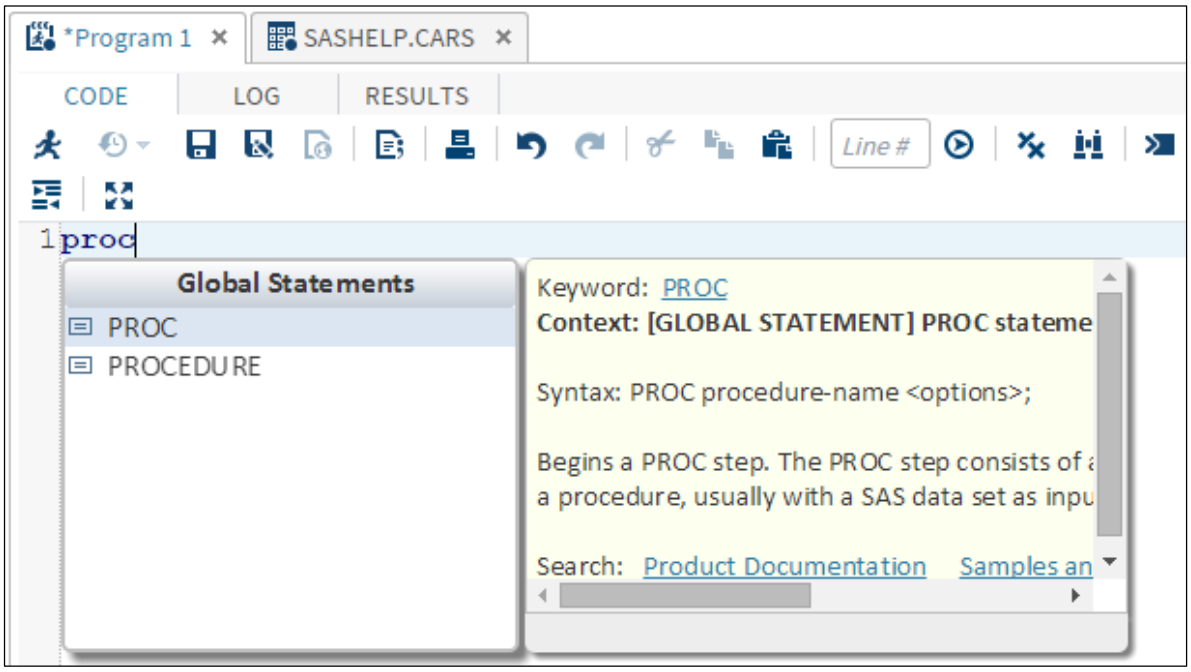
Writing a Program in SAS Studio

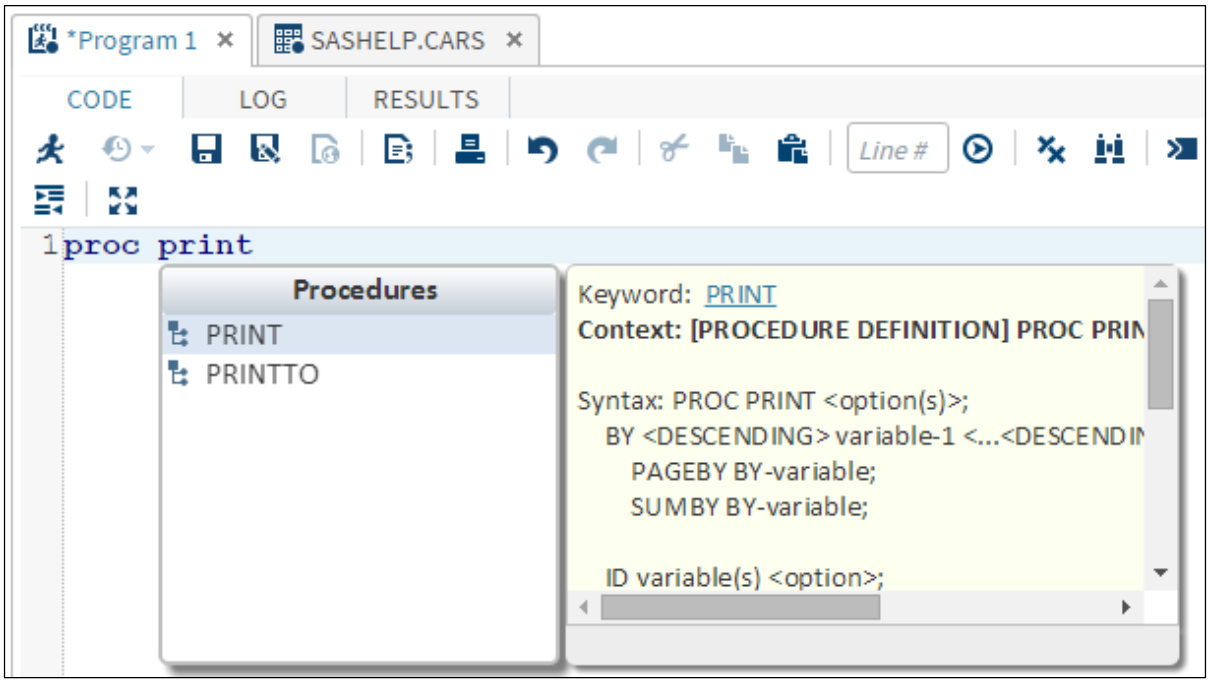
Write a SAS program that enables you to see the **cars** data in the form of a report.

1. Enter the word **PROC** in the Program 1 workspace.



As you begin to type, notice the context-sensitive Help, which is useful when you are learning SAS programming.

2. Enter the word **print** and notice how the context-sensitive Help changes.



Scroll through the Context Help window. First notice the syntax for the PRINT procedure.

General form of the PRINT procedure:

PROC PRINT <*option(s)*>**;**
BY <DESCENDING> *variable*-1 <...<DESCENDING>
variable-n><NOTSORTED>**;**
PAGEBY *BY-variable*;
SUMBY *BY-variable*;

ID *variable(s)* <*option*>**;**
SUM *variable(s)* <*option*>**;**
VAR *variable(s)* <*option*>**;**

Next, notice a description of the procedure.

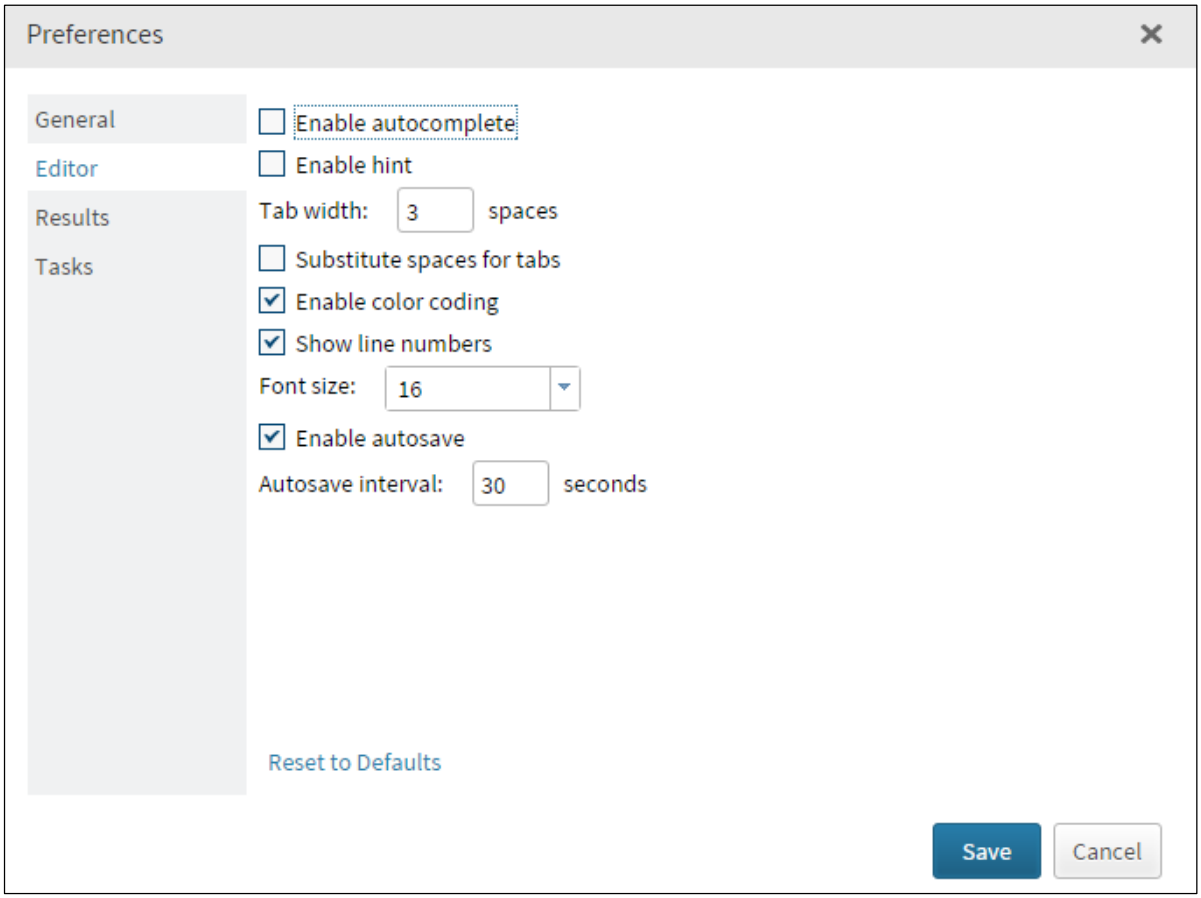
The PRINT procedure prints the observations in a SAS data set, using all or some of the variables. You can create a variety of reports ranging from a simple listing to a highly customized report that groups the data and calculates totals and subtotals for numeric variables.

Beginning in SAS 9.3, the PRINT procedure is now completely integrated with the Output Delivery System.

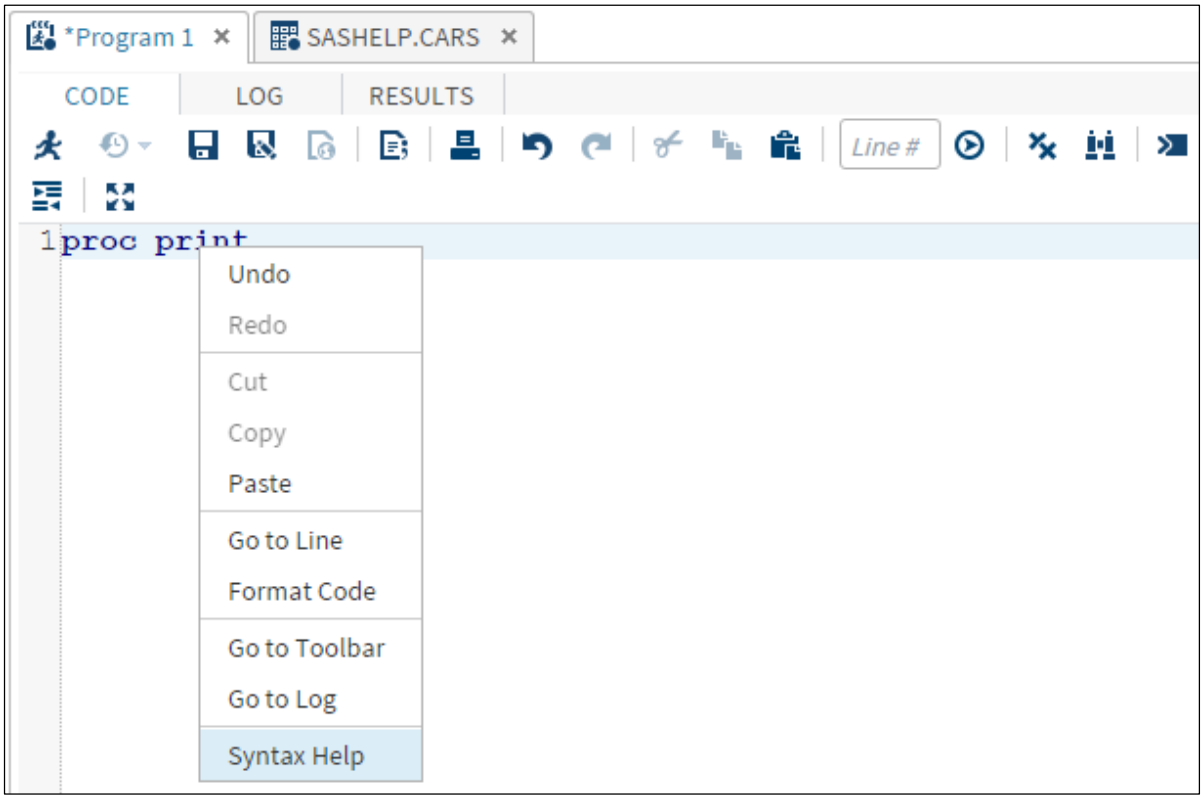
Finally, the context-sensitive Help provides links to SAS documentation and samples.

Search: **Product Documentation ⇨ Samples and SAS Notes ⇨ Papers**

3. To turn off the context Help, select **More Application Options** ⇨ **Preferences** ⇨ **Editor**. Clear the **Enable autocomplete** check box. Select **Save**.



4. To view the context Help without the Autocomplete option, right-click the keyword **print** and select **Syntax Help**.

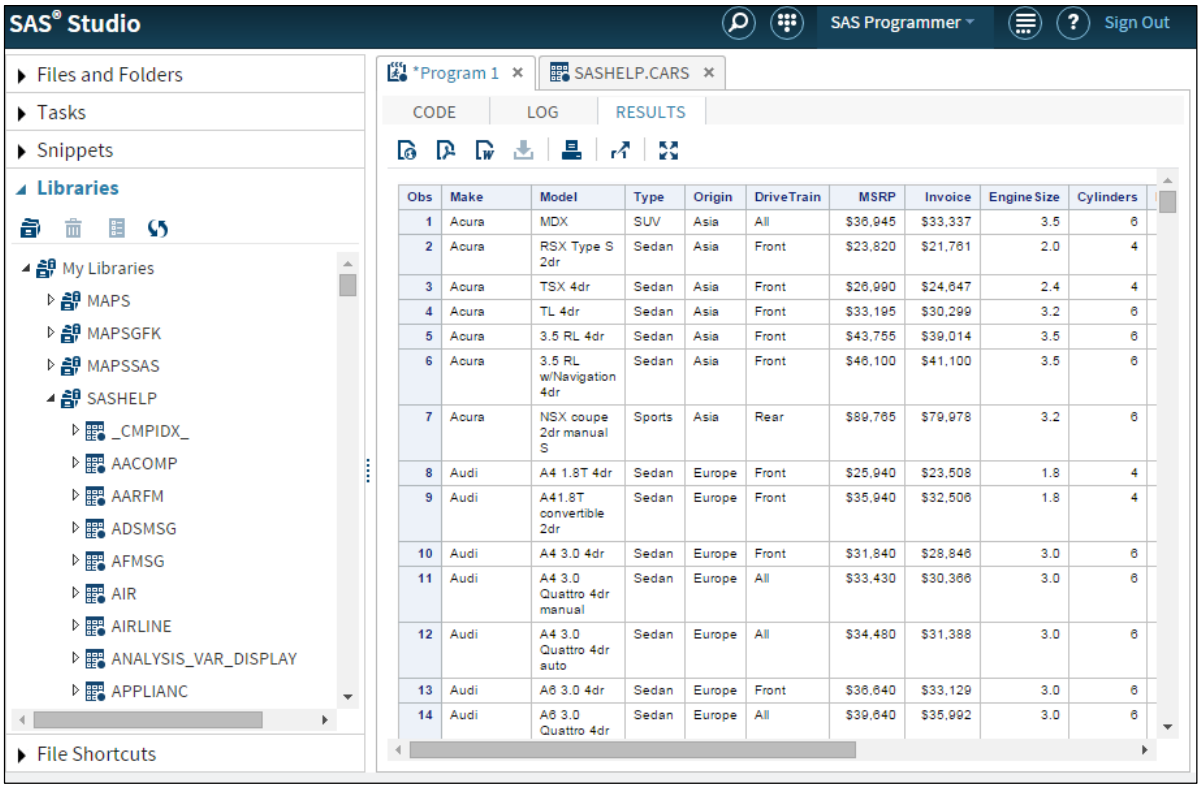


5. Finish the program by entering the following code:

```
proc print data=sashelp.cars;
run;
```

This program tells SAS to print the data table **cars** in the **Sashelp** library. The DATA= option tells SAS which data set to use for the specified procedure. Notice that the library name is followed by a period and then the data set name.

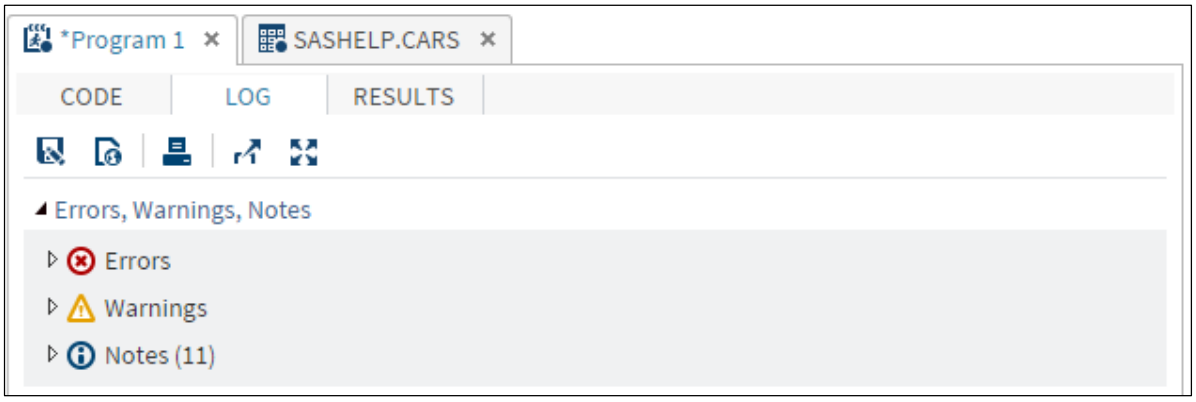
6. Print the **cars** data table by clicking **Run** on the toolbar or pressing **F3**.



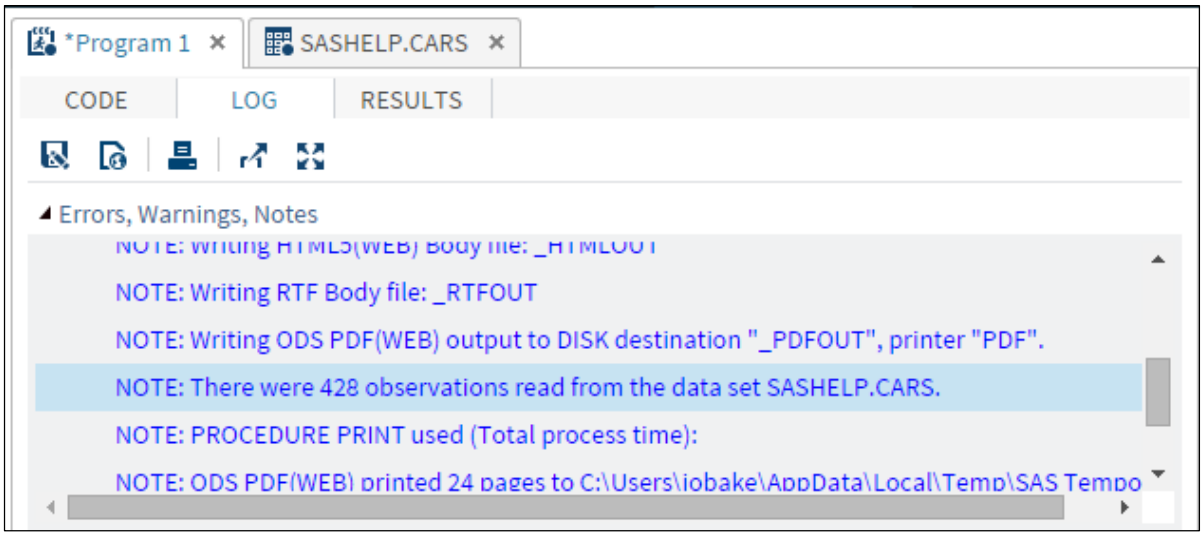
Obs	Make	Model	Type	Origin	DriveTrain	MSRP	Invoice	Engine Size	Cylinders
1	Acura	MDX	SUV	Asia	All	$36,945	$33,337	3.5	6
2	Acura	RSX Type S 2dr	Sedan	Asia	Front	$23,820	$21,761	2.0	4
3	Acura	TSX 4dr	Sedan	Asia	Front	$26,990	$24,647	2.4	4
4	Acura	TL 4dr	Sedan	Asia	Front	$33,195	$30,299	3.2	6
5	Acura	3.5 RL 4dr	Sedan	Asia	Front	$43,755	$39,014	3.5	6
6	Acura	3.5 RL w/Navigation 4dr	Sedan	Asia	Front	$46,100	$41,100	3.5	6
7	Acura	NSX coupe 2dr manual S	Sports	Asia	Rear	$89,765	$79,978	3.2	6
8	Audi	A4 1.8T 4dr	Sedan	Europe	Front	$25,940	$23,508	1.8	4
9	Audi	A41.8T convertible 2dr	Sedan	Europe	Front	$35,940	$32,506	1.8	4
10	Audi	A4 3.0 4dr	Sedan	Europe	Front	$31,840	$28,846	3.0	6
11	Audi	A4 3.0 Quattro 4dr manual	Sedan	Europe	All	$33,430	$30,366	3.0	6
12	Audi	A4 3.0 Quattro 4dr auto	Sedan	Europe	All	$34,480	$31,388	3.0	6
13	Audi	A6 3.0 4dr	Sedan	Europe	Front	$36,640	$33,129	3.0	6
14	Audi	A6 3.0 Quattro 4dr	Sedan	Europe	All	$39,640	$35,992	3.0	6

The results are displayed on the RESULTS tab. Scroll to view different parts of the table. You can open the results in another window, by clicking the **Open in New Browser** tab. In addition, the toolbar on the Results page provides several ways to save the results. You can download and save the results in a Word, PDF, or HTML document by selecting the appropriate icon.

7. As a best practice, always click the **Log** tab to view the errors, warnings, and notes.



8. Click the **Notes** arrow to view the 11 notes that were created.



Notice that the log reports that there were 428 observations read from the **sashelp.cars** data set.

When the log reports errors, it is much easier to click the **Errors** arrow rather than searching for the error throughout the log.

9. Create a new program by selecting **New Options** at the top of the page and then selecting **New SAS Program** (or simply press **F4**).

10. Add the following code to the Program 2 workspace. Use the VAR statement to print only the desired column variables: **Make**, **Model**, **MPG_City**, and **MPG_Highway**.

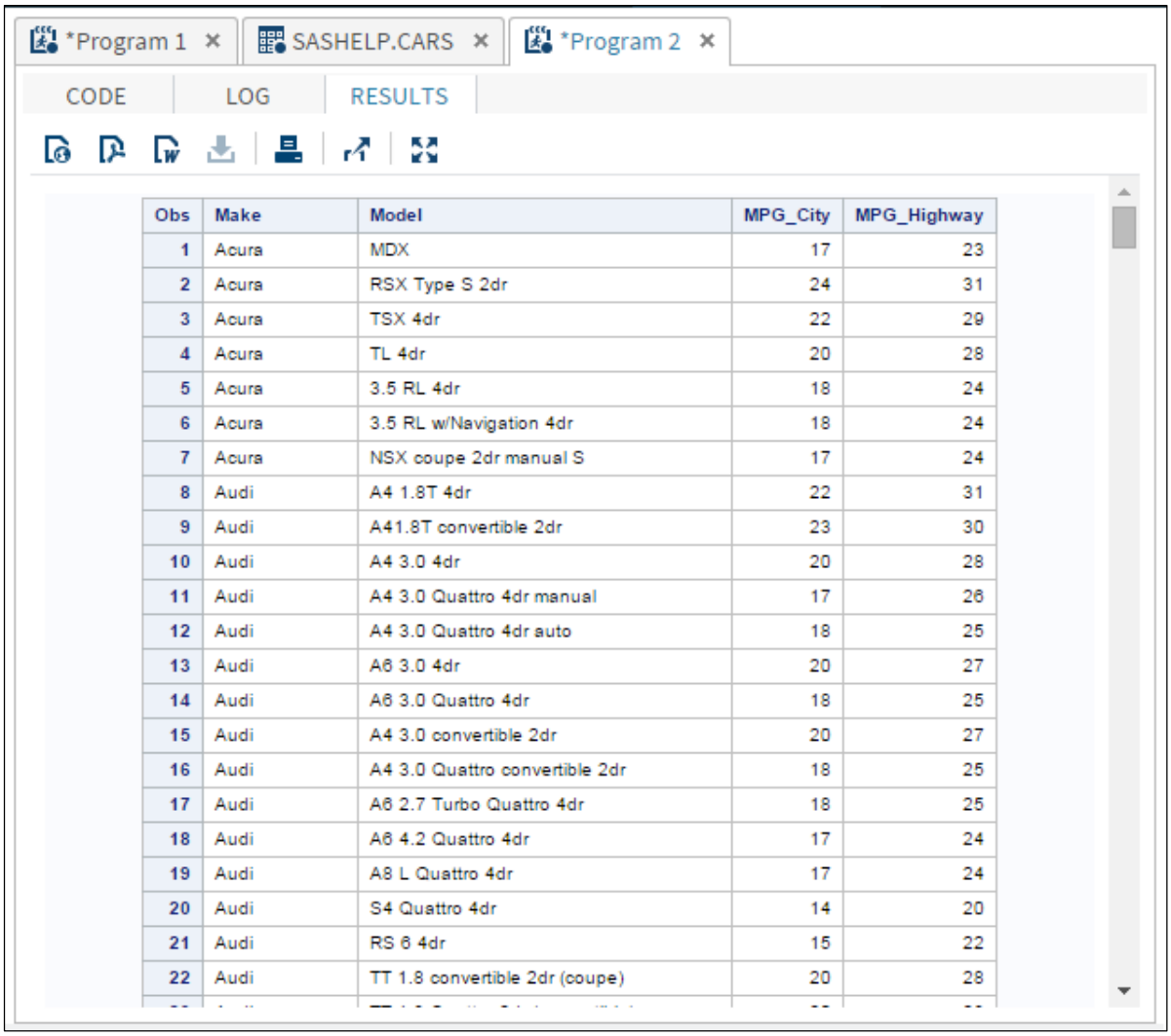
```
proc print data=sashelp.cars;
   var
run;
```

11. In the Libraries pane, select the arrow next to the **cars** data set to view the variables in the data set. Drag and drop the four variables into the program to complete the program.

```
proc print data=sashelp.cars;
   var Make Model MPG_City MPG_Highway;
run;
```

You can also enter the name of each variable.

12. Run the program and view the results.



Obs	Make	Model	MPG_City	MPG_Highway
1	Acura	MDX	17	23
2	Acura	RSX Type S 2dr	24	31
3	Acura	TSX 4dr	22	29
4	Acura	TL 4dr	20	28
5	Acura	3.5 RL 4dr	18	24
6	Acura	3.5 RL w/Navigation 4dr	18	24
7	Acura	NSX coupe 2dr manual S	17	24
8	Audi	A4 1.8T 4dr	22	31
9	Audi	A41.8T convertible 2dr	23	30
10	Audi	A4 3.0 4dr	20	28
11	Audi	A4 3.0 Quattro 4dr manual	17	26
12	Audi	A4 3.0 Quattro 4dr auto	18	25
13	Audi	A6 3.0 4dr	20	27
14	Audi	A6 3.0 Quattro 4dr	18	25
15	Audi	A4 3.0 convertible 2dr	20	27
16	Audi	A4 3.0 Quattro convertible 2dr	18	25
17	Audi	A6 2.7 Turbo Quattro 4dr	18	25
18	Audi	A6 4.2 Quattro 4dr	17	24
19	Audi	A8 L Quattro 4dr	17	24
20	Audi	S4 Quattro 4dr	14	20
21	Audi	RS 6 4dr	15	22
22	Audi	TT 1.8 convertible 2dr (coupe)	20	28

Notice that only the four variables specified in the VAR statement are printed on the Results page.