

ANLT5010 – Week 5

Assignment 1 Tutorial

SAS Studio



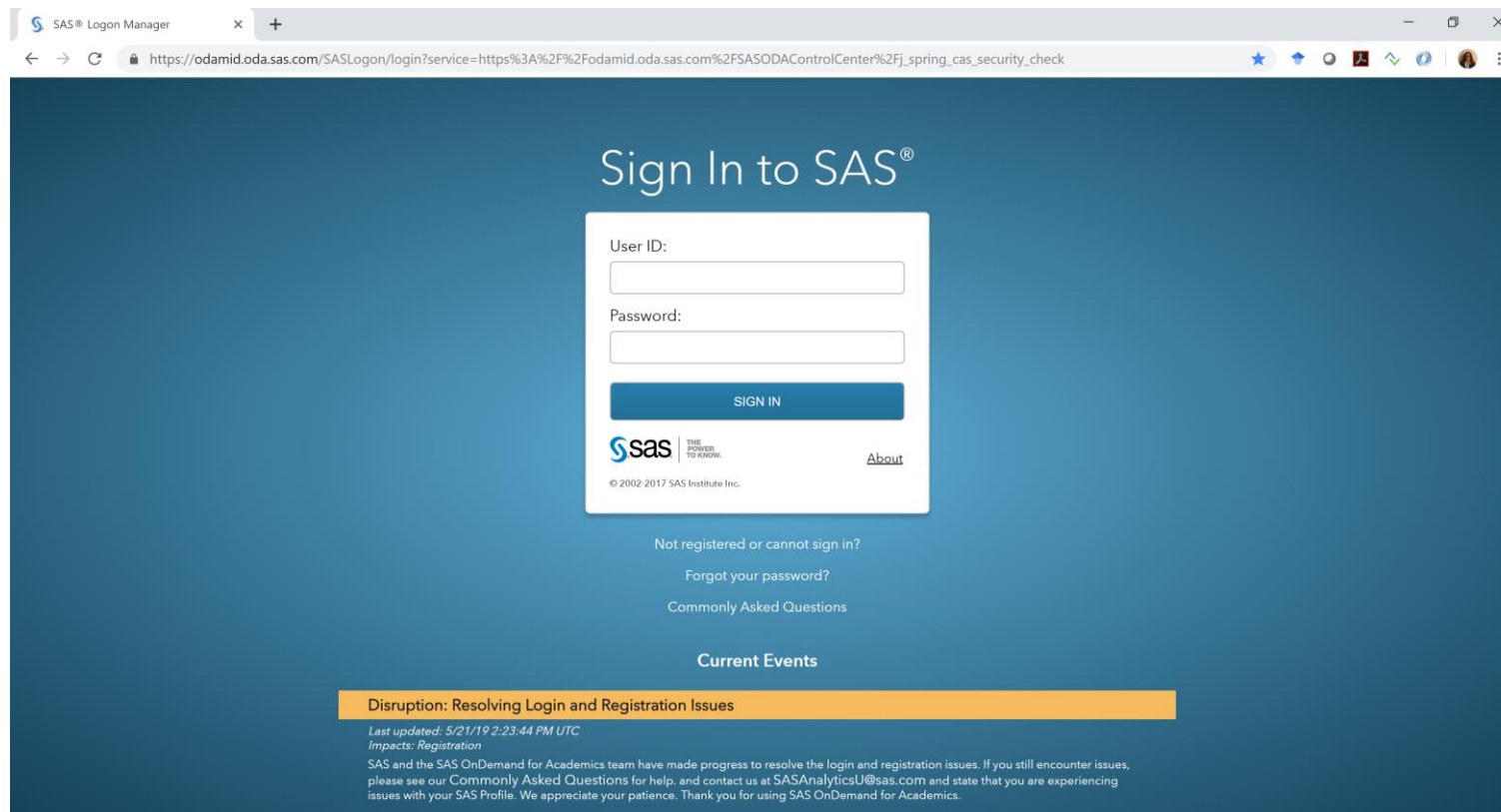
Dataset

- Download the cf_ANLT5010_W5_Sales_Data.csv file from the Week 5 Welcome announcement in the course announcements or the Week 5 assignment area.



Access the SAS OnDemand for Academics Control Center

<https://odamid.oda.sas.com/SASODAControlCenter>



The screenshot shows a web browser window with the URL https://odamid.oda.sas.com/SASLogon/login?service=https%3A%2F%2Fodamid.oda.sas.com%2FSASODAControlCenter%2Fj_spring_cas_security_check. The page has a dark blue background and features a white login form in the center. The form is titled "Sign In to SAS®" and contains two input fields: "User ID:" and "Password:". Below these fields is a blue "SIGN IN" button. Under the button is the SAS logo with the tagline "THE POWER TO KNOW." and a link to "About". At the bottom of the form, it says "© 2002-2017 SAS Institute Inc.". Below the login form, there are links for "Not registered or cannot sign in?", "Forgot your password?", and "Commonly Asked Questions". At the bottom of the page, there is a section titled "Current Events" with a yellow banner that reads "Disruption: Resolving Login and Registration Issues". Below the banner, it says "Last updated: 5/21/19 2:23:44 PM UTC" and "Impacts: Registration". The text continues: "SAS and the SAS OnDemand for Academics team have made progress to resolve the login and registration issues. If you still encounter issues, please see our Commonly Asked Questions for help, and contact us at SASAnalyticsU@sas.com and state that you are experiencing issues with your SAS Profile. We appreciate your patience. Thank you for using SAS OnDemand for Academics."



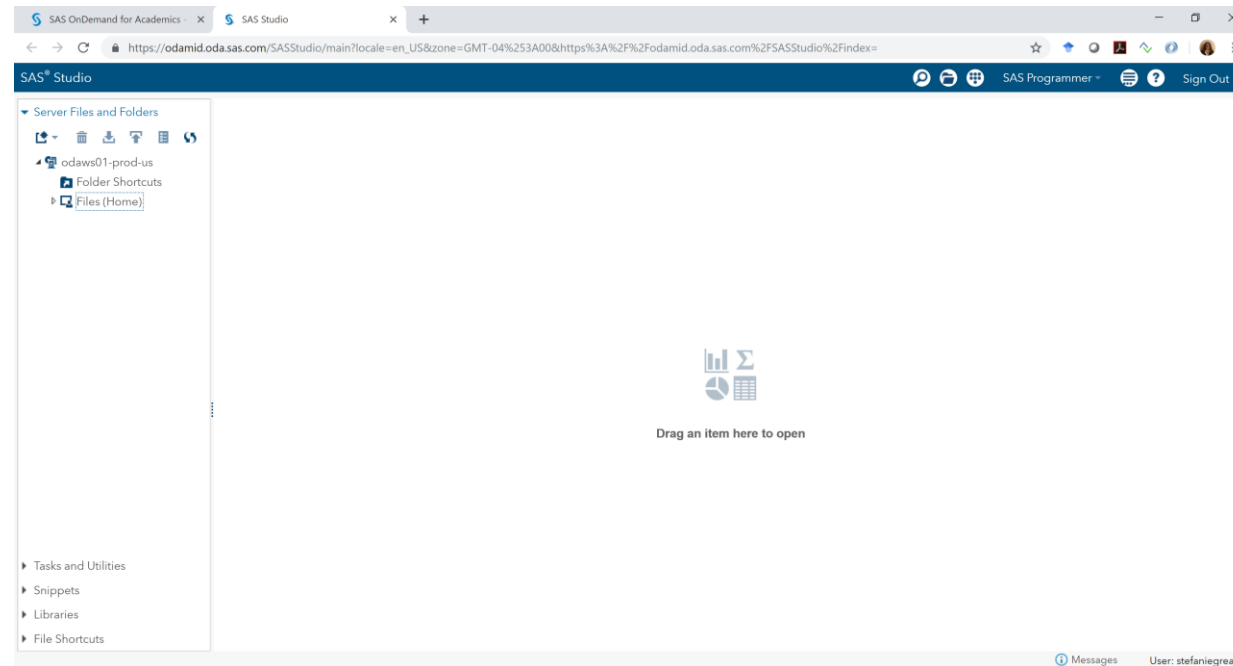
SAS OnDemand for Academics (SODA) Control Center

The screenshot displays the SAS OnDemand for Academics (SODA) Control Center dashboard. At the top right, the user is logged in as 'Stefanie Reay' in the 'United States' region. The dashboard title is 'SAS® OnDemand for Academics Dashboard'. Below the title are buttons for 'Planned Events' and 'Notices'. A message states: 'Your session in the United States region has timed out. You may now sign out to end this session as well or begin another regional session.' The main content area is divided into two columns. The left column has tabs for 'Applications', 'Enrollments', and 'Courses'. Under 'Applications', there are five items: 'SAS® Studio' (Write and run SAS code with a Web-Based SAS development environment. Actions: [Clear my saved tabs.](#)), 'SAS® Enterprise Guide®' (Deliver the power of SAS from an easy-to-use, point-and-click interface. (Download Required)), 'SAS® Enterprise Miner™' (Reveal valuable insights with powerful data mining software. (Configuration Steps Required) Actions: [Clear my project locks.](#)), 'SAS® Forecast Studio' (Generate large numbers of high-quality forecasts automatically. (Configuration Steps Required) Actions: [Manage your personal environment.](#)), and 'JMP® Software access to SAS® hosted servers' (Statistical discovery software. Users must have a copy of JMP® software. (Configuration Steps Required)). The right column has a 'Reference' section with links to 'Support Site', 'Step-by-Step Reference Guides', and 'Frequently Asked Questions'. Below this is a 'Quotas (learn more)' section showing two progress bars: 'Home Directory (22.5MB/5120MB)' at 0% and 'Course Directory (207.0MB/3072MB)' at 7%.

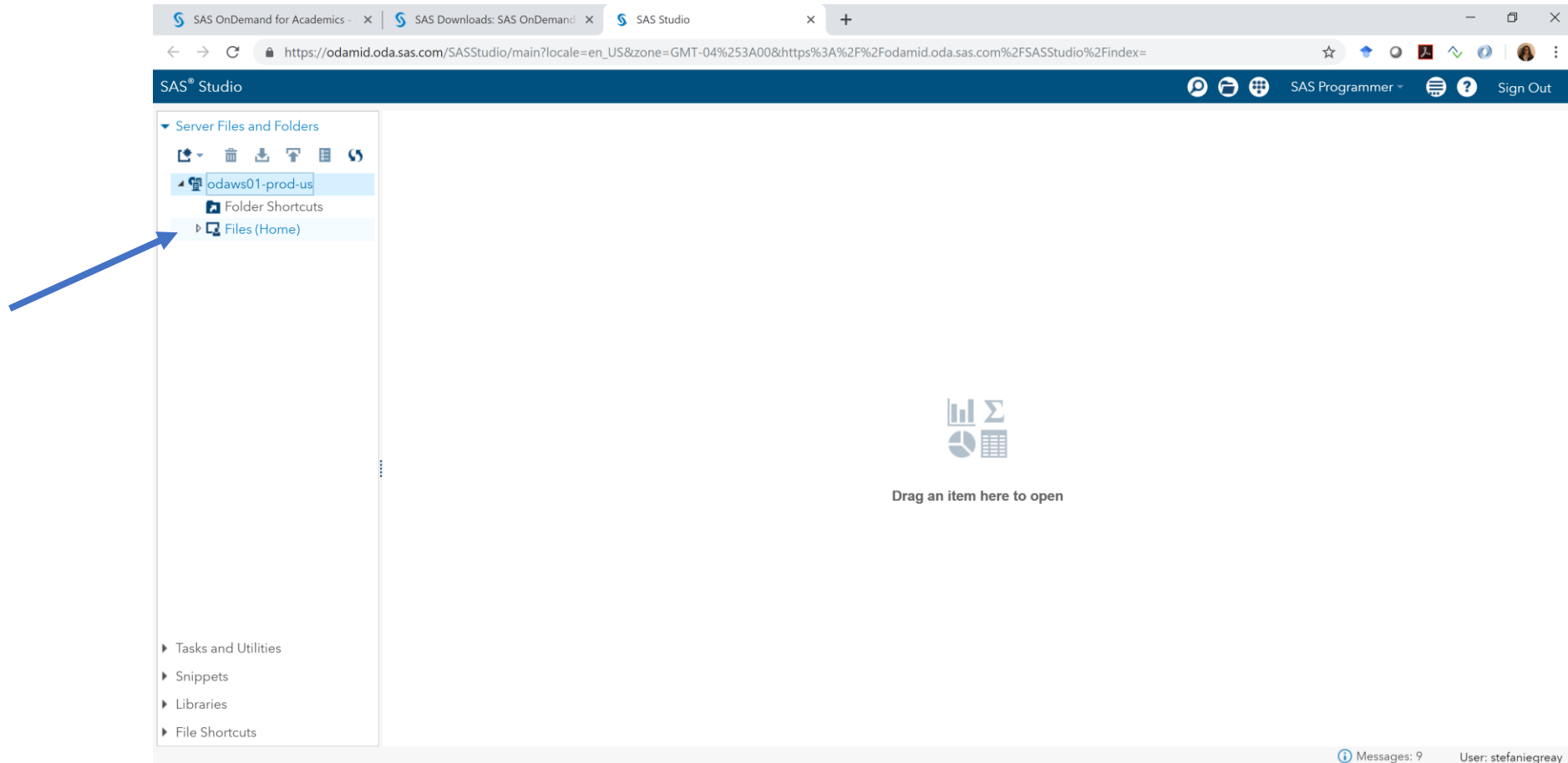


SAS Studio

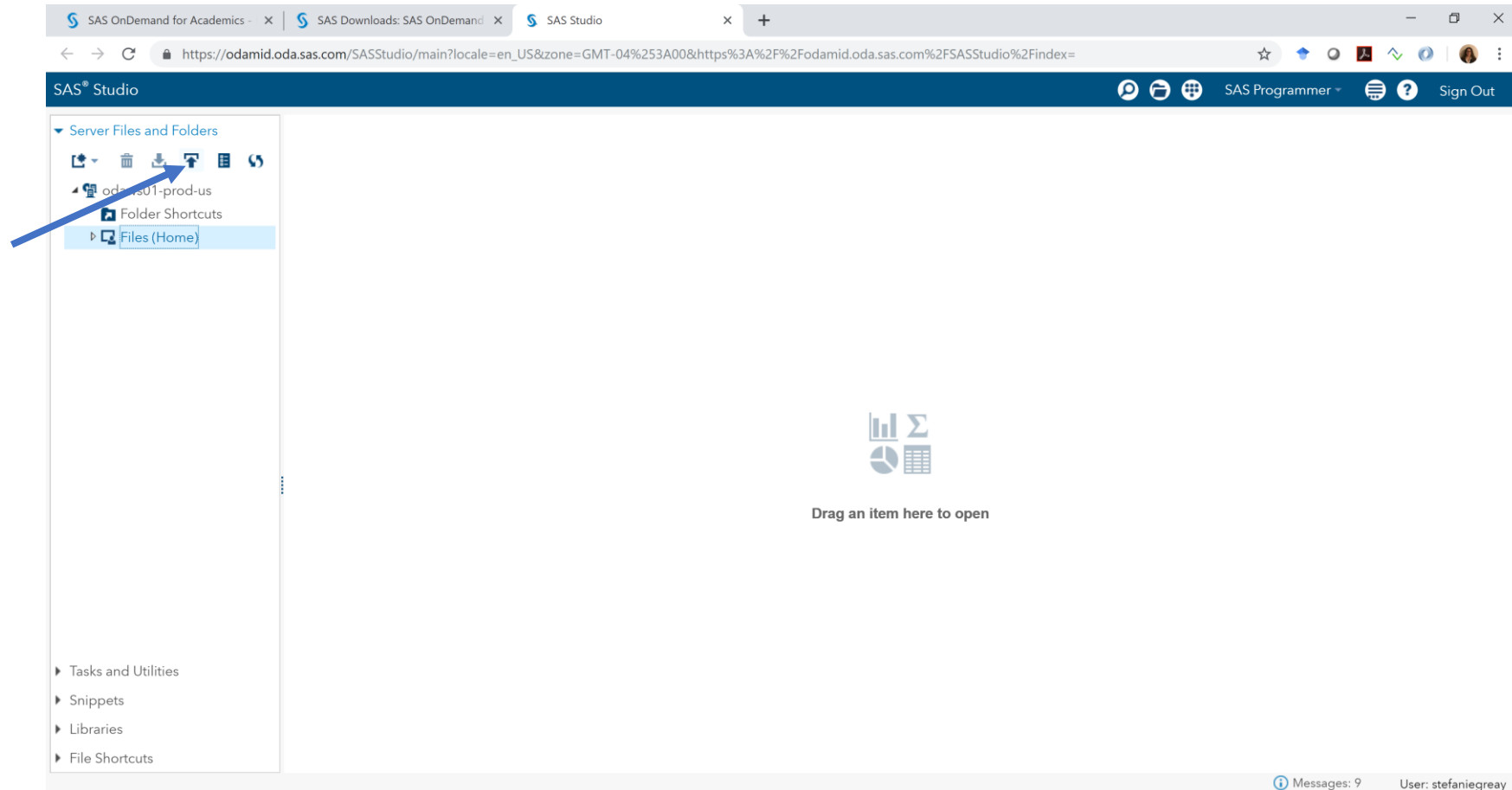
<https://odamid.oda.sas.com/SASStudio/>



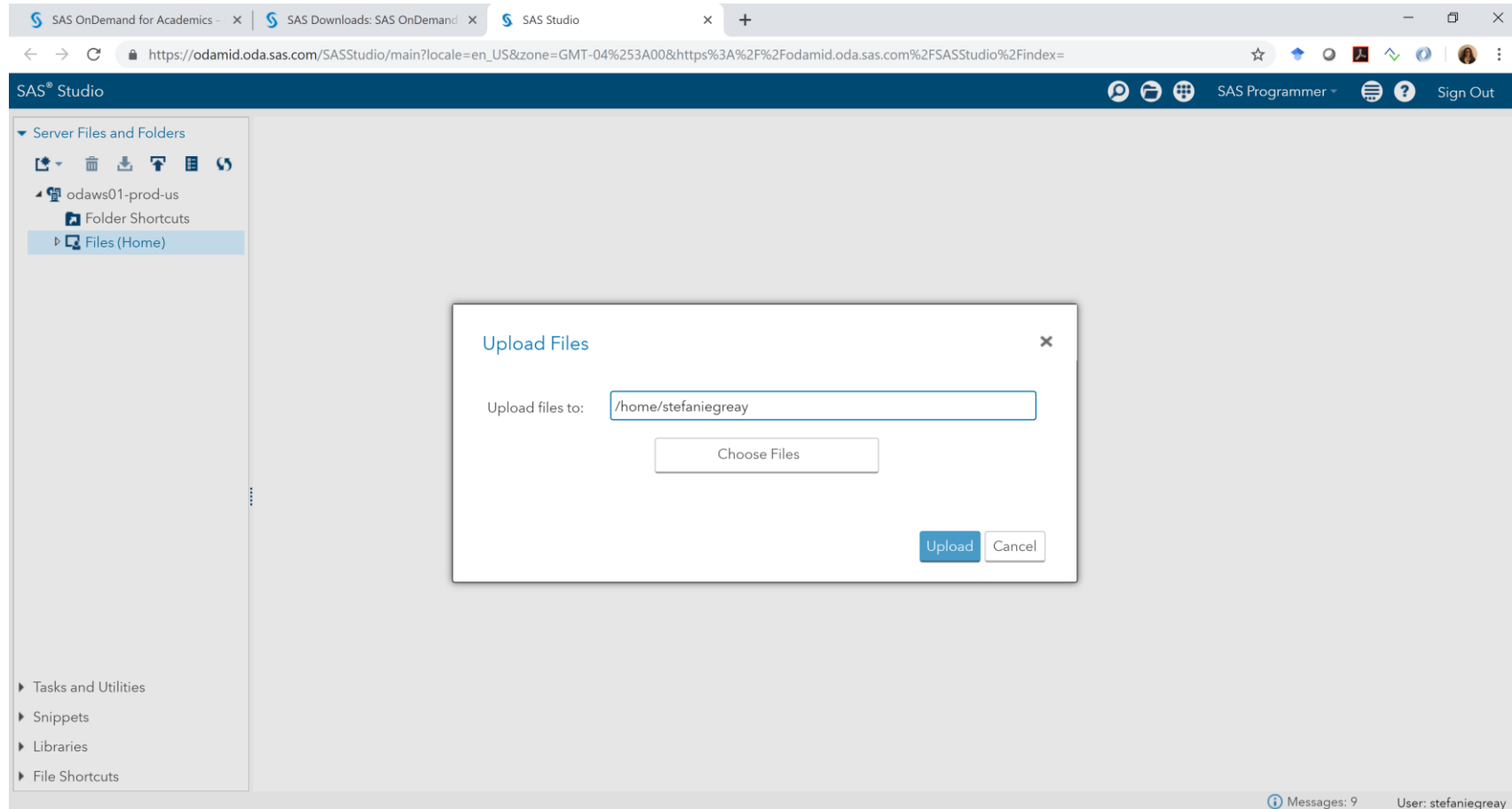
Click on Files(Home)



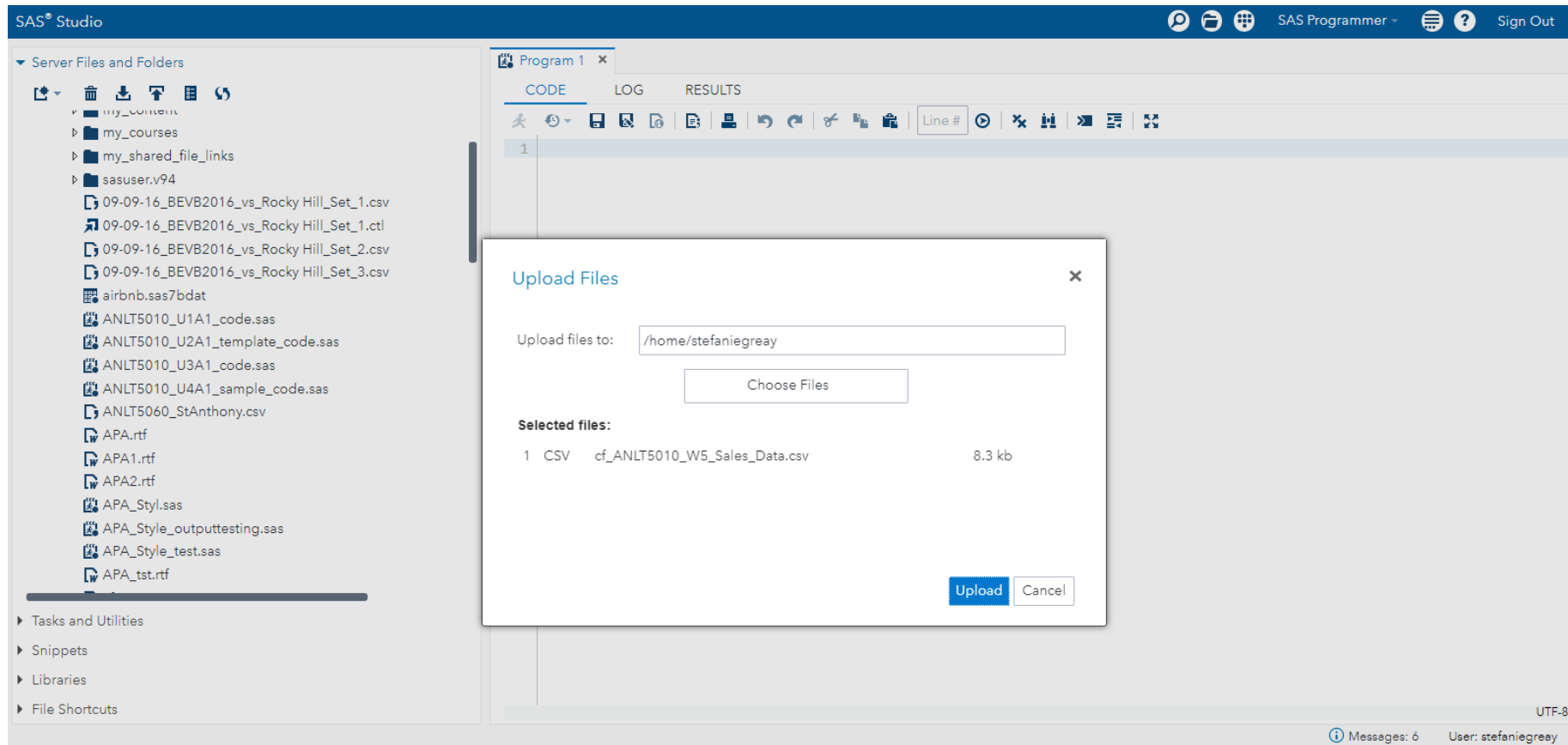
The Upload button will display in dark blue



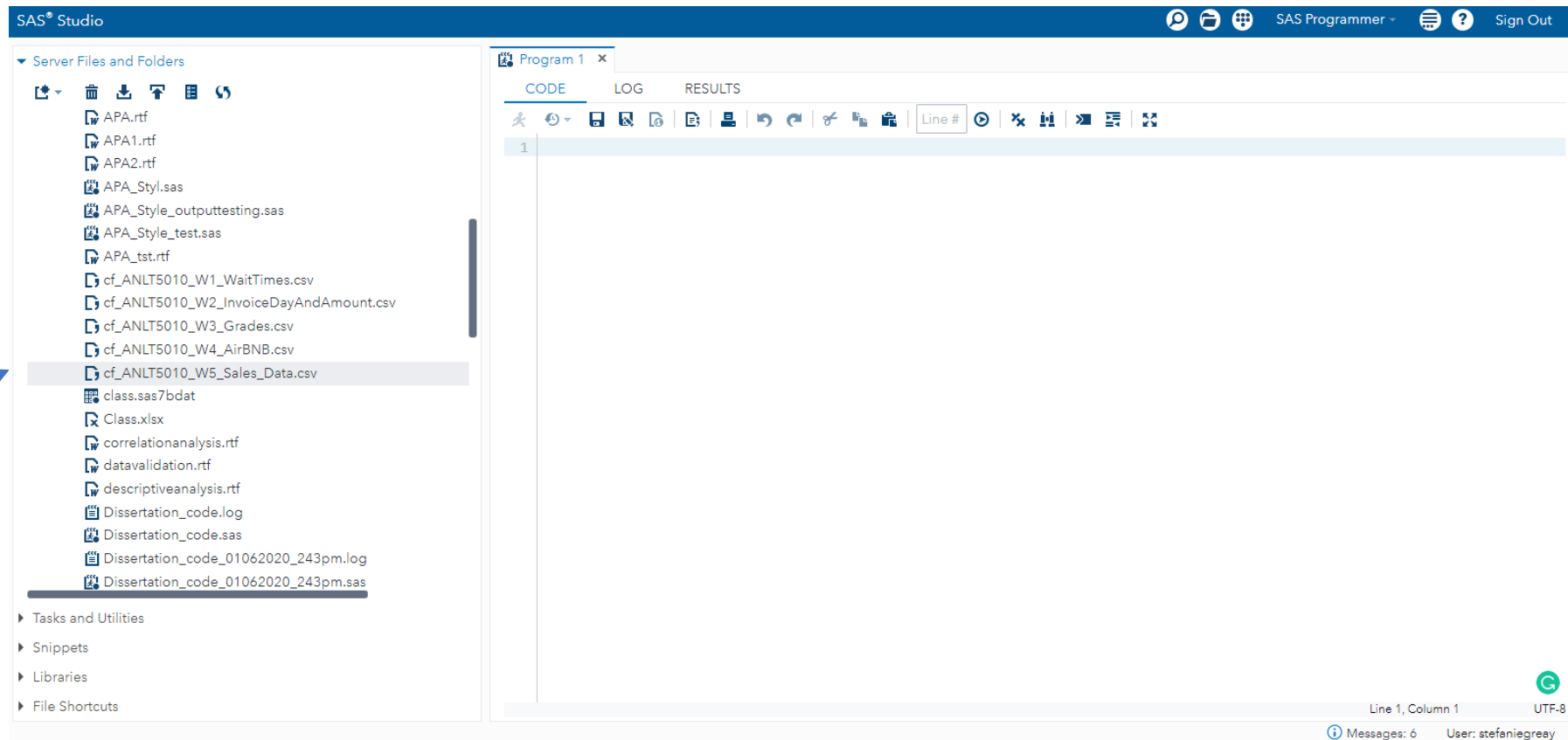
You can create a folder at this point, if you wish, or simply upload to your home directory.



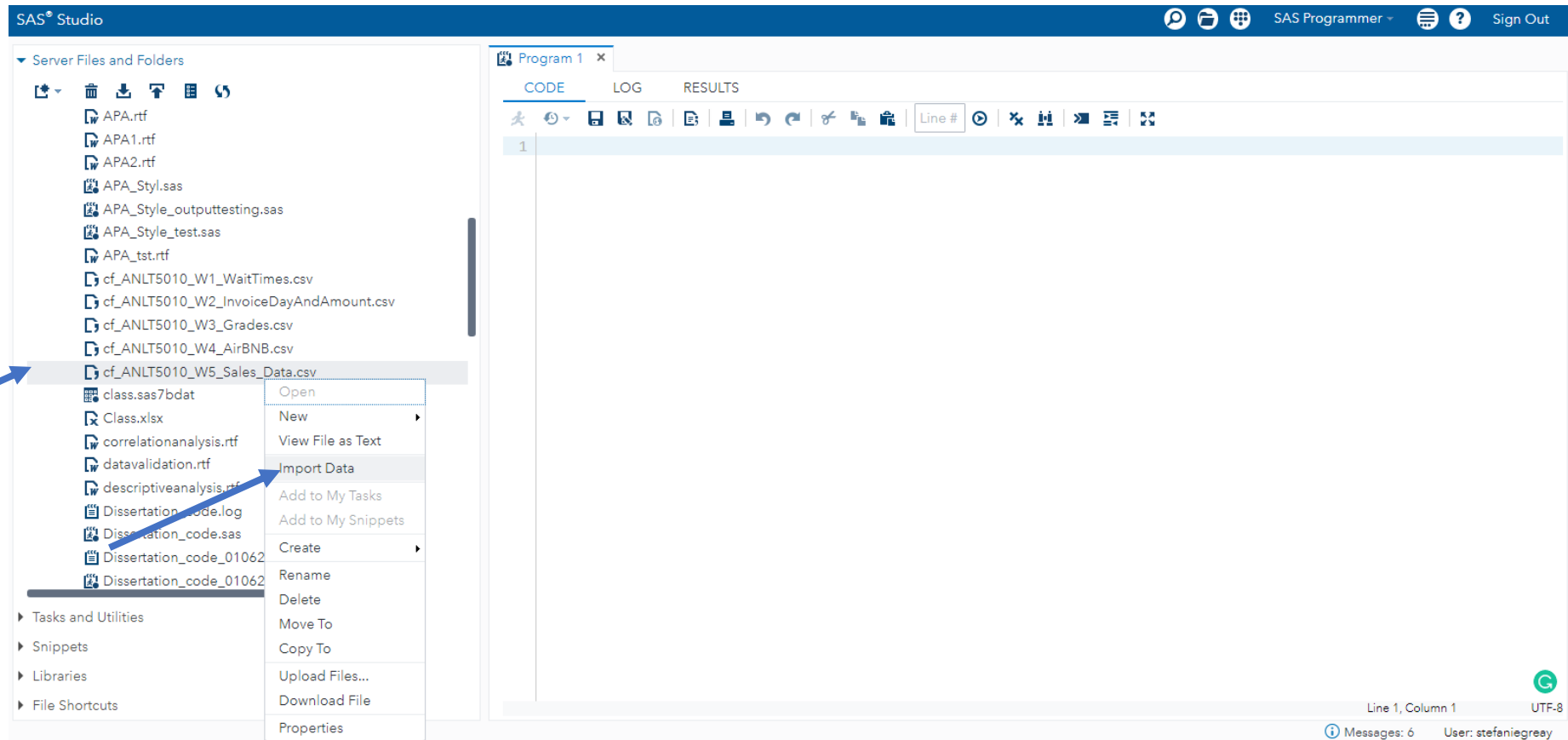
Select “Choose Files” to browse your computer for the dataset you want to upload. Once the dataset has been selected, click “Upload.”



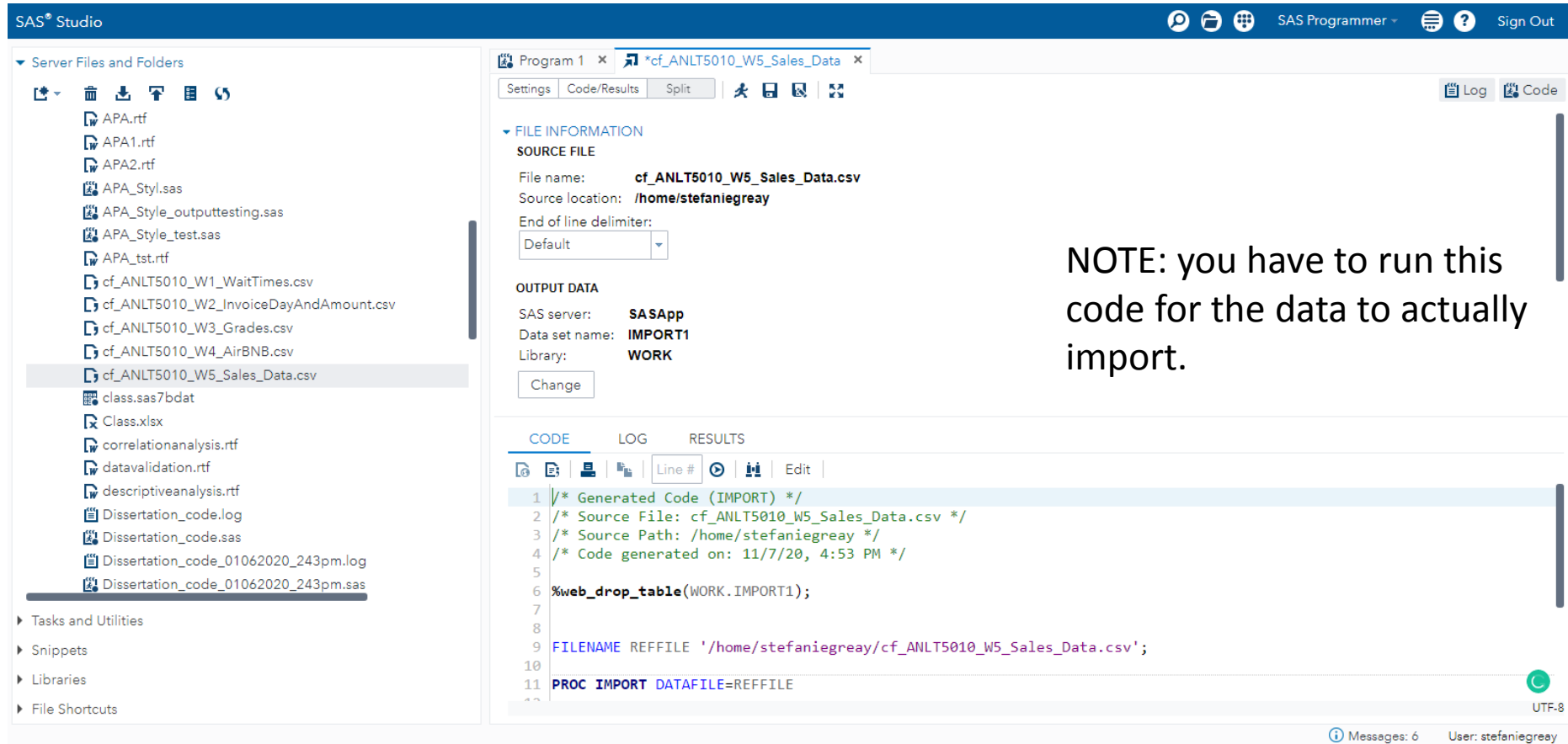
You will be able to view your files by clicking on “Files(Home)” to verify that your file successfully uploaded.



To import the dataset into a SAS dataset format (from the current csv format), right click on the name of the file, and select “Import Data.”



The Proc Import code will be written for you (save this as a template to use for future imports!)



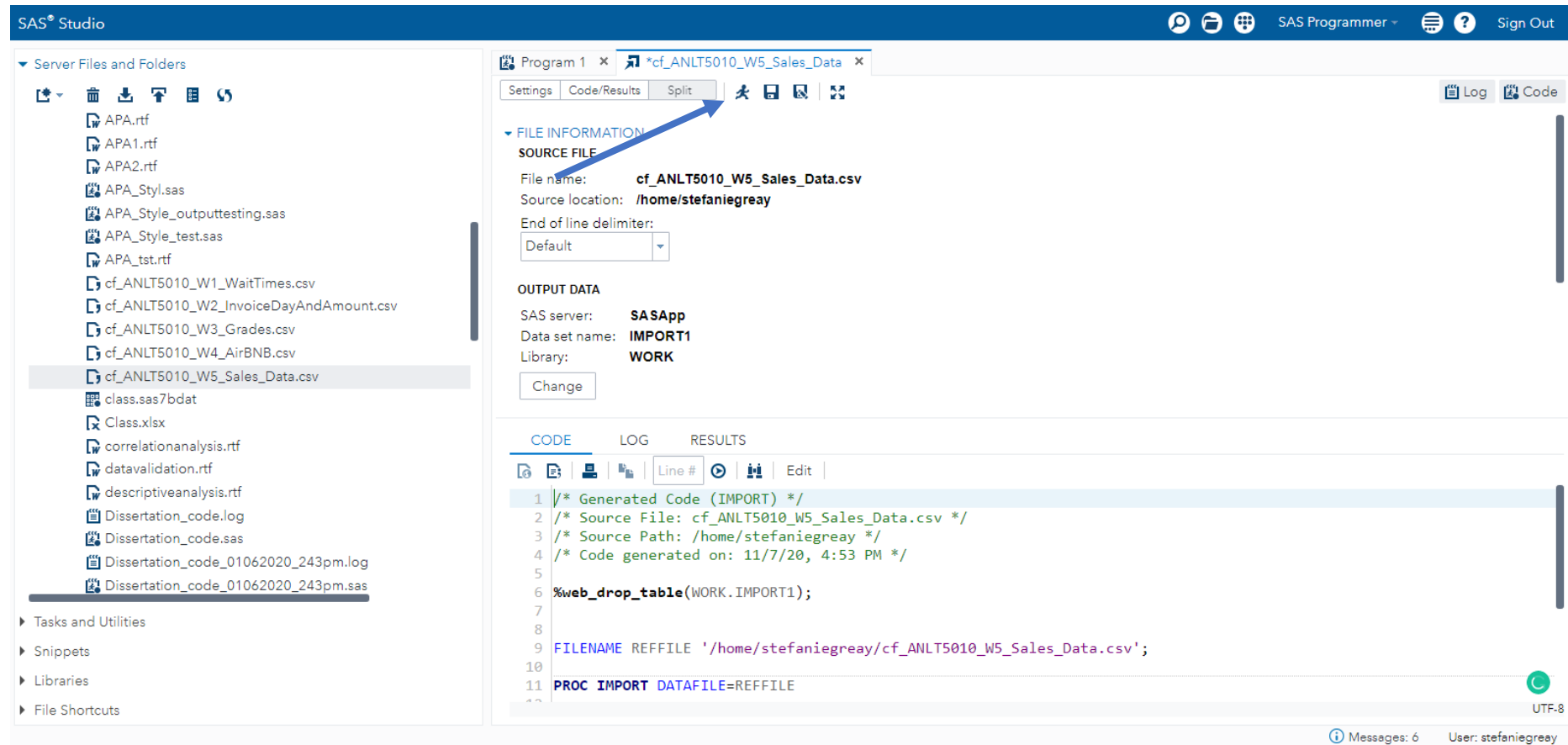
The screenshot shows the SAS Studio interface. On the left, the 'Server Files and Folders' pane lists various files, with 'cf_ANLT5010_W5_Sales_Data.csv' selected. The main window displays the 'FILE INFORMATION' and 'OUTPUT DATA' sections. The 'FILE INFORMATION' section shows the file name 'cf_ANLT5010_W5_Sales_Data.csv', source location '/home/stefaniegreay', and end of line delimiter 'Default'. The 'OUTPUT DATA' section shows the SAS server 'SASApp', data set name 'IMPORT1', and library 'WORK'. Below these sections, the 'CODE' pane shows the generated SAS code for importing the CSV file.

NOTE: you have to run this code for the data to actually import.

```
1 /* Generated Code (IMPORT) */
2 /* Source File: cf_ANLT5010_W5_Sales_Data.csv */
3 /* Source Path: /home/stefaniegreay */
4 /* Code generated on: 11/7/20, 4:53 PM */
5
6 %web_drop_table(WORK.IMPORT1);
7
8
9 FILENAME REFFILE '/home/stefaniegreay/cf_ANLT5010_W5_Sales_Data.csv';
10
11 PROC IMPORT DATAFILE=REFFILE
```



To run the code, click the icon that looks like a guy running.



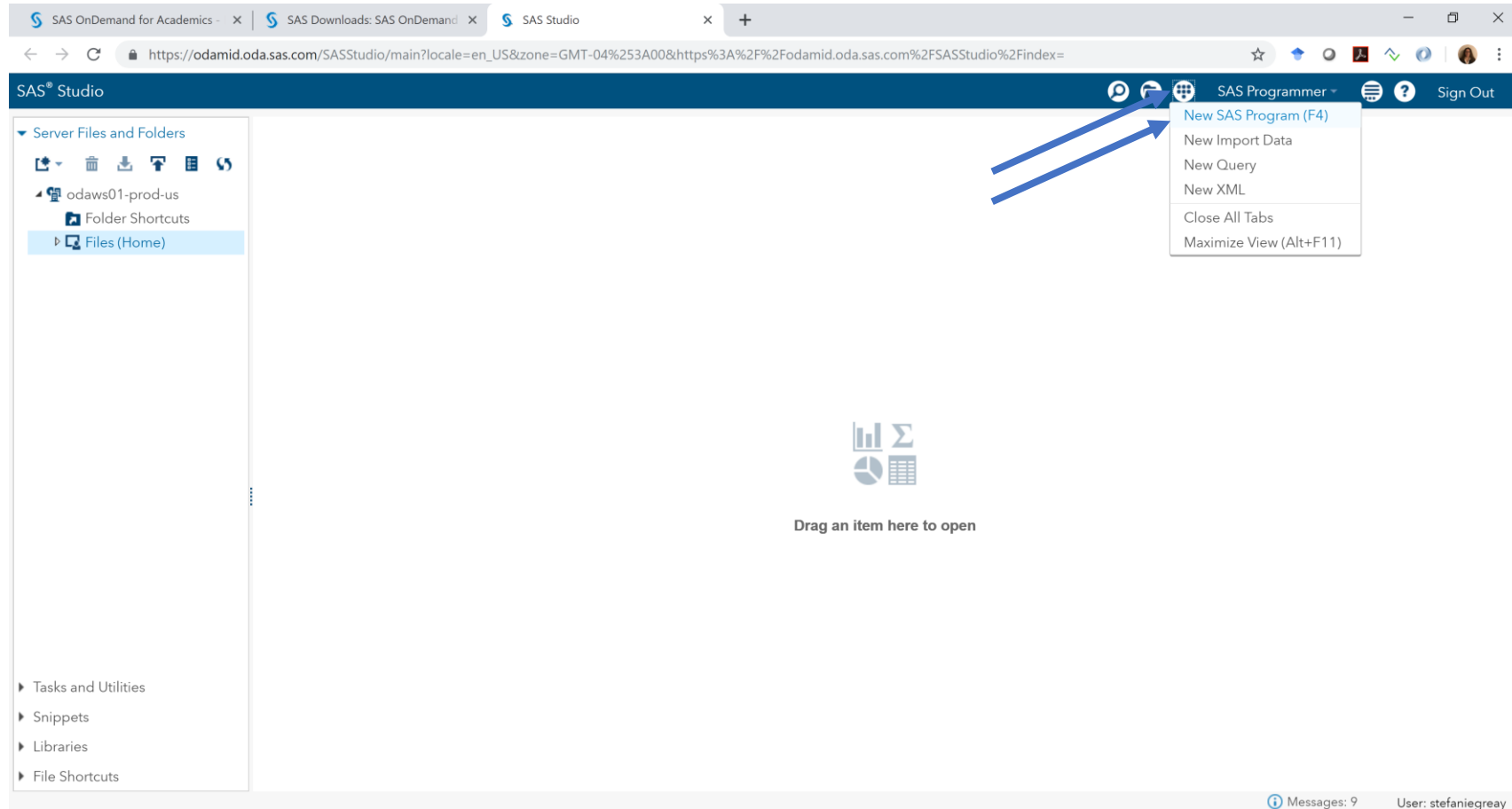
When you run the code, you will see the dataset and summary in the output data window and can verify its success.

The screenshot displays the SAS Studio interface. On the left, the 'Server Files and Folders' pane shows a list of files, with 'cf_ANLT5010_W5_Sales_Data.csv' selected. The main pane is divided into two sections: 'FILE INFORMATION' and 'OUTPUT DATA'. The 'FILE INFORMATION' section shows the file name 'cf_ANLT5010_W5_Sales_Data.csv' and its source location '/home/stefaniegreay'. The 'OUTPUT DATA' section shows the SAS server 'SASApp', data set name 'IMPORT1', and library 'WORK'. Below these sections, the 'RESULTS' tab is active, displaying a 'Table of Contents' for 'The CONTENTS Procedure'. This table provides a summary of the data set, including the number of observations (730), variables (3), and other metadata.

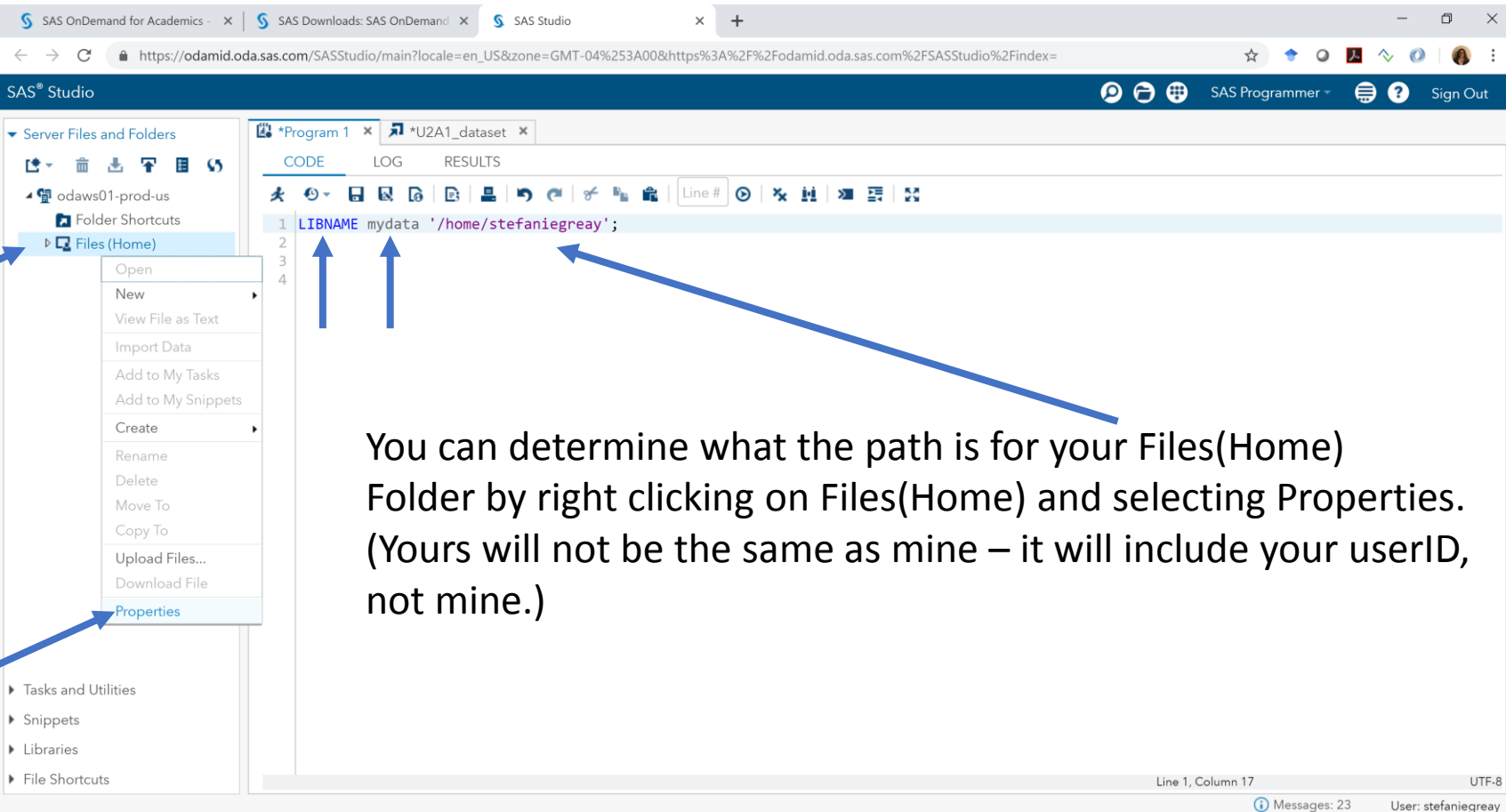
The CONTENTS Procedure			
Data Set Name	WORK.IMPORT1	Observations	730
Member Type	DATA	Variables	3
Engine	V9	Indexes	0
Created	11/07/2020 16:54:23	Observation Length	24
Last Modified	11/07/2020 16:54:23	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			



To get started with the SAS portion of the Week 4 Assignment 1 assignment, start a new SAS program.



To create a SAS Library for your Files(Home) folder, you need to use a libname statement



The screenshot shows the SAS Studio web interface. On the left, the 'Server Files and Folders' pane displays a tree structure with 'Files (Home)' selected. A right-click context menu is open over 'Files (Home)', with the 'Properties' option highlighted at the bottom. A blue arrow points from the 'Properties' option to the explanatory text. In the center, the 'CODE' pane shows a SAS program with the following code on line 1:

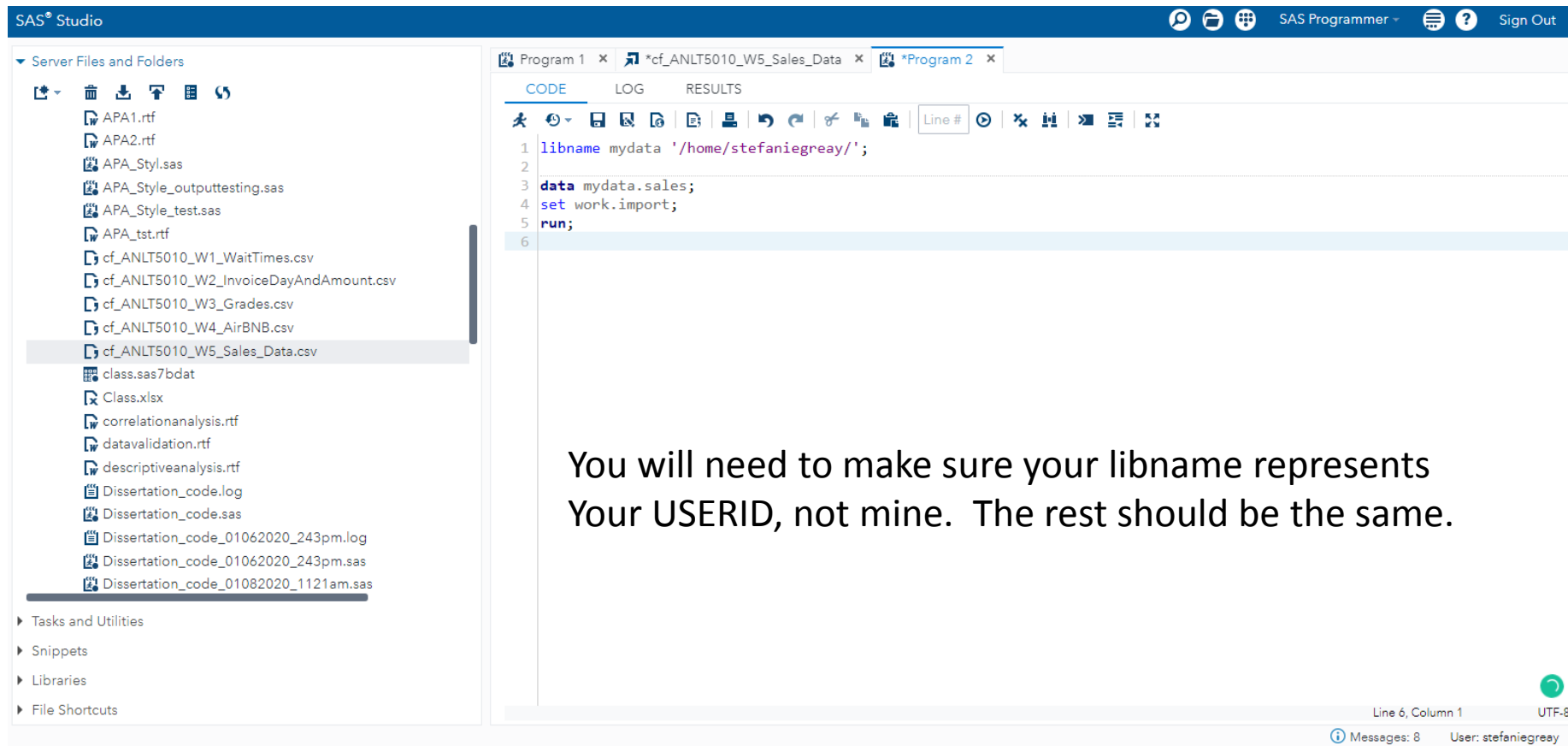
```
1 LIBNAME mydata '/home/stefaniegreay';
```

Two blue arrows point to the components of this statement: one to 'LIBNAME' and another to 'mydata'. A third blue arrow points from the 'Properties' option in the context menu to the path '/home/stefaniegreay' in the code. The status bar at the bottom right indicates 'Line 1, Column 17' and 'UTF-8'.

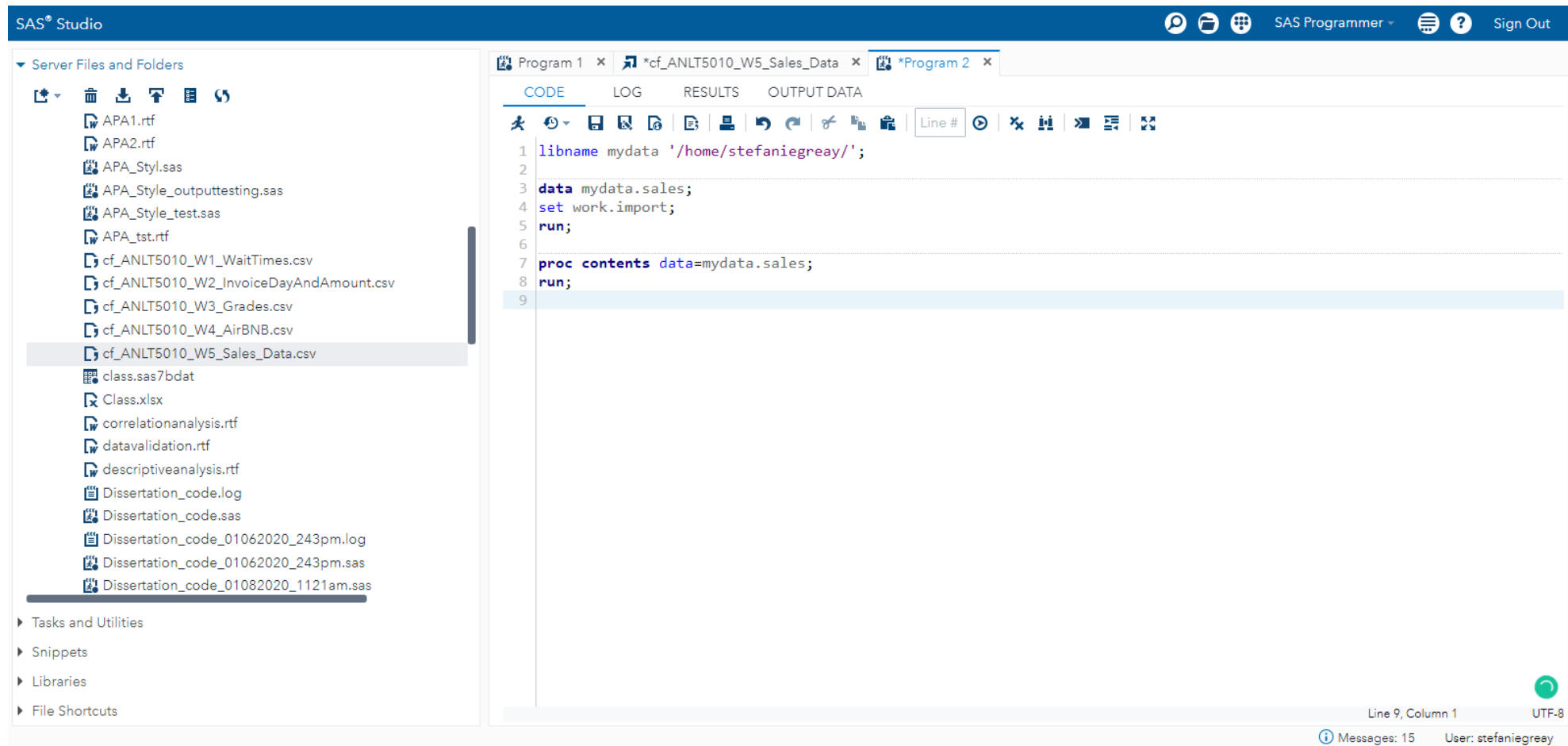
You can determine what the path is for your Files(Home) Folder by right clicking on Files(Home) and selecting Properties. (Yours will not be the same as mine – it will include your userID, not mine.)



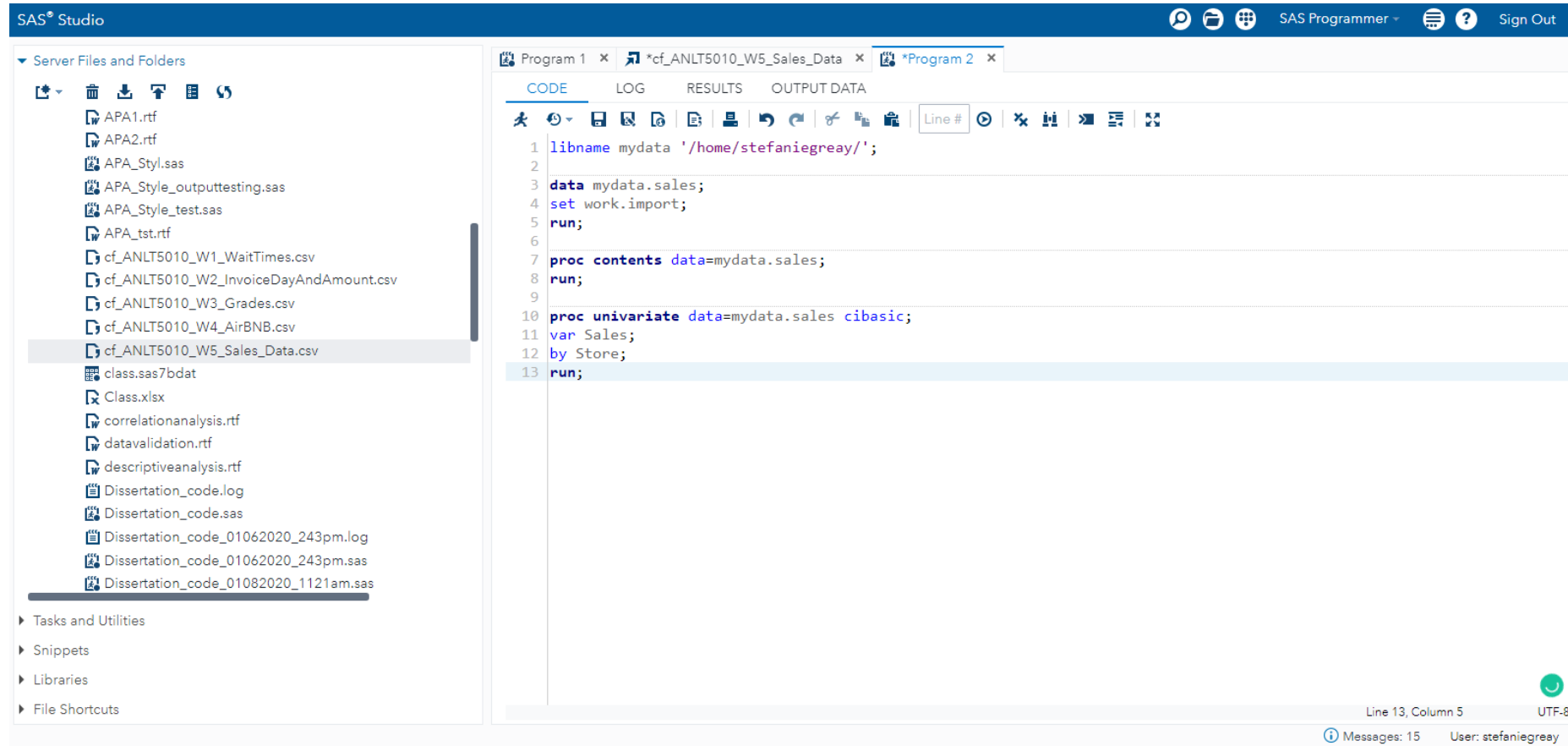
Save the temporary SAS dataset created by the import to your library using the following sample code.



Use a Proc Contents statement to look at the contents of the dataset



Use a Proc Univariate to summarize the quantitative variable(s) in the dataset and calculate the 95% confidence intervals.



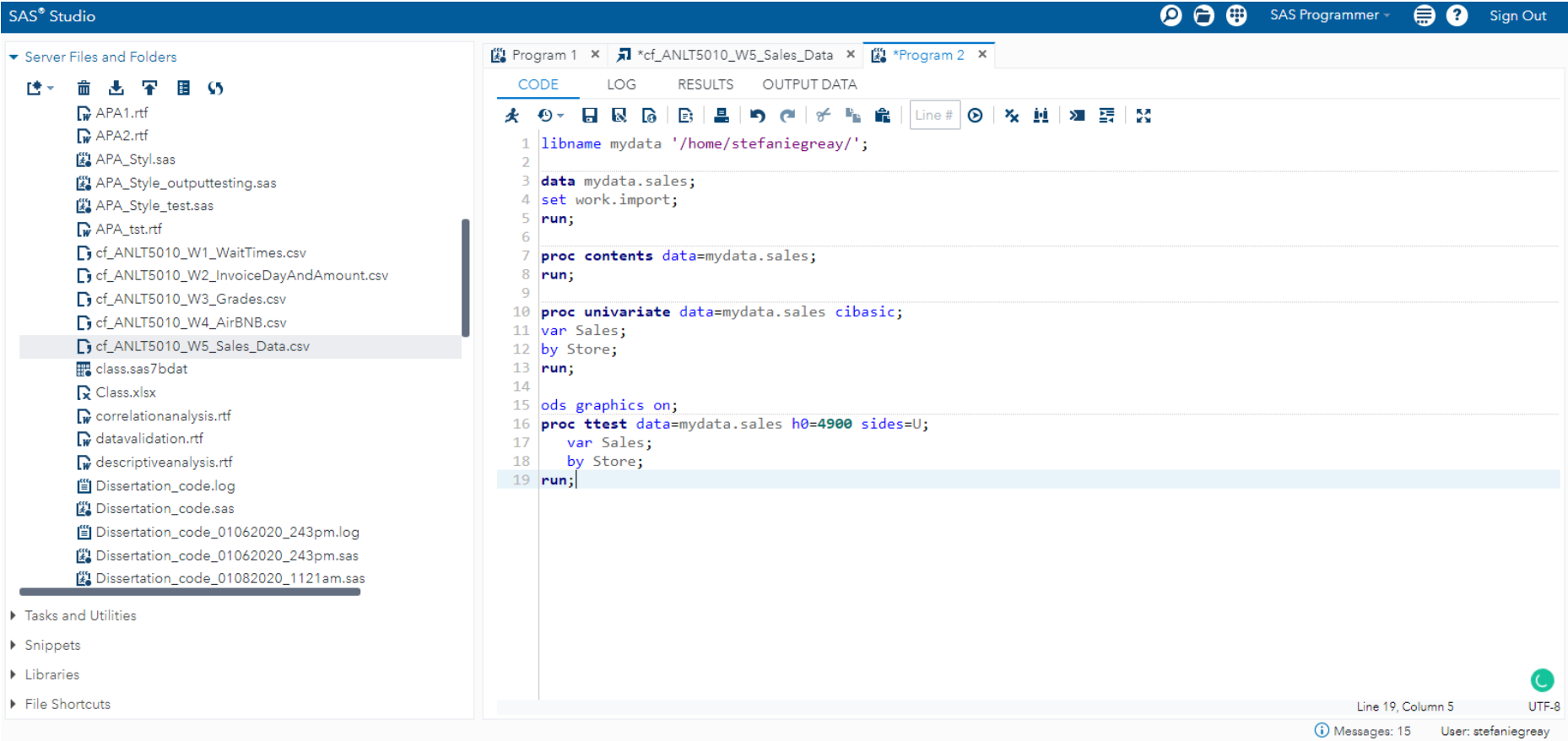
The screenshot displays the SAS Studio web interface. On the left, the 'Server Files and Folders' pane shows a list of files, with 'cf_ANLT5010_W5_Sales_Data.csv' selected. The main editor area shows a SAS program with the following code:

```
1 libname mydata '/home/stefaniegreay/';
2
3 data mydata.sales;
4 set work.import;
5 run;
6
7 proc contents data=mydata.sales;
8 run;
9
10 proc univariate data=mydata.sales cibasic;
11 var Sales;
12 by Store;
13 run;
```

The status bar at the bottom indicates 'Line 13, Column 5' and 'UTF-8'. The bottom right corner shows 'Messages: 15' and 'User: stefaniegreay'.



Run a proc ttest to conduct the two hypothesis tests for break even for each store.



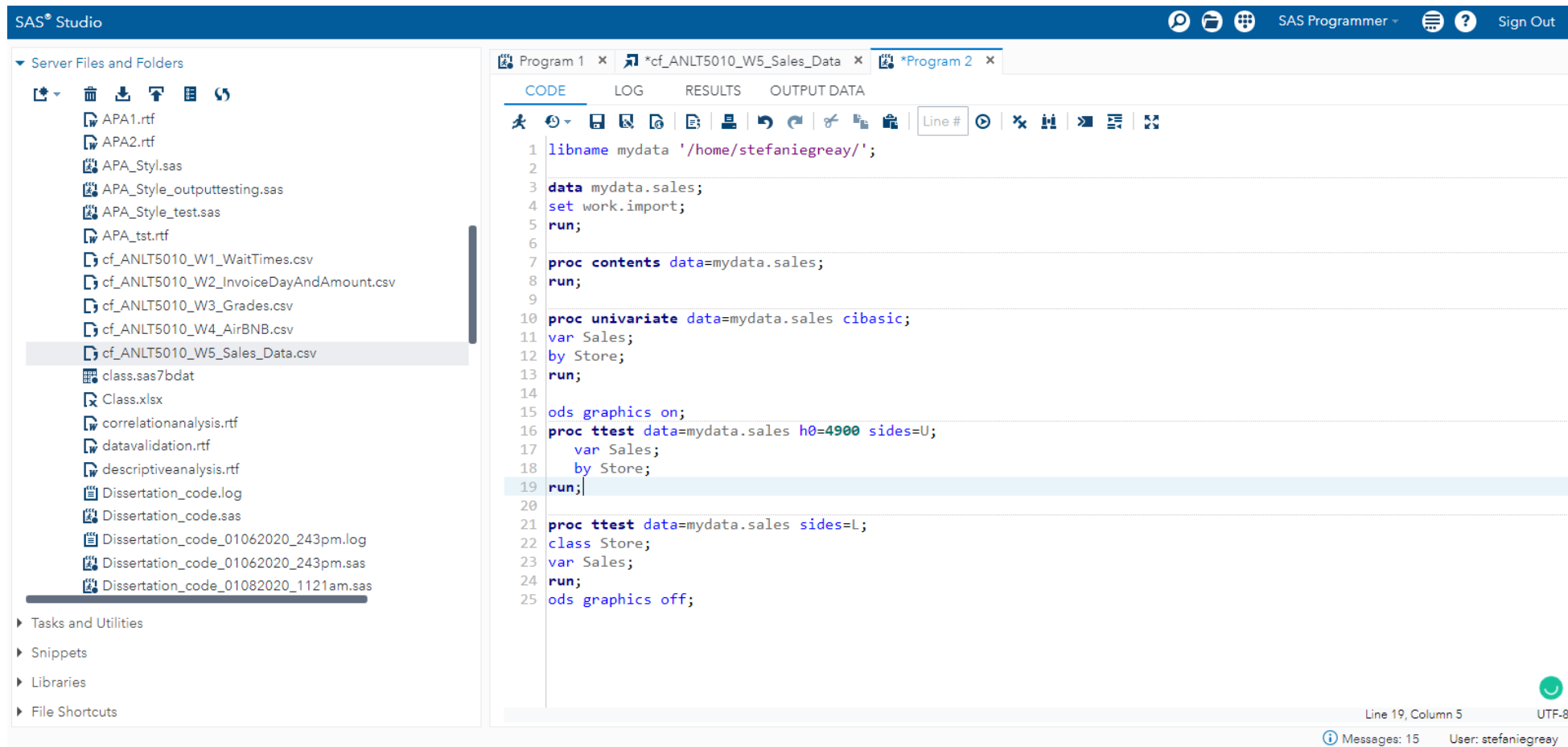
The screenshot displays the SAS Studio environment. On the left, the 'Server Files and Folders' pane shows a list of files, with 'cf_ANLT5010_W5_Sales_Data.csv' selected. The main editor window, titled 'Program 2', contains the following SAS code:

```
1 libname mydata '/home/stefaniegreay/';
2
3 data mydata.sales;
4 set work.import;
5 run;
6
7 proc contents data=mydata.sales;
8 run;
9
10 proc univariate data=mydata.sales cibasic;
11 var Sales;
12 by Store;
13 run;
14
15 ods graphics on;
16 proc ttest data=mydata.sales h0=4900 sides=U;
17 var Sales;
18 by Store;
19 run;
```

The status bar at the bottom indicates 'Line 19, Column 5' and 'UTF-8'. The bottom right corner shows 'Messages: 15' and 'User: stefaniegreay'.



Run another proc ttest to conduct the hypothesis test comparing the two stores.



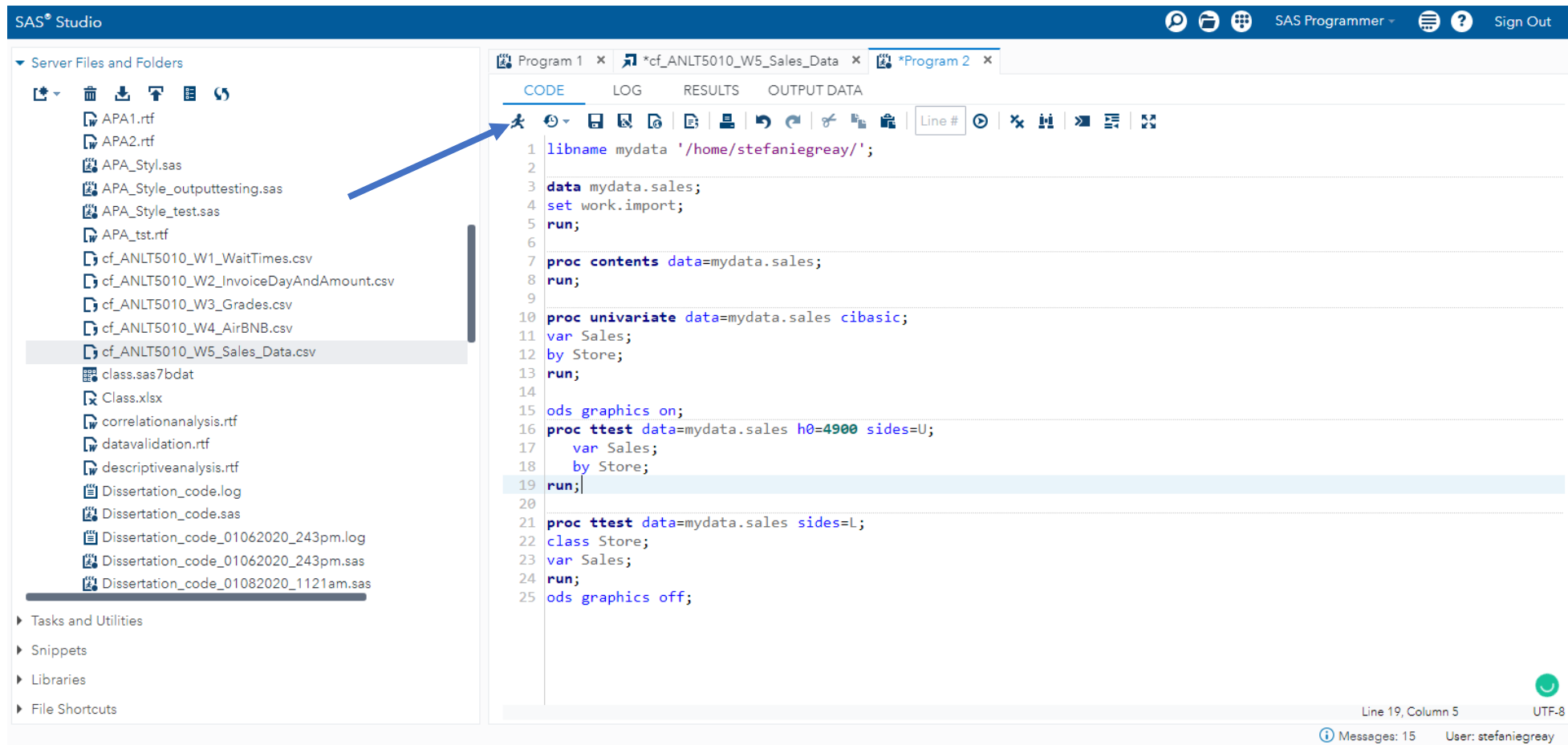
The screenshot displays the SAS Studio environment. On the left, the 'Server Files and Folders' pane shows a list of files, with 'cf_ANLT5010_W5_Sales_Data.csv' selected. The main editor window, titled 'Program 2', contains the following SAS code:

```
1 libname mydata '/home/stefaniegreay/';
2
3 data mydata.sales;
4 set work.import;
5 run;
6
7 proc contents data=mydata.sales;
8 run;
9
10 proc univariate data=mydata.sales cibasic;
11 var Sales;
12 by Store;
13 run;
14
15 ods graphics on;
16 proc ttest data=mydata.sales h0=4900 sides=U;
17 var Sales;
18 by Store;
19 run;
20
21 proc ttest data=mydata.sales sides=L;
22 class Store;
23 var Sales;
24 run;
25 ods graphics off;
```

The status bar at the bottom indicates 'Line 19, Column 5' and 'UTF-8'. The bottom right corner shows 'Messages: 15' and 'User: stefaniegreay'.



To run the code, click the icon that looks like a guy running.



Full code (basic)

```
libname mydata '/home/stefaniegreay/';

data mydata.sales;
set work.import;
run;
proc contents data=mydata.sales;
run;
proc univariate data=mydata.sales cibasic;
var Sales;
by Store;
run;
ods graphics on;
proc ttest data=mydata.sales h0=4900 sides=U;
    var Sales;
    by Store;
run;
proc ttest data=mydata.sales sides=L;
class Store;
var Sales;
run;
ods graphics off;
```



Additional Resources for Interpreting Output

Proc Univariate Confidence Intervals:

https://documentation.sas.com/?cdclid=pgmsascdc&cdcVersion=9.4_3.5&docsetId=procstat&docsetTarget=procstat_univariate_examples09.htm&locale=en

Proc Ttest for One sample t-test:

https://documentation.sas.com/?cdclid=pgmsascdc&cdcVersion=9.4_3.5&docsetId=statug&docsetTarget=statug_ttest_examples02.htm&locale=en

Proc Ttest for Comparing two means:

https://documentation.sas.com/?cdclid=pgmsascdc&cdcVersion=9.4_3.5&docsetId=statug&docsetTarget=statug_ttest_examples01.htm&locale=en

