
t1	Make	Make	Car Make
t1	Model	Model	Car Model
t1	Type	Type	Car Type
t1	Origin	Origin	Car Origin
t1	MSRP	MSRP	MSRP
t1	Invoice	Invoice	Invoice
t2	WEBSITE	Website	Main Website

✎ This assumes that **t1** is the *CARS Table* step and **t2** is the *Import* step.

4. Click  to add a calculated column.

5. Enter the following for the calculation:

t1.MSRP - t1.Invoice

✎ This assumes that **t1** is the *CARS Table* step.

6. Enter the following for the properties:

- Column name: **Diff**
- Column label: **Difference**
- Type: **Numeric**

7. Click **Save** to save the calculated column.

8. On the *Join* tab, confirm that the join condition is **t1.Make=t2.MAKE**.

✎ This join condition is made automatically since the columns have the same name.


9. Select the following columns on the *Sort* tab:

Table	Source	Sort
t2	PARENT_COMPANY	Ascending
t1	Make	Ascending
t1	Model	Ascending

10. On the *Output Options* tab, leave the selection for *Generate code using as* **PROC SQL**.

11. **Save** the changes to the flow.


Run and Preview Results


- 1. **Run** the flow.
- 2. Select the **Output port** of the *Query* step and **preview** its results.
- 3. On the *Select* tab, of the *Query* node, select Change Format in the *Format* column for the **Diff** calculated column.
- 4. Set the format to **DOLLAR8** and click **OK**.
- 5. **Save** the changes to the flow.
- 6. **Run** the flow and select the **Output port** of the *Query* step and **preview** its results.

Add Output Table Step to Flow

- 1. Add a **Table** step from the *Data (Input and Output)* section to the flow and connect it to the *Output port* of the **Query** step.
- 2. In the **Table Properties** section select the following:
 - Library: **WORK**

- Table name: **CARS_INFO**

 This creates an output table for the flow. You will need to type the new table name.

3. **Save** and **Run** the flow.
4. View the **Generated Code** and the **Submitted Code and Results** tabs.
5. Select  Libraries to view the Libraries pane.
6. View the **CARS_INFO** table in the **WORK** SAS library.
7. **Close** the *Table* and the *Flow* file.

Exercise Completed

YOU HAVE COMPLETED THE EXERCISE ON BUILDING A SAS STUDIO FLOW!

For additional information on SAS Studio Flows, please refer to its [documentation](#).

THANKS FOR ATTENDING THIS WORKSHOP!