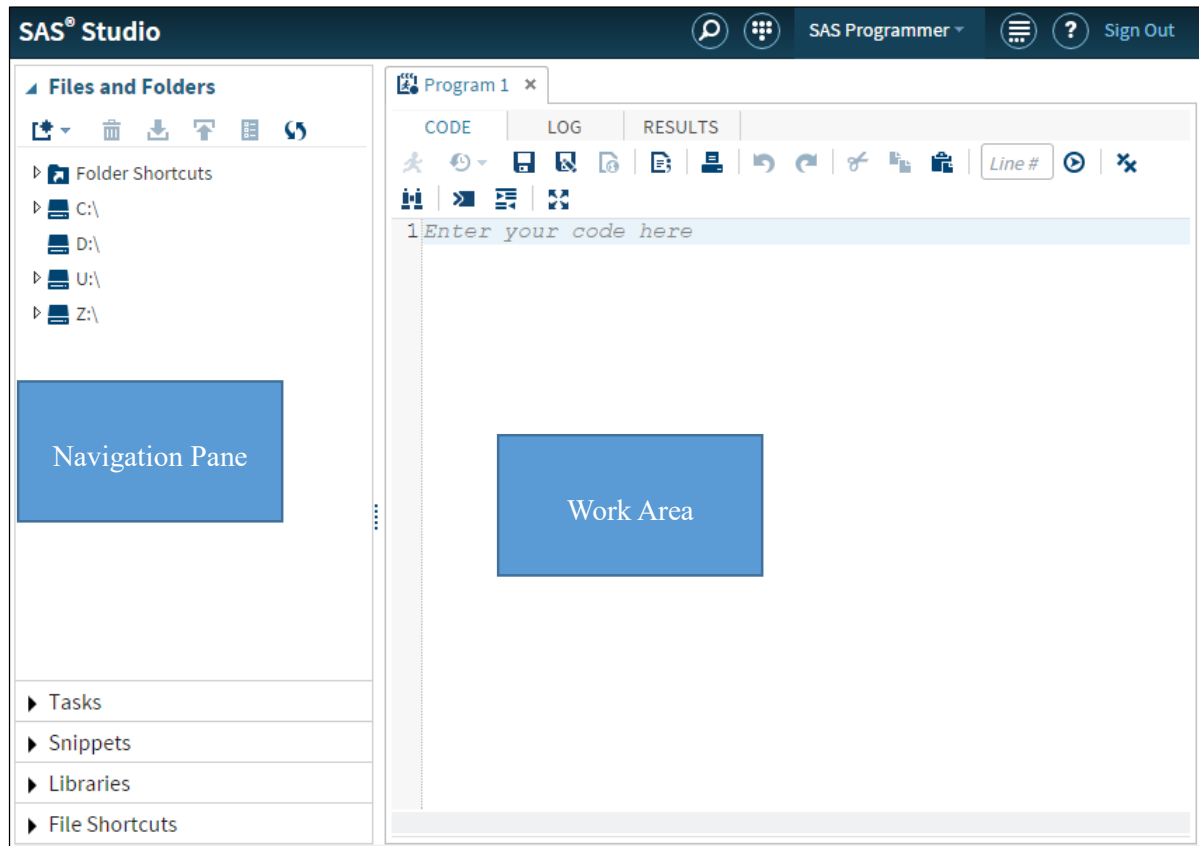




Working in SAS Studio

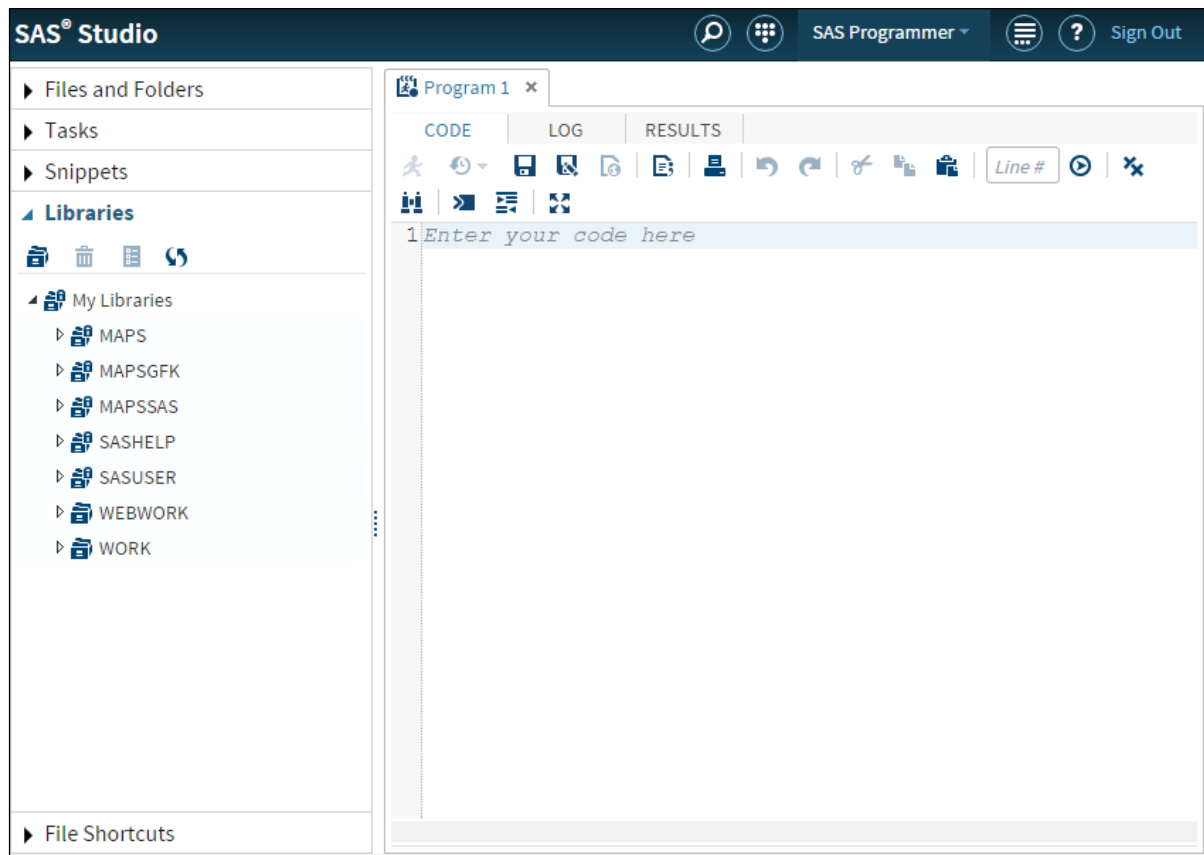
1. Open your SAS Studio session to view the interface.



The SAS Studio interface is separated into the Navigation pane on the left and the Work area on the right. The Work area displays your programs with tabs for Code, Log, and Results. The Navigation pane provides easy access to your folders and libraries that contain your permanent and temporary data sets.

The Files and Folders tab is displayed by default and gives the user quick access to load data sets and SAS programs.

2. Click the **Libraries** tab in the Navigation pane and select **My Libraries**.



The libraries **MAPS** through **WEBWORK** are permanent libraries. The data displayed in each library is a permanent data set, which users can use at their convenience. The **Work** library is a temporary library. Any data saved to the **Work** library by the user is deleted when the user closes the SAS session. In a later demonstration, you see how to save a new data set to the **Work** library and create a new permanent library. A new permanent library enables the user to load external data a single time and update or use the data table each new session. This heavily reduces the load time and cleaning time of your data because it is done only once.

- Open the **Sashelp** library and navigate to the **cars** data set. Double-click the data set to open it in the Table Viewer in the Work area.

The screenshot shows the SAS Studio interface. On the left, the 'Libraries' pane lists various datasets, with 'CARS' selected. The central 'Columns' pane shows a list of 15 columns: Make, Model, Type, Origin, DriveTrain, MSRP, Invoice, EngineSize, Cylinders, and Horsepower, all of which are selected. The right pane displays the data table with 428 rows and 15 columns. The table has columns 'Make' and 'Model' highlighted. The data shows various car models from different manufacturers like Acura and Audi.

	Make	Model
1	Acura	MDX
2	Acura	RSX Type S 2dr
3	Acura	TSX 4dr
4	Acura	TL 4dr
5	Acura	3.5 RL 4dr
6	Acura	3.5 RL w/Navigation 4dr
7	Acura	NSX coupe 2dr manual S
8	Audi	A4 1.8T 4dr
9	Audi	A4 1.8T convertible 2dr
10	Audi	A4 3.0 4dr
11	Audi	A4 3.0 Quattro 4dr manual
12	Audi	A4 3.0 Quattro 4dr auto
13	Audi	A6 3.0 4dr
14	Audi	A6 3.0 Quattro 4dr
15	Audi	A4 3.0 convertible 2dr
16	Audi	A4 3.0 Quattro convertible 2dr
17	Audi	A6 2.7 Turbo Quattro 4dr
18	Audi	A6 4.2 Quattro 4dr

The **cars** data set contains 428 total rows of data and 15 columns or variables.

You can use the arrows to navigate between pages or the scroll bar at the bottom of the data table to change your view of the data.

In the Columns area of the Table Viewer, notice that all columns are selected by default. Simply clear the check box from a column to remove the column from the viewer.

4. Clear the **Select all** check box and then select **Make**, **Model**, **Type**, **Origin**, **MSRP**, and **Invoice**.

The screenshot shows the SAS Studio interface with the SASHELP.CARS dataset loaded. The 'Columns' panel on the left shows the 'Select all' checkbox unchecked, and the following columns are selected: Make, Model, Type, Origin, MSRP, and Invoice. The 'Property Value' table below the columns panel shows the following values:

Property	Value
Label	Origin
Name	Origin
Length	6
Type	Char
Format	
Informat	

The main data table displays the first 17 rows of the dataset, showing the Make and Model for each car. The total number of rows is 428 and the total number of columns is 15.

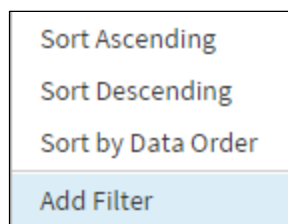
	Make	Model
1	Acura	MDX
2	Acura	RSX Type S 2dr
3	Acura	TSX 4dr
4	Acura	TL 4dr
5	Acura	3.5 RL 4dr
6	Acura	3.5 RL w/Navigation 4dr
7	Acura	NSX coupe 2dr manual S
8	Audi	A4 1.8T 4dr
9	Audi	A41.8T convertible 2dr
10	Audi	A4 3.0 4dr
11	Audi	A4 3.0 Quattro 4dr manual
12	Audi	A4 3.0 Quattro 4dr auto
13	Audi	A6 3.0 4dr
14	Audi	A6 3.0 Quattro 4dr
15	Audi	A4 3.0 convertible 2dr
16	Audi	A4 3.0 Quattro convertible 2dr
17	Audi	A6 2.7 Turbo Quattro 4dr

5. To customize the view of the data table, select the arrow next to **Columns** to hide the columns area and then select the **Maximize View** icon.

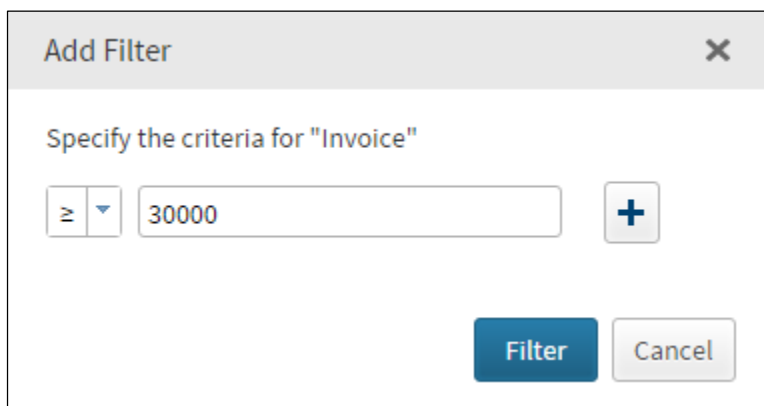
SAS Studio interface showing a data table with 15 columns and 428 rows. The table is titled 'SASHELP.CARS' and displays car data including Make, Model, Type, Origin, MSRP, and Invoice. The interface includes a top navigation bar, a toolbar with icons for view and filter, and a status bar at the bottom.

	Make	Model	Type	Origin	MSRP	Invoice
1	Acura	MDX	SUV	Asia	\$36,945	\$33,337
2	Acura	RSX Type S 2dr	Sedan	Asia	\$23,820	\$21,761
3	Acura	TSX 4dr	Sedan	Asia	\$26,990	\$24,647
4	Acura	TL 4dr	Sedan	Asia	\$33,195	\$30,299
5	Acura	3.5 RL 4dr	Sedan	Asia	\$43,755	\$39,014
6	Acura	3.5 RL w/Navigation 4dr	Sedan	Asia	\$46,100	\$41,100
7	Acura	NSX coupe 2dr manual S	Sports	Asia	\$89,765	\$79,978
8	Audi	A4 1.8T 4dr	Sedan	Europe	\$25,940	\$23,508
9	Audi	A41.8T convertible 2dr	Sedan	Europe	\$35,940	\$32,506
10	Audi	A4 3.0 4dr	Sedan	Europe	\$31,840	\$28,846
11	Audi	A4 3.0 Quattro 4dr manual	Sedan	Europe	\$33,430	\$30,366
12	Audi	A4 3.0 Quattro 4dr auto	Sedan	Europe	\$34,480	\$31,388
13	Audi	A6 3.0 4dr	Sedan	Europe	\$36,640	\$33,129
14	Audi	A6 3.0 Quattro 4dr	Sedan	Europe	\$39,640	\$35,992
15	Audi	A4 3.0 convertible 2dr	Sedan	Europe	\$42,490	\$38,325
16	Audi	A4 3.0 Quattro convertible 2dr	Sedan	Europe	\$44,240	\$40,075
17	Audi	A6 2.7 Turbo Quattro 4dr	Sedan	Europe	\$42,840	\$38,840
18	Audi	A6 4.2 Quattro 4dr	Sedan	Europe	\$49,690	\$44,936

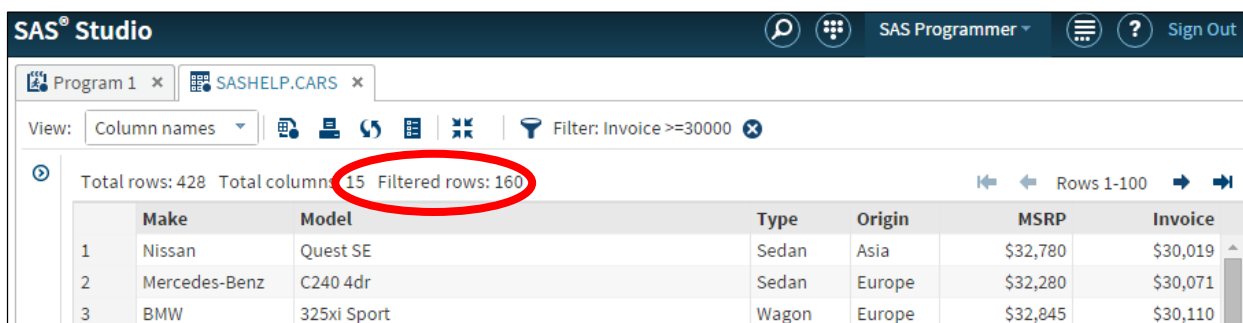
6. You can right-click a column heading to filter and sort the data table by that column. Right-click the **Invoice** column and select **Add Filter**. Notice that the other options are Sort Ascending, Sort Descending, and Sort by Data Order.



7. Add a filter to select only the rows with Invoice values greater than or equal to \$30,000. Use the drop-down menu to change the filter in the Add Filter window. Add the filter value in the text box. Then click **Filter**.



The 'Add Filter' dialog box has a title bar with a close button. Below the title bar, it says 'Specify the criteria for "Invoice"'. There is a dropdown menu showing '≥' and a text box containing '30000'. To the right of the text box is a '+' button. At the bottom, there are two buttons: 'Filter' (in blue) and 'Cancel'.



The SAS Studio interface shows a program window with 'Program 1' and 'SASHELP.CARS' tabs. The toolbar includes a filter icon and a filter expression 'Filter: Invoice >=30000'. Below the toolbar, the table view shows 'Total rows: 428', 'Total columns: 15', and 'Filtered rows: 160'. The table has columns: Make, Model, Type, Origin, MSRP, and Invoice. The first three rows are visible:

	Make	Model	Type	Origin	MSRP	Invoice
1	Nissan	Quest SE	Sedan	Asia	\$32,780	\$30,019
2	Mercedes-Benz	C240 4dr	Sedan	Europe	\$32,280	\$30,071
3	BMW	325xi Sport	Wagon	Europe	\$32,845	\$30,110

At the top of the table, you see that the number of filtered rows is 160.

8. As you select options and customize the table, SAS Studio generates SAS code that you can use. To view the query code, click the **Display Query** button on the toolbar.

```
PROC SQL;
    CREATE TABLE work.query AS
        SELECT Make , Model , 'Type'n , Origin , MSRP , Invoice
            FROM sashelp.cars WHERE Invoice >=30000 ORDER BY Invoice;
RUN;
QUIT;

PROC DATASETS NOLIST NODETAILS;
    CONTENTS DATA=work.query OUT=work.details;
RUN;

PROC PRINT DATA=work.details;
RUN;
```

A new Program tab is created with the code that is used to create the view of the table. This code first creates a new data table in the **Work** library and then prints the data table. You can save this code for use later with the Save button on the toolbar.

9. Close the Query code. Exit the maximized view, and expand the **Columns** pane to get back to the default table view. You can clear the table filter by selecting **Clear Filter** on the Tools table.