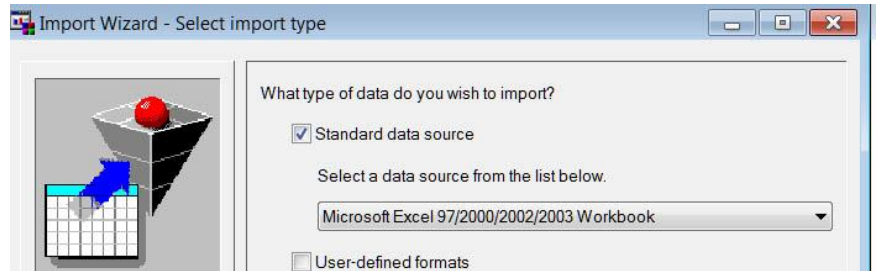
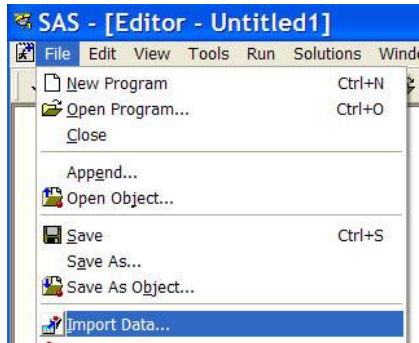


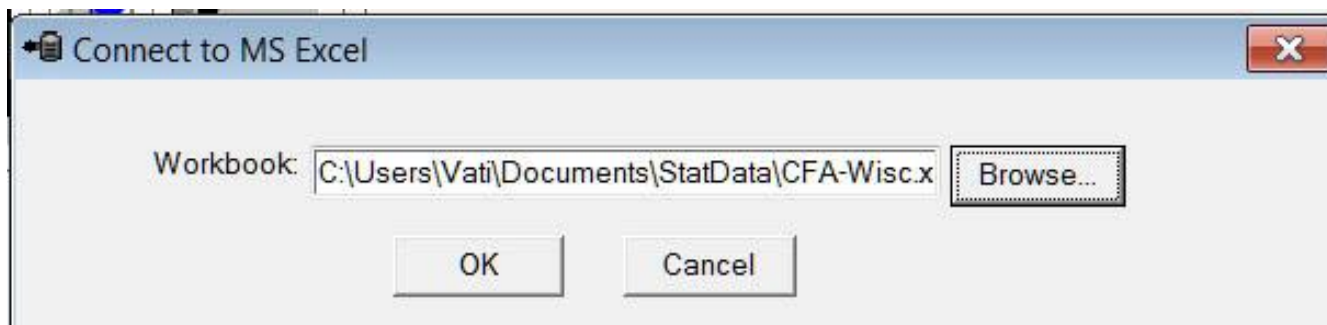
Reading Excel, SPSS or Text Data into SAS

The data for this lesson are in the file CFA-Wisc.xls on my [StatData](#) page. Download that Excel file.

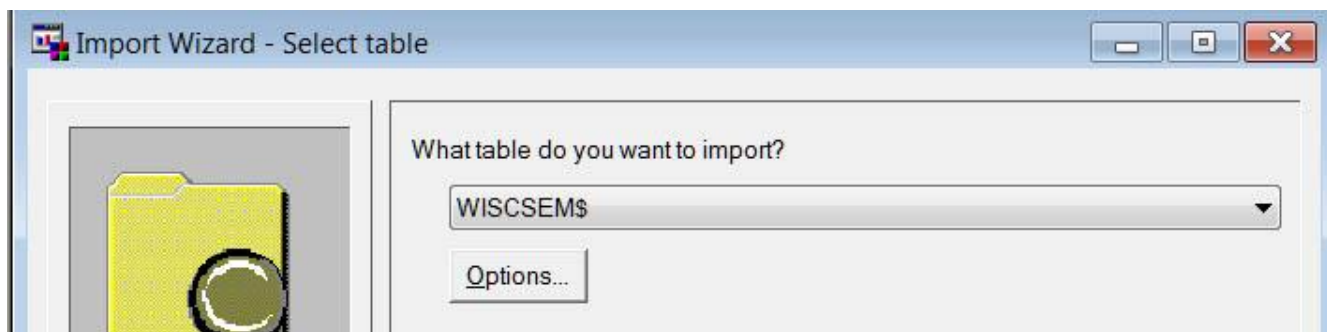
Boot up SAS. Click on File, Import Data. Select the type of data source, in this case, Excel xls. The dropdown list includes Excel xlsx and many other types as well.



Click "Next."

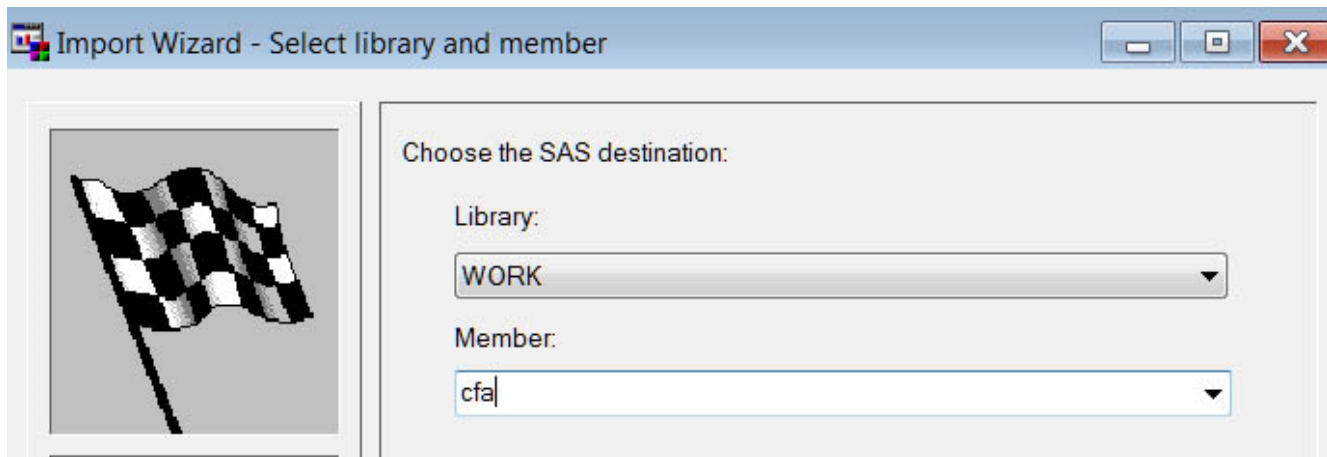
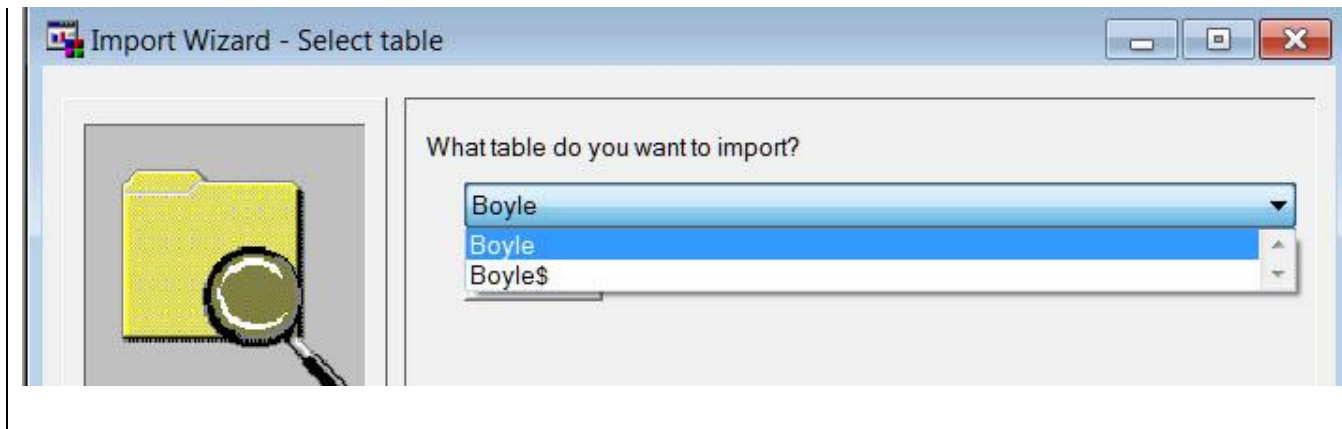


Browse to the location of the CFA-Wisc.xls file and then click "OK."

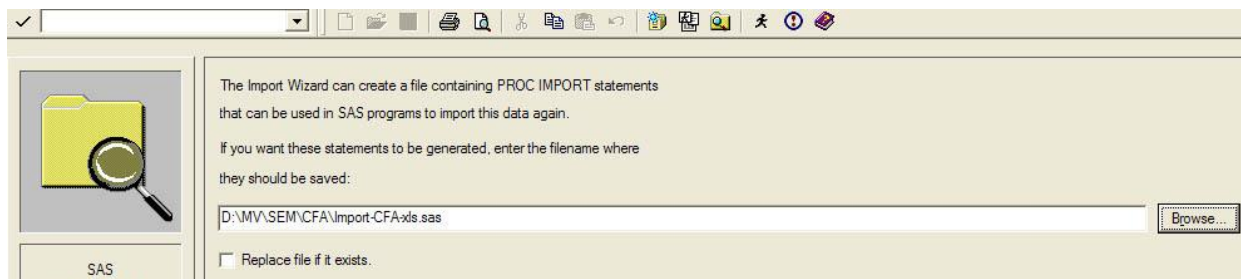


Click "Next."

Warning: Some of my students have found that the Excel files they have downloaded from the Internet have more than one data table in them. In that case, try the first table first. If it does not import properly (for example, one column of data is excluded), try another table.



Enter a Member name (such as "cfa") and click "Next."

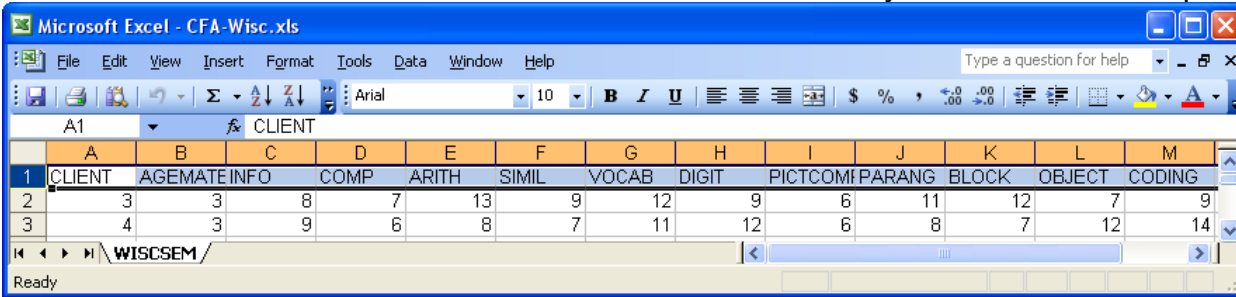


If you want to save the code to read the xls file again without going through the wizard, browse to a location and provide a file name. Click "Finish." You cannot carry this code from one computer to another.

Here is an example of such code:

```
PROC IMPORT OUT= WORK.cfa
            DATAFILE= "D:\StatData\CFA-Wisc.xls"
            DBMS=EXCEL REPLACE;
    SHEET="WISCSEM$";
    GETNAMES=YES;
    MIXED=NO;
    SCANTEXT=YES;
    USEDATE=YES;
    SCANTIME=YES;
RUN;
```

The variables within SAS will have the same names they have in the Excel Spreadsheet.



You may issue this command to get an overview of the data:

Proc Contents; Run;

```

The SAS System      17:08 Wednesday, September 9, 2009      2

The CONTENTS Procedure

Data Set Name      WORK.CFA              Observations      175
Member Type       DATA                  Variables         13
Engine            V9                     Indexes           0
Created           Wed, Sep 09, 2009 05:10:05 PM  Observation Length 104
Last Modified     Wed, Sep 09, 2009 05:10:05 PM  Deleted Observations 0
Protection        Compressed             NO
Data Set Type     Sorted                 NO
Label
Data Representation WINDOWS_32
Encoding          wlatin1 Western (Windows)

Engine/Host Dependent Information

Data Set Page Size      12288
Number of Data Set Pages 2
First Data Page        1
Max Obs per Page       117
Obs in First Data Page 95
Number of Data Set Repairs 0
Filename                C:\DOCUME~1\Vati\LOCALS~1\Temp\SAS Temporary
                        Files\_TD3028\cfa.sas7bdat
Release Created         9.0201M0
Host Created            XP_PRO

Alphabetic List of Variables and Attributes

#   Variable   Type   Len   Label
2   AGEMATE    Num    8     AGEMATE
5   ARITH      Num    8     ARITH
11  BLOCK      Num    8     BLOCK
1   CLIENT     Num    8     CLIENT
13  CODING     Num    8     CODING
4   COMP      Num    8     COMP
8   DIGIT     Num    8     DIGIT
3   INFO      Num    8     INFO
12  OBJECT     Num    8     OBJECT
10  PARANG     Num    8     PARANG
9   PICTCOMP  Num    8     PICTCOMP
6   SIMIL     Num    8     SIMIL
7   VOCAB     Num    8     VOCAB

```

Also useful is Proc Print; Run;

You can execute any proc statement immediately. For example, Proc Means; Var Info -- Coding; run;

The MEANS Procedure						
Variable	Label	N	Mean	Std Dev	Minimum	Maximum
INFO	INFO	175	9.4971429	2.9122695	3.0000000	19.0000000
COMP	COMP	175	10.0000000	2.9653168	0	18.0000000
ARITH	ARITH	175	9.0000000	2.3069112	4.0000000	16.0000000
SIMIL	SIMIL	175	10.6114286	3.1836301	2.0000000	18.0000000
VOCAB	VOCAB	175	10.7028571	2.9327212	2.0000000	19.0000000
DIGIT	DIGIT	175	8.7314286	2.7041657	0	16.0000000
PICTCOMP	PICTCOMP	175	10.6800000	2.9342214	2.0000000	19.0000000
PARANG	PARANG	175	10.3714286	2.6596789	2.0000000	17.0000000
BLOCK	BLOCK	175	10.3142857	2.7098313	2.0000000	18.0000000
OBJECT	OBJECT	175	10.9028571	2.8439779	3.0000000	19.0000000
CODING	CODING	175	8.5485714	2.8721184	0	15.0000000

If you wish to manipulate the data prior to running proc steps, you will need to create a data step. For example:

```
Data xyzzy; Set cfa;  
ICA = INFO+COMP+ARITH; run;  
Proc Means; Var ICA; run;
```

The MEANS Procedure					
Analysis Variable : ICA					
N	Mean	Std Dev	Minimum	Maximum	
175	28.4971429	6.5327418	15.0000000	47.0000000	

Warning: Do not use INFILE or INPUT here, they are not needed and may mess up your session. Infile is for reading in an external file, but you have already done that with the import wizard. To read an internal file (the data you just imported) use the SET command. The syntax is **SET member** – you gave SAS the member name during the import process.

Formats created with Proc Format can be applied in a Proc step, in which case they apply only for that Proc, or in a data step, in which case they apply to all procedures. If you have imported data and want to apply a format in a data step, you will need to create a data step. Suppose you have imported data from an Excel or SPSS data file and wish to apply a format you have created, such as format grp., 0 = 'Control' 1 = 'Treatment'. When you imported the data you gave it member name cfa. Here is an example of how you would apply the yn. Format”

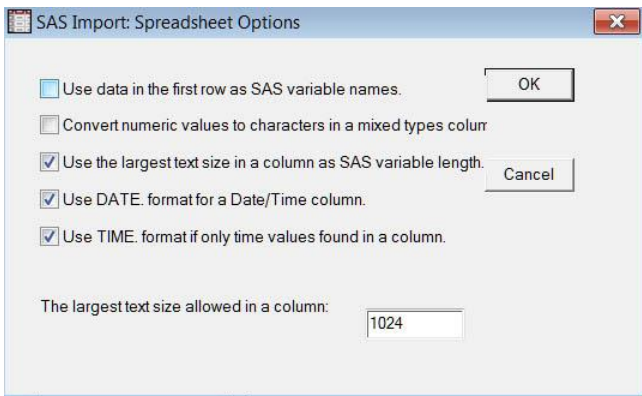
```
Data ttest; set cfa; format group grp. ; run;  
Proc ttest; class group; var BloodP PulseR BTemp; run;
```

Alternatively, you could dispense with the Data step and apply the format with the Proc, like this:

```
Proc ttest; class group; var BloodP PulseR BTemp; format group grp. ; run;
```

Warning: My students have found that some Excel files downloaded from the Internet can be difficult to import to SAS. If you are one of his students, Professor Karl can help in these cases, if he has available time – he is such a geek that he actually enjoys such challenges – but you should give it your best try before calling for help. One thing that often works is simply to copy and paste the data from the downloaded Excel file to a new Excel file. Another option is to write the Excel data to a plain text file and then import to SAS that text file.

Variable Names. By default, SAS assumes that the first row in the Excel file contains variable names. I strongly encourage you to put variable names in that first row, even though you can tell SAS that the Excel files does not include variable names by unchecking that option. Click on the Options button [here](#).



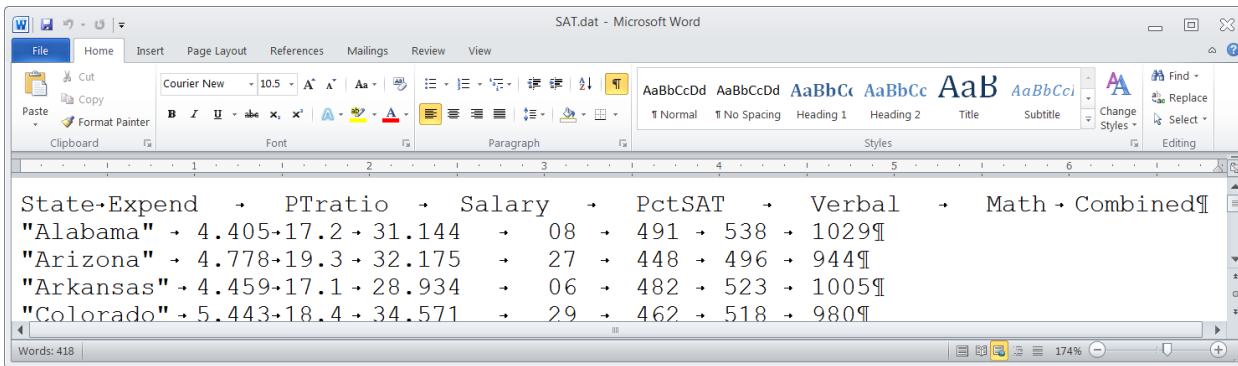
When importing Excel data without variable names, SAS will assign these names:

Alphabetic List of Variables and Attributes				
#	Variable	Type	Len	Label
1	F1	Num	8	F1
2	F2	Num	8	F2
3	F3	Num	8	F3
4	F4	Num	8	F4

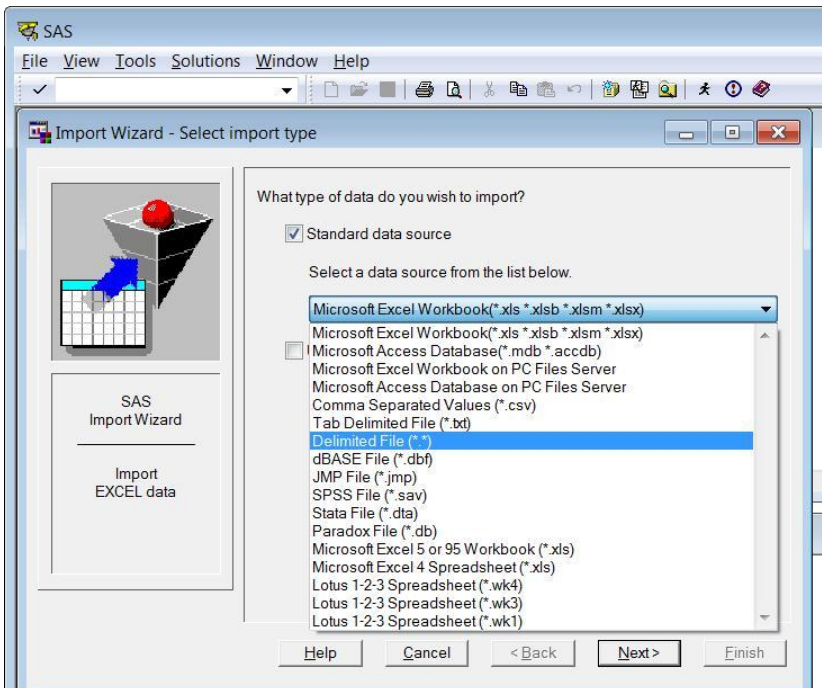
Importing Text Data Into SAS

You obtain a data file from the internet, such as <http://www.uvm.edu/~dhowell/methods8/DataFiles/SAT.dat> . There clearly is some delimiter between each score and the next, but in your browser you cannot tell what the delimiter is. Bring the data file into Word and have Word set to show formatting. If you see a dot between each score and the next, a blank space is the delimiter. If you see an arrow (see below), then a tab character will be the delimiter. You will need to tell SAS what the delimiter is.

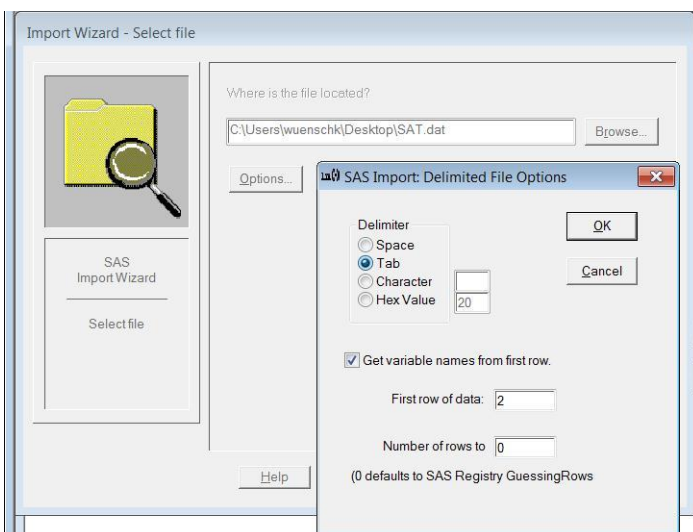
If the first line of the data file contains the variable names, you need to tell that to SAS too.



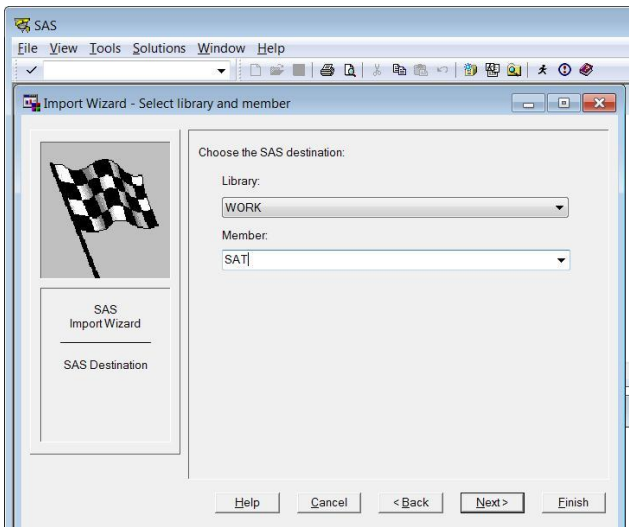
Boot up SAS. Click File, Import Data.



Select Delimited File. Click Next.



Click Browse. Point to the location of the data file. Click Options. Select Delimiter = Tab, Yes, Ger variable names from first row. Click OK, Next.



Give the data set (Member) a name. Click Next. You are given the opportunity to save the syntax used to import this file, so you do not have to go through the wizard again the next time you use it. If you wish to save the syntax, point to the location where you want it saved and give the file a name. Click Finish.

At this point, the data are in SAS and ready to use. You might want to peek at them first. In the program editor, type PROC PRINT; RUN; and then click the running person.

Obs	State	Expend	PTratio	Salary	PctSAT	Verbal	Math	Combined
1	Alabama	4.405	17.2	31.144	8	491	538	1029
2	Arizona	4.778	19.3	32.175	27	448	496	944
3	Arkansas	4.459	17.1	28.934	6	482	523	1005
4	Colorado	5.443	18.4	34.571	29	462	518	980

Importing SPSS (*.sav) Data Into SAS

This works pretty much the same as when importing Excel data, but when asked to Select Import Type you select "SPSS File (*.sav)". See [Import SPSS Data](#) .

[Return to Wuensch's SAS Lessons Page](#)

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August, 2020

