

(Sources: Various – Not all sources are referenced here)

<https://support.sas.com/software/products/university-edition/faq/main.htm>

SAS University Edition

It is a powerful statistical package provided free of cost by SAS Institute to universities. SAS Studio is the user interface for SAS University Edition. SAS Studio is a browser interface that you access using the web browser of your computer. The common browsers are Internet Explorer, Safari, Firefox, and Chrome.

An advantage of a browser interface is that the computer doing the processing could be anywhere on the web. Usually, it will be the same PC as the browser is running on but could equally well be a remote computer or a cloud computing service, such as Amazon Web Services. In the latter case, the browser could be running on a mobile device such as a tablet.

What does SAS® University Edition do?

SAS University Edition is free SAS software that can be used for teaching and learning statistics and quantitative methods. It is useful in such areas as economics, psychology and other social sciences, computer science, business, medical/health and engineering.

Why is SAS® University Edition important?

Throughout the world both public and private sectors are experiencing a technical analytics skills gap. SAS is helping to build the statistical knowledge needed to fill this gap and provide the workforce with high-demand skills to solve problems with analytics.

For whom is SAS® University Edition designed?

SAS University Edition is designed for those who want easy access to statistical software to learn and perform quantitative analysis. This includes teachers, professors, students, academic researchers and independent learners.

- **SAS Studio.** Reduce your programming time with autocomplete for hundreds of SAS statements and procedures, as well as built-in syntax help. You can use JupyterLab as an alternative interface.

Components of SAS Studio

Invoke SAS University Edition by using SAS Studio, and you'll see that SAS University Edition has two basic windows.

- The Navigation pane that houses the files, folders, tasks, snippets, libraries, and file shortcuts

Navigation Pane

The Navigation pane gives you access to the following:

- Server Files and Folders: Displays the content that is visible to SAS University Edition.
- Tasks: Contains menus for data manipulation, graphics, and statistical analysis.
- Snippets: Contains saved segments of SAS syntax or code that can be edited. You can also add your own snippets.
- Libraries: Contains a collection of SAS files. (SAS files are stored in libraries.)
- File Shortcuts: Provides shortcuts similar to what's in the Microsoft environment.

Work area

The work area contains that has four tabs:

- Program
- CODE
- LOG
- RESULTS

Guide to Setting Up SAS University

- 1) About half way down the SAS University web page is a box labeled “Technical Information” which has two links. Check the system requirements link so you know what is required. Close the “Technical Information” window and click the “Technical Support” link. Under the “Samples and Tips” tab are some short videos that you might view to better orient yourself with regards to the SAS University set-up, including Oracle Virtual Box. This is not necessary, but is a very helpful guide.
- 2) Now return to the SAS University web page and click on the “Download Free Software” link at the top of the page. A panel will appear with two options: Direct Download and Run in the Cloud. Choose Direct Download. This will take you to a page titled “Download SAS University”. About halfway down this page is the subsection “How to Download SAS University Edition.” Follow the steps outlined.

Step 1.

Requires you to download the virtualization software. Students have installed both types of software and they appear to work fine. However, preference will be given to Oracle VirtualBox since this is what is installed on the instructor’s computer.

Step 2

This step in the process provides links to documentation: “Quick Start for VirtualBox” or “Quick Start for VMWare” depending on your choice of virtualization software. The pdf downloaded provides the set-up instructions for your virtualization software. You will likely need to refer to this document during the set-up process. This same information is available through online video. I would encourage you to view video for the virtualization software set up.

Step 3

Download the SAS University Software for the type of virtualization software you have selected. This is a large file (1.3 gigabytes) and will take some time to download.

Step 4

“Quick Start for VirtualBox” or “Quick Start for VMWare” depending on your choice of virtualization software.

During the set-up process, you will be required to have the SAS University information and start-up software located on your local machine. This folder should be on your operating system (OS) and should be named **SASUniversityEdition**. Within this folder, there should be a subfolder named **myfolders**. All programs and data that you want to access must be located within this subfolder, as SAS University cannot see any other directories on your computer. Through the virtualization software you can create short-cuts to other folders on your computer, but that will be left to the individual and will not be discussed.

An important part of the installation is the creation of shared folders. We recommend using `c:\SASUniversityEdition\myfolders` as the path and `myfolders` as the name. Take care to match the case exactly.

1.8.1 Starting the SAS University Edition

To start the SAS University Edition under Windows:

1. Start VirtualBox or VMware Player.
2. Start (or play) the SAS University Edition virtual machine. It takes a little time to start and then shows an address to enter in your browser. For VirtualBox, this is likely to be <http://localhost:10080>; for VMware Player, it will be an IP address such as <http://172.16.49.136>.
3. Note this address.
4. Minimize VirtualBox or VMware Player (do not close it).
5. Start your browser and enter the address above in the address box (the initial `http://` might be optional).
6. At the welcome screen, click **Start SAS Studio**.

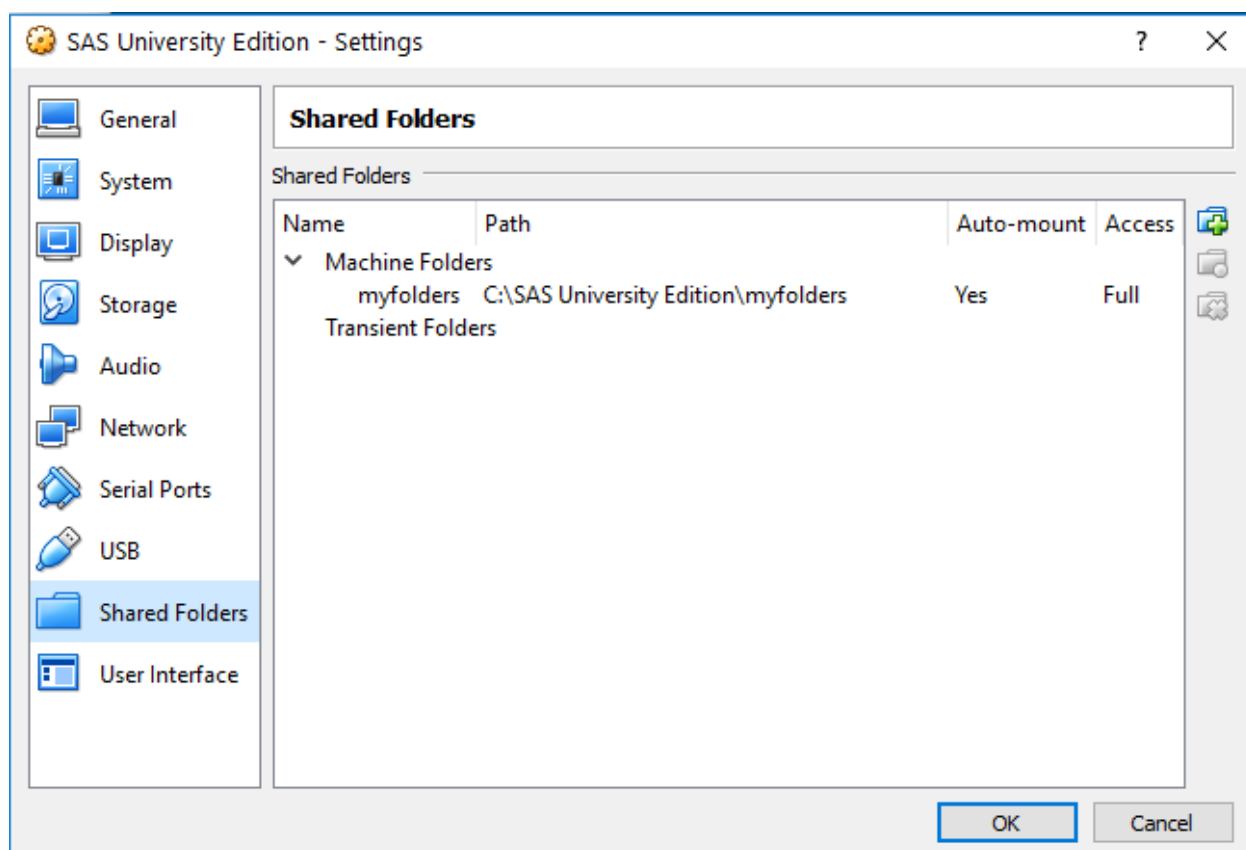
1.8.2 The SAS University Edition User Interface



The SAS University Edition interface is shown in Display 1.1 and consists of a navigation pane on the left and a work area on the right. In the view shown in Display 1.1, the work area is itself split into two parts: the settings pane and the results pane. Display 1.1 is based on an example in Chapter 4, Section 4.2.3.

The instructions for installing SAS University Edition included setting up a shared folder. The recommended path for this was C:\SASUniversityEdition\myfolders and the name for the shared folder myfolders. (If you did not create a shared folder at installation, you will need to do it now.)


1. Start SAS University Edition.

Below are the SAS University Edition settings for the shared folders (saved).



2. Under **Server files and folders ► My Folders**, click the **New** button () , select **Folder** from the drop-down menu, type **sasdata** for the name, and click **Save**.
3. Select the newly created **sasdata** folder and click the **Upload Data** () button.
4. Click **Choose files**, and navigate to the place where the downloaded online materials were saved.
5. Select all sasdata files (that is, those with the extension .sas7bdat), and click **Upload**.
(On a PC, it is also possible to simply copy the downloaded **sasdata** folder to C:\SASUniversityEdition\myfolders.)

Having copied or uploaded the SAS data files, we now need to assign them to a library.

1. In the navigation area under **Libraries**, click the **New Library** button () .
2. In the box for the name, enter **sasue**.
3. For the path, enter **/folders/myfolders/sasdata**.
4. Select **Re-create this library at start-up**.

SAS University Edition: Help Center

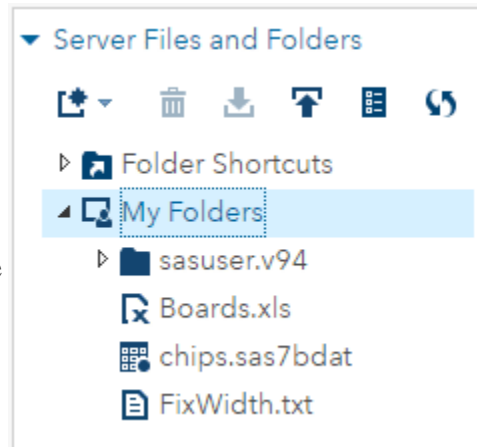
[« Return to Help Center](#)

How do I reference SAS data from within a SAS program?

You can access SAS content from within a SAS program by using your `myfolders` folder or by using folder shortcuts. Remember that directory paths and filenames are case sensitive. You must also always use "/" in the directory path and enclose any directory paths that contain a macro variable in double quotation marks.

In SAS Studio, you can view your data and results from the navigation pane, as shown in this screenshot.

To access this SAS content from within a SAS program, use these guidelines:



- To access content from **My Folders**, use `/folders/myfolders/filename`. If you are running the SAS University Edition vApp using VirtualBox, VMware Workstation Player, VMware Fusion, or VMware Player, **My Folders** is the location of the default shared folder for your virtualization software. To use a file in SAS University Edition on Amazon Web Services Marketplace, you must upload the file via SAS Studio.
- To access content from a folder shortcut (which is a shortcut to directories on your local computer), use `/folders/myshortcuts/folder-name`. If you are running the SAS University Edition vApp using VirtualBox, VMware Workstation Player, VMware Fusion, or VMware Player, these folder shortcuts must be defined as additional shared folders in your virtualization software.
- Always use '/' in the directory path, even in Windows operating environments.
- Enclose any directory paths that contain a macro variable in double quotation marks (").
- Directory paths and filenames are case sensitive.



In SAS Studio, some code snippets might use a hardcoded path for file references. Before saving your work, verify that the directory path is correct for your program.

Additional topics

- [Where do I save my work?](#)
- [How do I create a shared folder in VirtualBox?](#)
- [How do I create a shared folder in VMware Workstation Player or VMware Fusion?](#)
- [How do I create a folder shortcut to my existing SAS files?](#)

- [How do I use my existing SAS data, Microsoft Excel data, or raw data in SAS Studio?](#)
-

[Accessing Your Existing Data: for SAS University Edition](#) (Video)



 [Cynthia sas](#)

SAS SUPER FREQ

Solution

Re: how to use own data in SAS university edition

Posted 08-10-2014_ (23912 views) | In reply to [mark_d_haynes](#)

Hi:

There are 2 ways to "map" your C: drive:

- 1) direct (copy files into a specific physical location)
- 2) shortcut (define a nickname/alias for a physical location to be used as a shortcut)

Both ways involve setup options in your Virtual Machine instructions, as follows:

1) direct method: You make a physical folder on your system called SASUniversityEdition and under that folder, you make a subfolder called myfolders. For example, on Windows, this location would be:

c:\SASUniversityEdition\myfolders the Unix equivalent of that location would be /folders/myfolders (note the Unix slashes. So if you have a subdirectory under /myfolders like this:

c:\SASUniversityEdition\myfolders\wombat then the Unix equivalent of that location would be /folders/myfolders/wombat

AND, if the wombat subdirectory had a file named sse.ret.dat, then

c:\SASUniversityEdition\myfolders\wombat\sse.ret.dat would translate to:

INFILE '/folders/myfolders/wombat/sse.ret.dat';

as described here: <https://communities.sas.com/message/218581#218581> (about importing Excel files) and here about creating a library <https://communities.sas.com/message/222449#222449> and using INFILE statements. Method 1 requires you to MOVE or COPY your files or CREATE your files in the folder location that has been defined to your Virtual Machine as a shared folder location.

2) The #2 method involves shortcuts. My recommendation is that you master setting up the #1 method before moving to the #2 method. You have the same issues with Unix slashes and a slightly different naming convention. And, you still have to do setup in your Virtual Machine to make the shortcut (or indirect) method work. The direction for Folder Shortcuts is here: [How do I create a](#)

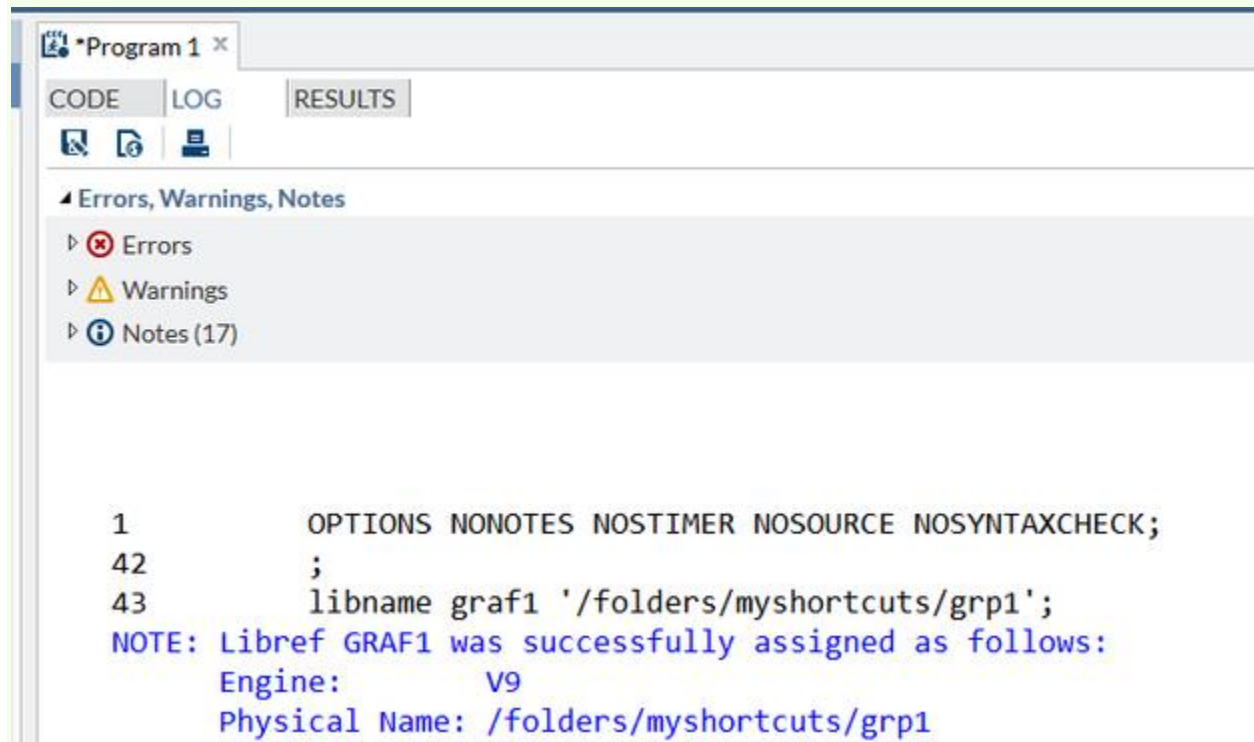
[folder shortcut to my existing SAS files?](#) and an example of code is shown below in #2 screen shot.

So the way that #2 works, is that you follow the instructions to define a shortcut in your Virtual Machine software and then you use a /folders/myshortcuts location as shown in the attached 3 screen shots. If you set up a SHORTCUT in your virtual machine of "fred" that pointed to the physical location of c:\something\other\xyz\ and you had your sse.ret.dat in that "fred" location, then your INFILE statement would be:

```
INFILE '/folders/myshortcuts/fred/sse.ret.dat';
```

In either case, you CANNOT use a C: drive location in the SAS University Edition, because you have a box (3) in a box (2) in a box (1)...and Box #1 is your computer (Windows or Mac) and Box #2 is your Virtualization software (either Virtual Box or VMware Player) and Box #3 is the Linux virtual machine that has SAS University Edition installed. The bottom line is that Box #3 (UE) has no visibility of the physical drives on Box #1 (your computer) unless you define them in Box #2 (the Virtual Machine software/player).

cynthia



The screenshot shows the SAS University Edition interface. At the top, there is a tab labeled "Program 1". Below the tab are three buttons: "CODE", "LOG", and "RESULTS". The "RESULTS" button is currently selected. Below the buttons is a section titled "Errors, Warnings, Notes" with a dropdown arrow. Under this section, there are three items: "Errors" (with a red X icon), "Warnings" (with a yellow triangle icon), and "Notes (17)" (with a blue circle icon). The "Notes" section is expanded, showing a list of notes. The first note is a blue message: "NOTE: Libref GRAF1 was successfully assigned as follows:". Below this note, the "Engine:" is listed as "V9" and the "Physical Name:" is listed as "/folders/myshortcuts/grp1".

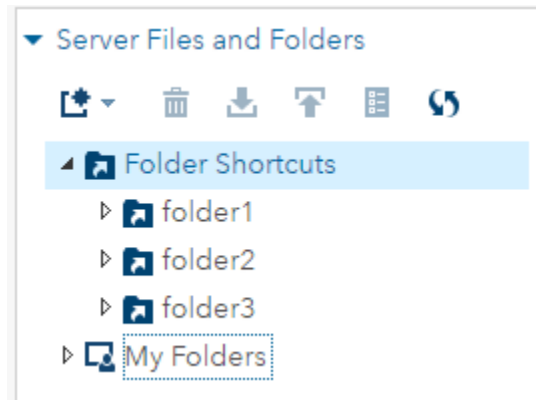
```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;  
42      ;  
43      libname graf1 '/folders/myshortcuts/grp1';  
NOTE: Libref GRAF1 was successfully assigned as follows:  
      Engine:          V9  
      Physical Name: /folders/myshortcuts/grp1
```


SAS University Edition: Help Center

[« Return to Help Center](#)

How do I create a folder shortcut to my existing SAS files?


When you use a vApp, shared folders are used by your virtualization software to access files on your local machine. Your default shared folder is **Folders > My Folders**. In your operating environment, this shared folder is called `myfolders`. If you have any existing SAS programs or data sets that you want to use in the SAS University Edition, you can copy these SAS files to the `myfolders` directory on your local computer.



 If you want to access your existing SAS files in JupyterLab, make sure that the file and folder names do not include embedded spaces or special characters. JupyterLab does not support embedded spaces or special characters in file and folder names. For more information, see [What is JupyterLab in SAS University Edition?](#)

If you have a lot of files, you might want to create folder shortcuts instead. To create these folder shortcuts, create additional shared folders. Unlike the `myfolders` shared folder, you can customize the names for these folder shortcuts.

An example path of the `myfolders` folder on Windows is `C:\SASUniversityEdition\myfolders`.

 To ensure that this folder shortcut persists between sessions and when the SAS University Edition vApp is updated, use the shared folder functionality in your virtualization software to create these folder shortcuts. If you create a folder shortcut by using the New Folder Shortcut feature in SAS Studio, your folder shortcut is not saved when you sign out of SAS Studio.

In this screenshot, the folder shortcuts are `folder1`, `folder2`, and `folder3`.

To create these folder shortcuts, complete the same steps that you completed to create the `myfolders` shared folder. The primary difference is that you can customize the names for these folder shortcuts. You do not need to use the `folder1`, `folder2`, and `folder3` naming conventions.

To create a file shortcut called `folder1` using VMware Workstation Player:


1. In VMware Workstation Player, select the SAS University Edition vApp, and then click **Edit virtual machine settings**.
2. On the **Options** tab, select **Shared Folders**.
3. In the **Folder sharing** area, select **Always enabled**.
4. To add a new shared folder, click **Add**. The Add Shared Folder Wizard appears.

1. In the Name the Shared Folder step, click **Browse**. In the Browse for Folder window, select the folder (in this example, `folder1`) where you want to create the shortcut. Click **OK**.



The name of the shared folder is case sensitive and should not include any spaces or special characters. If you use a network folder, do not include a backslash (\) in the name of the shared folder.

2. Click **Next**.
3. In the Specify Shared Folder Attributes step, click **Finish**.
5. In the Virtual Machines Settings dialog box, click **OK**.

You can add these shortcuts before you start SAS Studio or while SAS Studio is running. If you add these shortcuts while SAS Studio is running, click  in the navigation pane to see the new folder shortcuts (for example, `folder1`).

To reference this folder shortcut in a SAS program, use `/folders/myshortcuts/folder-name`.

Additional topics

- [Where do I save my work?](#)
- [How do I reference SAS data within a SAS program?](#)
- [How do I create a shared folder in VMware Workstation Player or VMware Fusion?](#)
- [How do I create a shared folder in VirtualBox?](#)

Related videos

- [Accessing Your Existing Data: for SAS University Edition](#)

<https://www.sascrunch.com/how-to-learn-sas-fast.html>

Using Libraries in SAS University Edition or SAS Studio

If you are using [SAS University Edition](#) and want to use SAS libraries to read and write permanent data files, the file path you use must refer to the shared folder: "/folders/myfolders". In fact, if you have ever tried to specify a SAS library in another directory (such as "C:/Users/myname/Documents" or "/Users/myname/Documents"), you may have received an error message. Why is this?

Because SAS University Edition runs using virtualization software, it may only access files located in folders that have been marked as "shared" with SAS University Edition. (The "sharing" process is done in VirtualBox, and is part of the installation and setup for SAS University Edition.) The material that you store in this shared folder will remain in this folder between sessions of using SAS University Edition.

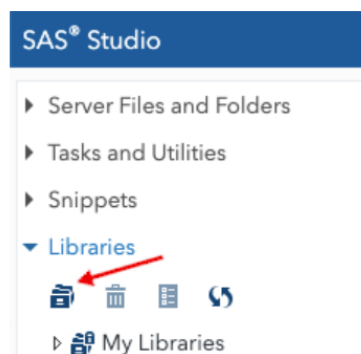
Fortunately, no matter where your "/folders/myfolders" directory is on your computer, in SAS University Edition, you will always use the file path "/folders/myfolders/" to refer to the shared folder. This true for users running SAS University Edition on Windows or Mac computers.

In SAS University Edition, you can use specify this shared folder with the following LIBNAME statement using this syntax:

```
LIBNAME practice '/folders/myfolders/';
```

This assigns the library name "practice" to the "/folders/myfolders/" directory.

Alternatively, you can also do this via the Libraries navigation pane. To create a library, click on the small filing cabinet icon under "Libraries".



This will open the New Library window:

New Library [X]

To create a library for this session, specify these values:

A Name: practice

B Path: /folders/myfolders/ Browse

Options: LIBNAME options (separated by spaces)

C ☐ Re-create this library at start-up
(adds the library to the SAS autoexec file)

OK Cancel

A Name: Create a name for the new library.

B Path: Similar to the LIBNAME statement, you will assign the location to be: `/folders/myfolders/`

C Re-create this Library at start-up: Optional setting for SAS to "remember" this library definition every time you use SAS University Edition. (This means that you wouldn't have to re-run the LIBNAME syntax or redo the New Library steps the next time you launch SAS University Edition.)