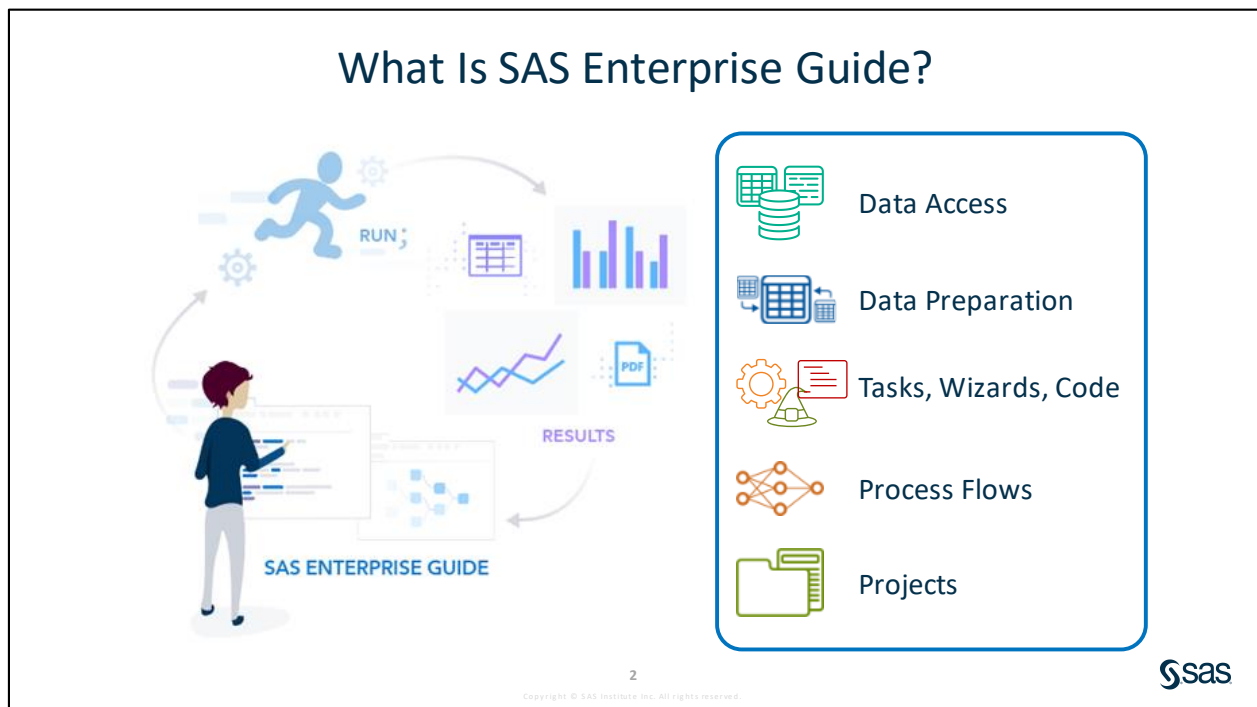


# Overview of SAS Enterprise Guide 8

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# 1.1 Overview of SAS Enterprise Guide 8



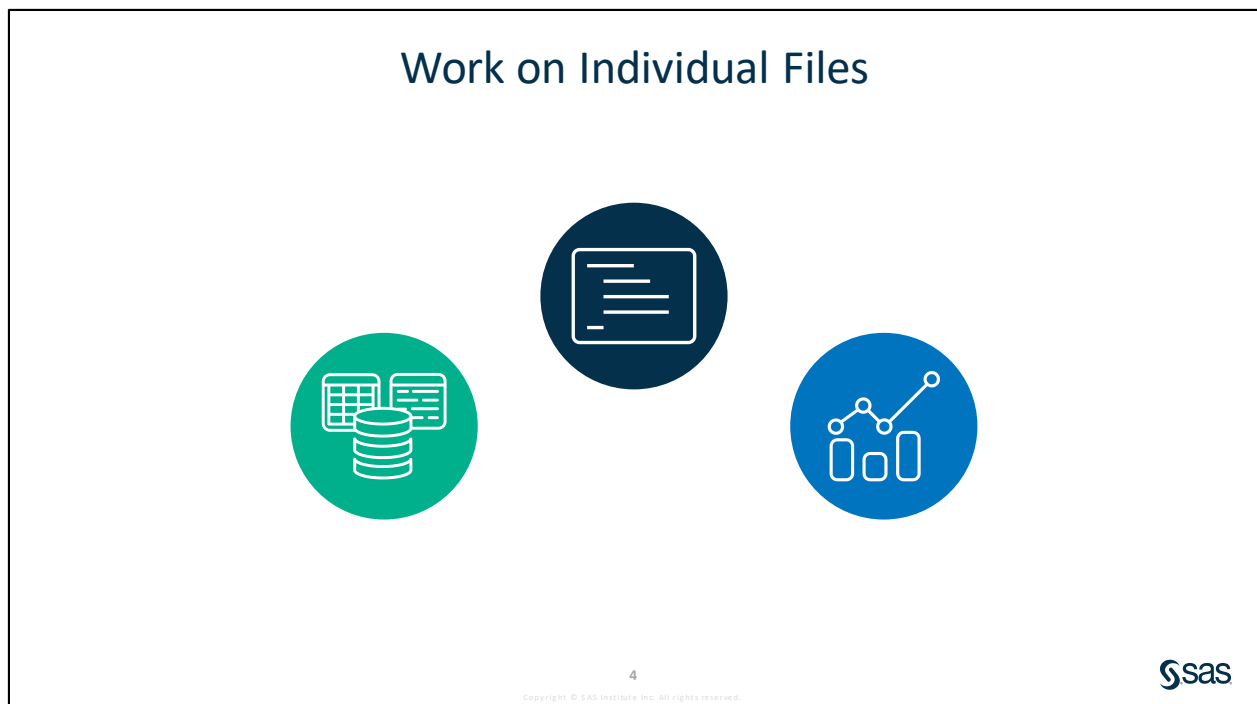
SAS Enterprise Guide is a Microsoft Windows client application that provides an intuitive, visual interface to the power of SAS.

- You have transparent access to both SAS and other types of data.
- When it comes to data preparation, you can join, filter, sort, and transform data using a robust Query Builder or you can write a SAS program.
- Using tasks and wizards, you can analyze data and create reports via point-and-click techniques. Enterprise Guide also has a full, modern Program Editor that you can use to write code.
- Using process flows, you can organize your project and make it easier to update results.
- Projects enable you to manage related data, code, tasks, and results.



A *project* is a single file that is a collection of shortcuts to data, SAS programs and logs, tasks and queries, results, and informational notes for documentation. Projects are saved as a single file with the *.egp* extension, and you can control the contents, sequencing, and updating of a project.

Starting with Enterprise Guide 8.1, when you open a file, you have the option to automatically have the file added to your project or manually control if the item should be added to your project.



Enterprise Guide can now be used as a tool to open and work on individual files such as SAS programs and data. Point-and-click tasks require a project.

## **1.2 SAS Enterprise Guide Demonstrations**

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This section contains several demonstrations to compare previous versions of SAS Enterprise Guide to SAS Enterprise Guide 8. In the demonstrations, you learn to do the following:

- navigate through the SAS Enterprise Guide environment
- use new project features

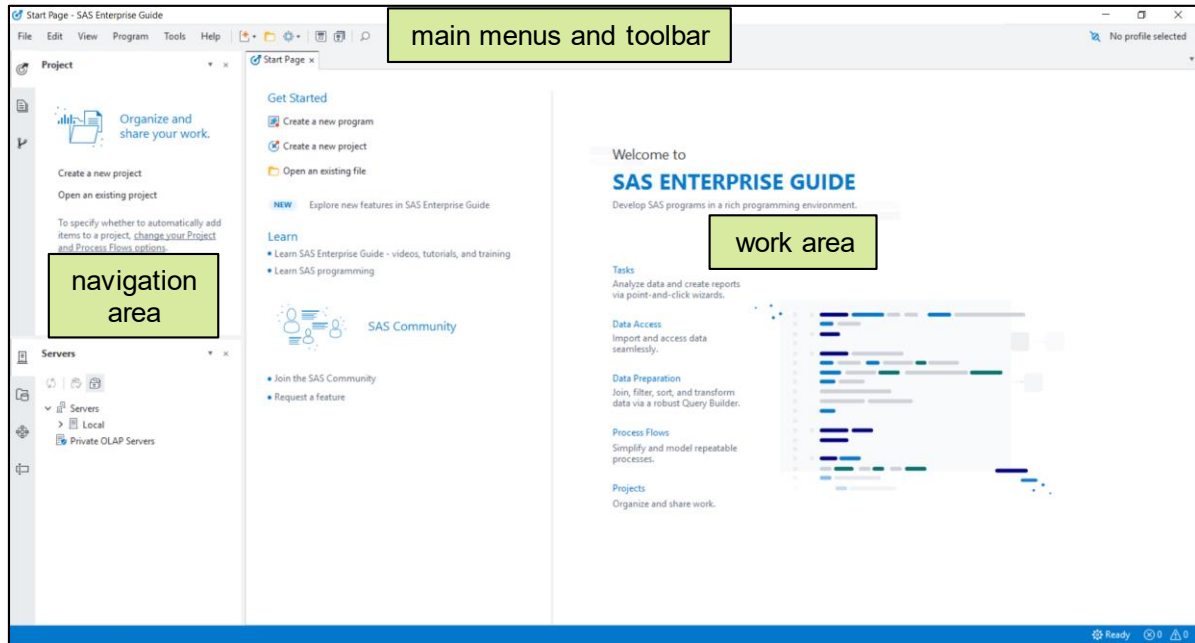


## Navigating the SAS Enterprise Guide Environment

This demonstration illustrates how to navigate through the SAS Enterprise Guide environment.

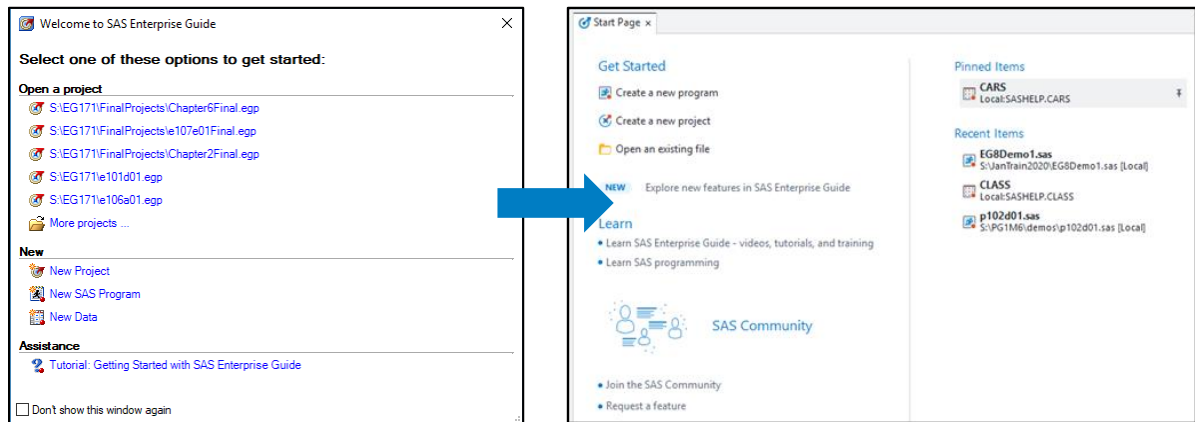
### 1. Start Enterprise Guide.

Enterprise Guide displays three main areas by default: the navigation area on the left, the work area on the right, and the main menus and toolbar at the top.





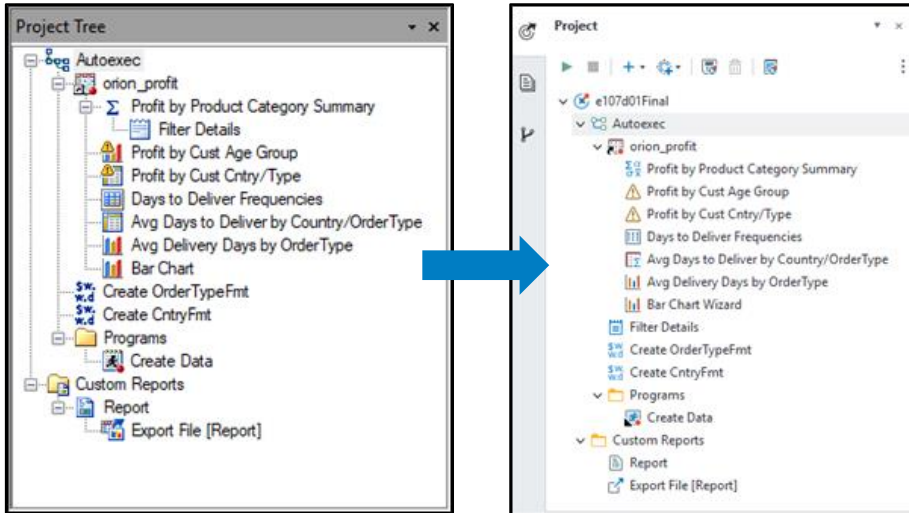
### 2. As you open data and programs and run tasks, new tabs appear in the work area.







By default, the Start Page is open in the work area to quickly create a new program or project, or open an existing file. As you open files, the Start Page displays your recent items, with the ability to pin them to the Start Page. The Start Page has replaced the Welcome to SAS Enterprise Guide window from previous versions of Enterprise Guide.

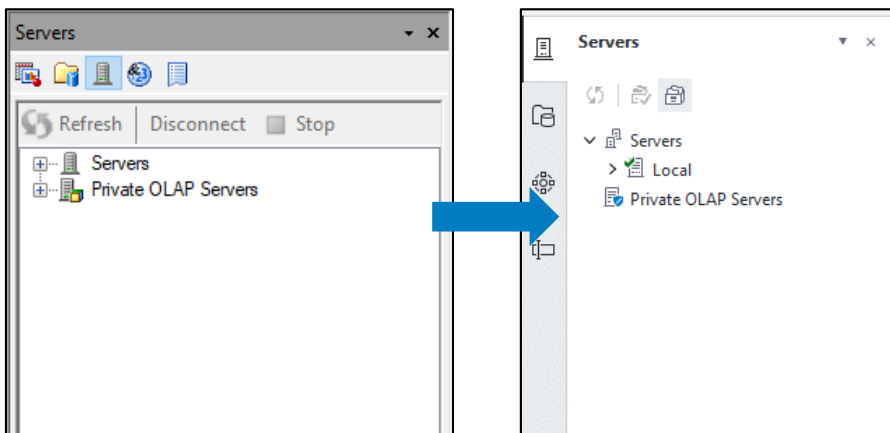



## 3. By default, the navigation area contains these panes:

- The Project pane  displays the active project and its associated data, programs, and tasks. When a project is open, the Project pane  is similar to the Project Tree in previous versions of Enterprise Guide.



- The Open Items pane  enables you to quickly view and access all items that are currently open in the work area. You can use this pane to quickly close all or selected tabs.
- The Git Repositories pane  provides access to basic Git features to track changes and manage version control among multiple users. This is a new pane starting with Enterprise Guide 8.2.
- The four panes in the bottom portion of the navigation area are equivalent to what was available in the Resources pane in previous versions of Enterprise Guide.
  - The Servers pane  displays a list of servers that are known to Enterprise Guide.
  - The SAS Folders pane  displays a list of the SAS folders that you can access.
  - The Tasks pane  displays a list of tasks that can include any tasks that are shipped with Enterprise Guide, any custom tasks, and any tasks that are shipped with SAS Studio.
  - The Prompt Manager pane  is used to create, edit, and delete prompts that allow for user input in tasks and SAS programs.

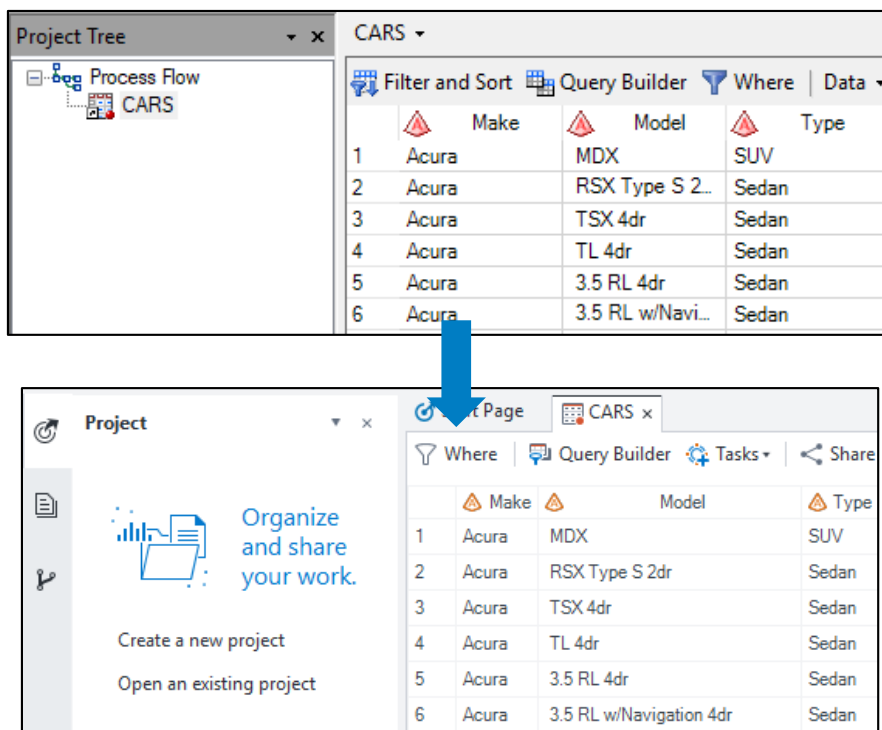




4. To open a file, on the main toolbar, click  (**Open a file**) to access the Open window. Notice that you no longer select what type of file you are opening before navigating your files. In addition, recent files and locations are listed and can be pinned for quick access. Select **Servers** ⇒ **Browse**. Double-click *your-server-name* ⇒ **Libraries** ⇒ **SASHELP**. Select **CARS** and click **Open**.

**Note:** Alternative ways to access the Open window:

- On the main toolbar, select **File** ⇒ **Open**.
  - On the Start Page, click **Open an existing file**.
  - Press Ctrl+O.
5. Notice that a project is *not* automatically created like previous versions of Enterprise Guide. Starting with Enterprise Guide 8.1, you are not required to use a project to work with individual files such as programs and data.

**Note:** Columns in the data grid are now auto-sized to the column heading label and values. To turn this feature off, on the main toolbar, select **Tools** ⇒ **Options**. In the Options window, select **Data – General**, and clear the **Auto-size column widths** check box.



6. You can move tabs or panes freely within or outside of the main application window, or dock them in predefined areas. To float the CARS tab, drag the tab, or alternatively, right-click the tab, and select **Float**. To dock it, on the CARS tab, click  (**Window options**) and select **Dock as tabbed document**. Alternatively, you can drag the tab back to its original location or use the Layout Guide to drag it to predefined regions in the work area.
7. To create a new SAS program, on the main toolbar, click  (**Create a new item**) ⇒ **Program**. Type or copy and paste the following code into the new SAS program.

**Note:** Alternative ways to create a new SAS program include these:

- On the main toolbar, select **File** ⇒ **New** ⇒ **Program**.
- On the Start Page, click **Create a new program**.

```


data class_metric(drop=Height Weight)
  class_imperial(drop=HeightCM WeightKG);
  set sashelp.class;
  HeightCM=Height*2.54;
  WeightKG=Weight/2.2;
run;

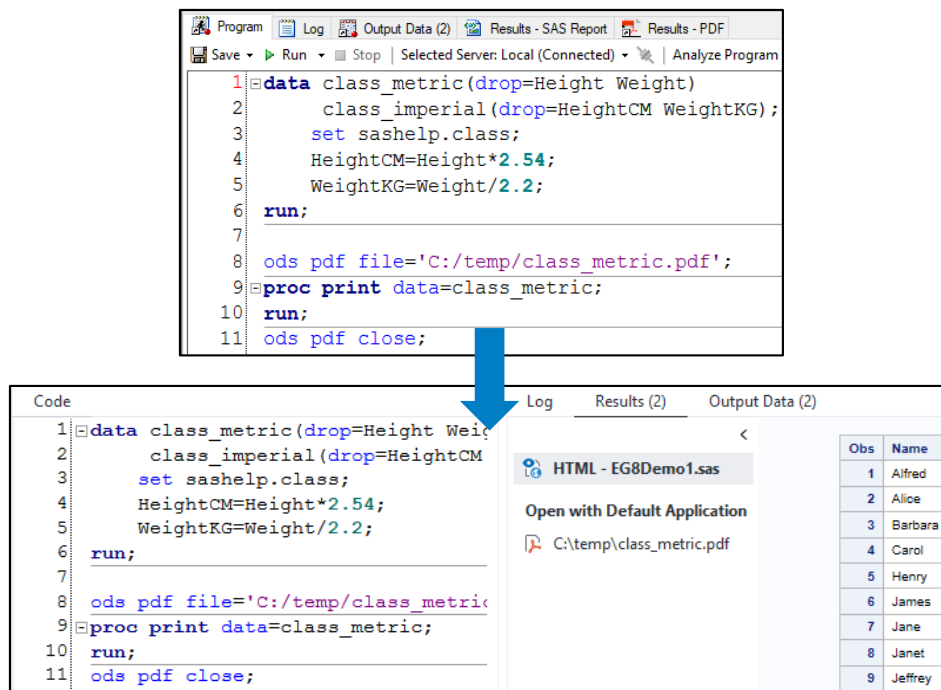
ods pdf file='C:/temp/class_metric.pdf';
proc print data=class_metric;
run;
ods pdf close;

```



You might need to adjust the file path in the ODS PDF statement to a path that is available.

- Click  (**Run**) on the Program Editor toolbar or press the F3 key on your keyboard to run the entire program. Notice that, by default, the Code tab is on the left and the Log, Results, and Output Data tabs are on the right.



The screenshot shows the SAS Enterprise Guide interface. The top window is the Program Editor, displaying the SAS code. A blue arrow points from the Run button in the toolbar to the Code editor. The bottom window shows the Output Data tab, which contains a table with 9 observations and 2 columns: Obs and Name.

Obs	Name
1	Alfred
2	Alice
3	Barbara
4	Carol
5	Henry
6	James
7	Jane
8	Janet
9	Jeffrey

- You can move the Code, Log, Results, and Output Data tabs freely within or outside of the application, or dock them in predefined areas using the same methods to float and dock tabs and panes. Alternatively, you can define a layout for all SAS programs. On the main toolbar, select **View** ⇒ **Program tab presets** to view the available program tab layouts. Select **Standard**.

**Note:** To quickly restore the default application layout, on the main toolbar, select **View** ⇒ **Reset to default layout** ⇒ **Restore**.



```

Code   Log   Results (2)   Output Data (2)
1 data class_metric(drop=Height Weight)
2     class_imperial(drop=HeightCM WeightKG);
3     set sashelp.class;
4     HeightCM=Height*2.54;
5     WeightKG=Weight/2.2;
6 run;
7
8 ods pdf file='C:/temp/class_metric.pdf';
9 proc print data=class_metric;
10 run;
11 ods pdf close;

```

10. Click the **Results** tab. The default output format is HTML instead of SAS Report like in previous versions of Enterprise Guide. All output formats generated are listed on tabs.

**Note:** To change the default output format, on the main toolbar, select **Tools** ⇒ **Options**. In the Options window, select **Results – General**, and in the Result Formats pane, select any desired output formats. Click **OK** to save the changes.

The screenshot shows the SAS Enterprise Guide interface. The top window displays a table with the following data:



Obs	Name	Sex	Age	HeightCM	WeightKG
1	Alfred	M	14	175.260	51.1364
2	Alice	F	13	143.510	38.1818
3	Barbara	F	13	165.862	44.5455
4	Carol	F	14	159.512	46.5909
5	Henry	M	14	161.290	46.5909
6	James	M	12	145.542	37.7273
7	Jane	F	12	151.892	38.4091

A blue arrow points from this table to the bottom screenshot. The bottom screenshot shows the same interface with the **Results (2)** tab selected. A list of output formats is displayed on the left, with **HTML - EG8Demo1.sas** selected and circled in red. The table data is visible on the right side of the window.

11. To view the PDF results, double-click the tab with the PDF icon. The results open outside of Enterprise Guide. Close the PDF file.
12. Click the **Output Data** tab. Similar to the Results tab, all generated output tables are listed on tabs. Double-click the **CLASS\_METRIC** tab to view the table.

The screenshot shows the 'Output Data (2)' window in SAS Enterprise Guide. The window displays a table with 5 rows of data. A dropdown menu is open over the table, showing 'CLASS\_METRIC' selected. A blue arrow points from the dropdown to the 'Output Data (2)' window below.

	Name	Sex	Age	HeightCM	WeightKG
1	Alfred	M	14	175.26	51.136363636
2	Alice	F	13	143.51	38.181818182
3	Barbara	F	13	165.862	44.545454545
4	Carol	F	14	159.512	46.590909091
5	Henry	M	14	161.29	46.590909091

13. Return to the Code tab and highlight the PROC PRINT step. The  (Run) button runs either the entire program if nothing is highlighted, or only the highlighted portion of your code. Click  (Run), or use the F3 key on your keyboard.

The screenshot shows the Code window in SAS Enterprise Guide. The 'proc print data=class\_metric;' line is highlighted. A blue arrow points from the highlighted line to the 'Run' button in the Code window below.

```

1  proc print data=class_metric;
2  run;
3  set sashelp.class;
4  HeightCM=Height*2.54;
5  WeightKG=Weight/2.2;
6  run;
7
8  ods pdf file='C:/temp/class_metric.pdf';
9  proc print data=class_metric;
10 run;
11 ods pdf close;

```



Notice that there is no prompt asking **Do you want to replace the results from the previous run?**. The results are automatically replaced.



- Click the **CARS** tab, and notice the banner with the message **Data unlocked due to inactivity. Values may be out-of-date or not available until refreshed.** When you open data in the data grid, the physical data is locked from updating, preventing users or processes from updating the data. By default, after three minutes of inactivity, the underlying lock on the data is released and the banner appears in the data grid with this message. Click **Refresh** on the banner to re-open the data, which re-establishes the data lock and re-populates the data grid with the latest values.

**Note:** To change the period of inactivity to release the data lock, on the main toolbar, select **Tools** ⇒ **Options**. In the Options window, select **Data – Performance**, and modify the time on the **Unlock open data after inactivity (minutes)** option.

The screenshot shows the SAS Enterprise Guide interface. At the top, there are tabs for 'Start Page', 'CARS', and 'EG8Demo1.sas'. Below the tabs is a navigation bar with 'Where', 'Query Builder', 'Tasks', and 'Share' options. A yellow banner across the top of the data grid reads: 'Data unlocked due to inactivity. Values may be out-of-date or not available until refreshed.' with a 'Refresh' button on the right. Below the banner is a data grid with the following columns: Make, Model, Type, Origin, DriveTrain, MSRP, Invoice, EngineSize, Cylinders, and Horsepower. The data rows are:

	Make	Model	Type	Origin	DriveTrain	MSRP	Invoice	EngineSize	Cylinders	Horsepower
1	Acura	MDX	SUV	Asia	All	\$36,945	\$33,337	3.5	6	2
2	Acura	RSX Type S 2dr	Sedan	Asia	Front	\$23,820	\$21,761	2	4	2
3	Acura	TSX 4dr	Sedan	Asia	Front	\$26,990	\$24,647	2.4	4	2

- In the Open Items pane , in the navigation area, select **EG8Demo1.sas**, hold down the Ctrl key, and select **CARS**. Click  (**Close**) to close the selected tabs.

**Note:** To close all tabs, in the Open Items pane , click  (**More options**) and select **Close all**.

**End of Demonstration**






## Using Features of Projects

This demonstration illustrates how to use features of Enterprise Guide projects.

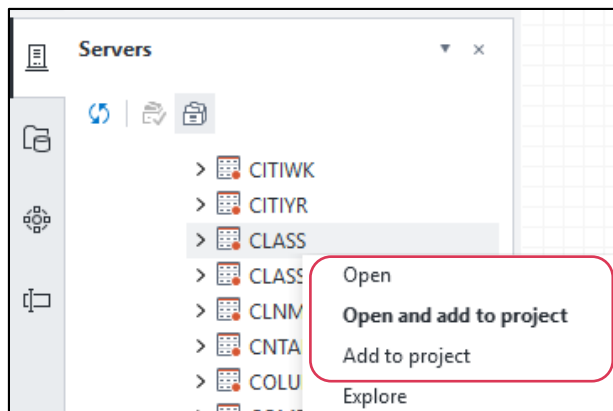
- To start a new project, on the main toolbar, select **File** ⇒ **New** ⇒ **Project**.

**Note:** Alternative ways to start a new project include these:

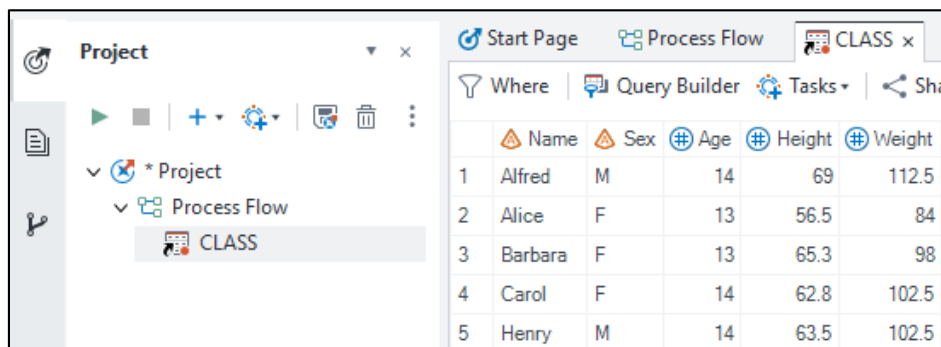
- On the main toolbar, click  (Create a new item) ⇒ **Project**.
- On the Start Page, click **Create a new project**.
- If no project is currently open, in the Project pane , click **Create a new project**.

- In the Servers pane , expand **Servers** ⇒ *your-server-name* ⇒ **Libraries** ⇒ **SASHELP**. Right-click **CLASS** and notice the different options, including **Open**, **Open and add to project**, and **Add to project**. The default behavior is the bolded **Open and add to project** option. Therefore, files are automatically opened and added to the project, which is the same behavior as previous versions of Enterprise Guide.


**Note:** The same open and add options are available for files in the Pinned Items and Recent Items list on the Start Page tab and in the Open window.

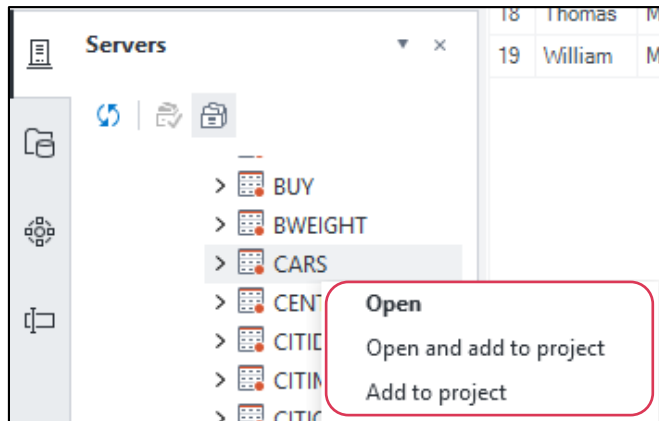


- Double-click **CLASS**. Notice that the table opens in a new tab in the work area and is automatically added to the project.

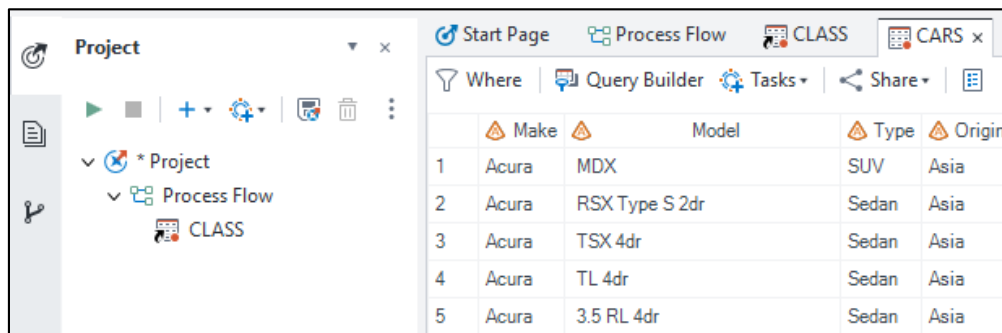




- To explicitly control which files are added to your project, the default behavior can be modified. On the main toolbar, select **Tools** ⇒ **Options**. In the Options window, select **Project and Process Flows**. Clear the **When an item is opened, automatically add to the project** option, and click **OK** to save the changes.

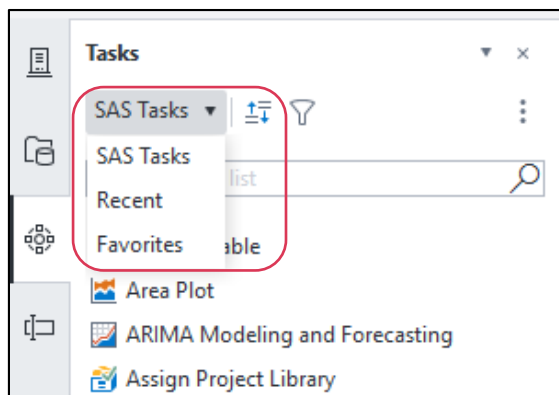
5. In the Servers pane , expand **Servers** ⇒ *your-server-name* ⇒ **Libraries** ⇒ **SASHELP**. Right-click **CARS**, and notice that the bolded default behavior has changed to **Open**.





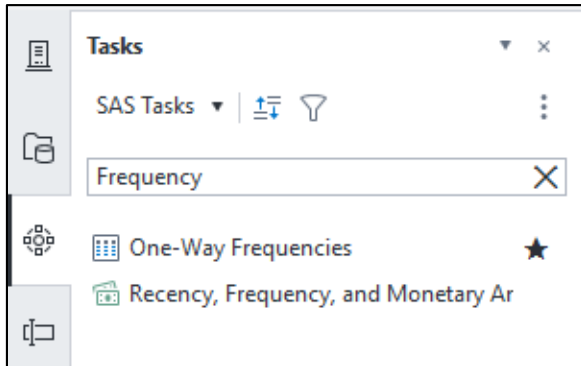
6. Double-click **CARS**. The table opens in a new tab but is not added to the project.



7. To manually add the **CARS** table to the project, right-click the **CARS** tab, and select **Add to project**.
8. There are several ways to start a task. With the **CARS** tab active, view the Tasks pane  in the navigation area. By default, tasks are categorized, but you can select  (**Sort**) ⇒ **Name** to view an alphabetical list of all tasks instead. You can also use the drop-down menu to display all tasks, recently accessed tasks, or favorite tasks.





9. On the Tasks pane , use the search bar to search for **Frequency**. Click the star icon  next to the One-Way Frequencies task to make it a favorite.

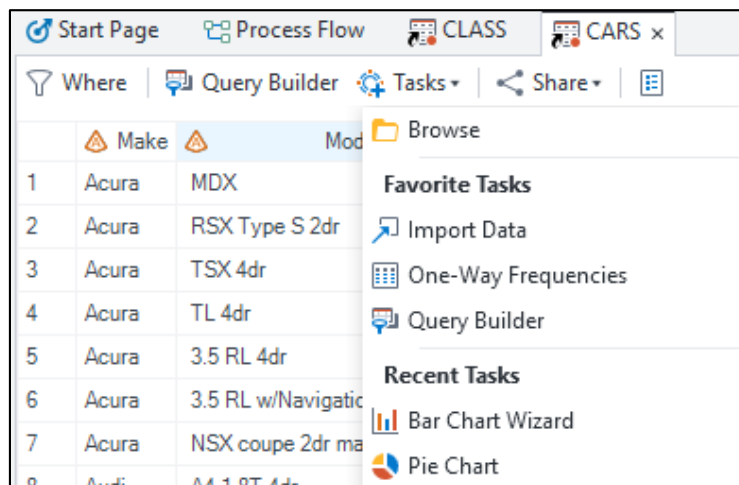


10. Another way to start a task is by using the data grid toolbar. On the CARS tab, click **Tasks**. This is a quick way to access favorite and recent tasks, but you can select **Browse** to view all tasks. Under Favorite Tasks, select **One-Way Frequencies**.

**Note:** Here are alternative ways to start a task:


- On the main toolbar, click  (**Open a task**).
- On the Project pane , click  (**Add tasks to the project**).
- On the process flow toolbar, select **Tasks**.

**Note:** The Import Data Wizard and the Query Builder are included under Favorite Tasks by default.

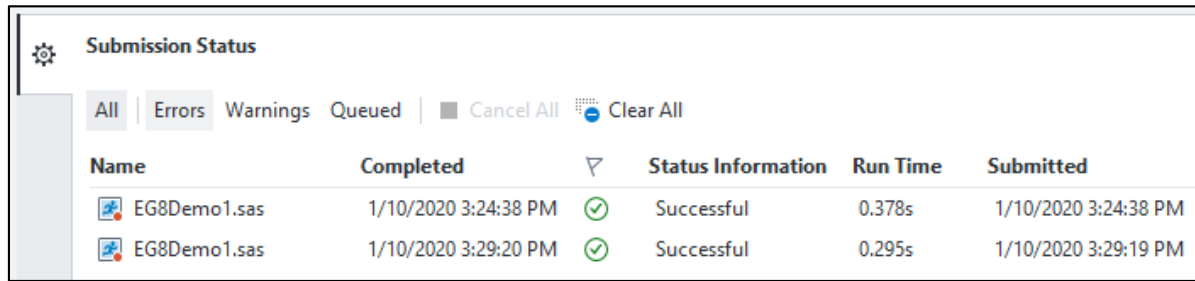


11. The task windows have had minimal changes, which enables you to use them the same way you did in previous versions of Enterprise Guide. Click **Help** in the task window. The documentation for Enterprise Guide is now available online at the SAS Help Center. This provides easy access to additional documentation, such as the Programming Documentation for SAS 9.4 and SAS Viya. Close the documentation and the One-Way Frequencies task.

**Note:** Alternatively, on the main toolbar, you can select **Help** ⇒ **SAS Enterprise Guide help** to access the documentation.

12. At the bottom of the work area, click  (**Submission Status**). The Submission Status pane enables you to see a list of items that are queued to run, that are currently running, and that

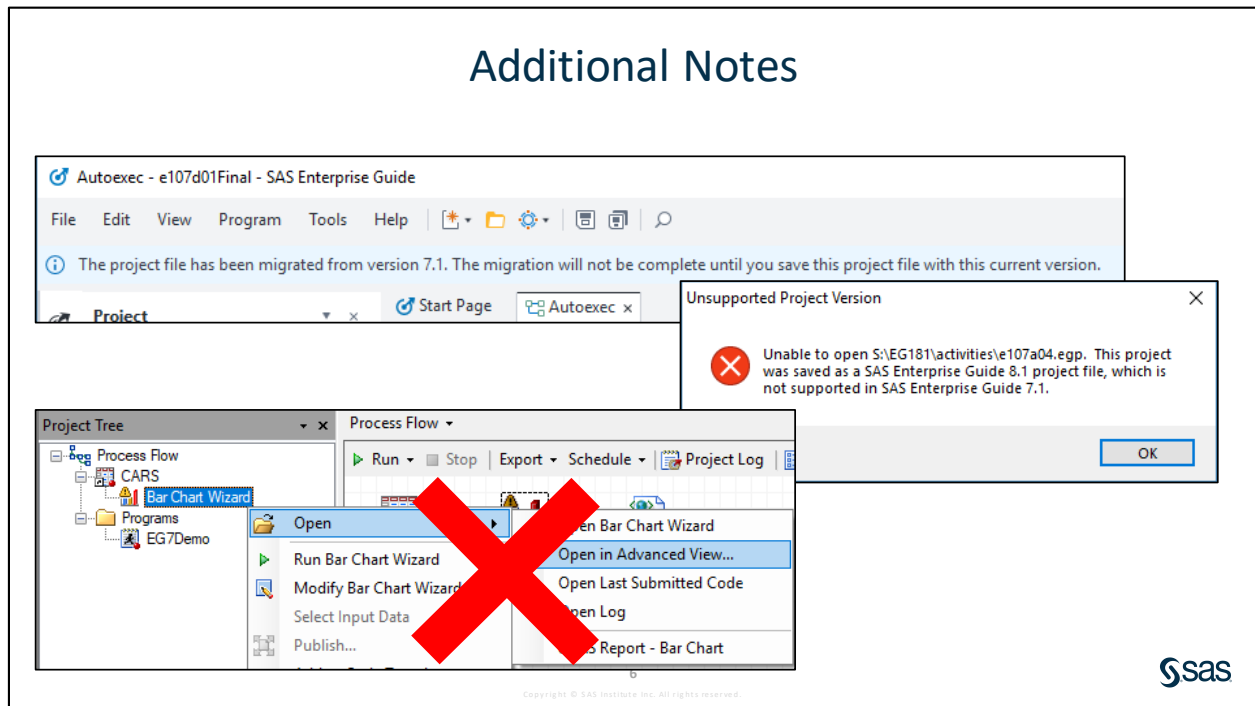
have completed in the current session, along with information such as the status, run time, and more. This has replaced the Task Status window from previous versions of Enterprise Guide.



Name	Completed	Status Information	Run Time	Submitted
EG8Demo1.sas	1/10/2020 3:24:38 PM	Successful	0.378s	1/10/2020 3:24:38 PM
EG8Demo1.sas	1/10/2020 3:29:20 PM	Successful	0.295s	1/10/2020 3:29:19 PM

**End of Demonstration**

## 1.3 Additional Notes



- Projects created in earlier versions of Enterprise Guide **can** be opened with Enterprise Guide 8. You see a message on the notification banner indicating that the migration process is not complete until you save the project through Enterprise Guide 8.
- Projects created in Enterprise Guide 8.1 or later **cannot** be opened in previous versions of Enterprise Guide. You see an error message indicating that this is not supported.
- In previous versions of Enterprise Guide, if you used a wizard to generate results and if there was a corresponding task available, you could right-click the task icon and select **Open** ⇔ **Open in Advanced View** to transfer the selections made in the wizard to the task. This enables you to access more customization options through the task. Although both wizards and tasks are still available, the ability to start from a wizard and use Advanced View to move to the task is no longer available.



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