Exercise Multiplicative Decomposition
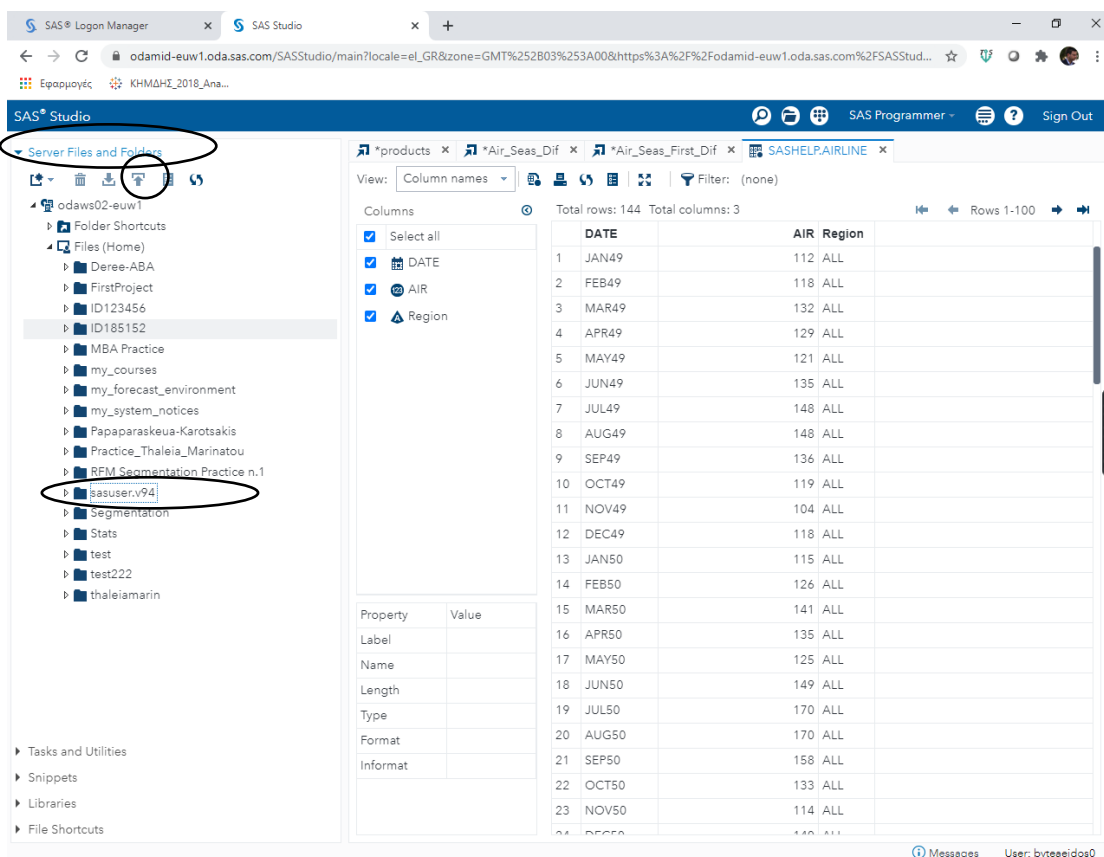
1) Open google chrome

2) Go to welcome.oda.sas.com

3) Select Europe in the drop down menu and press sign in

4) Insert your credentials

5) In the dashboard select SAS Studio

6) On the left hand side select Server Files and Folders and then sasuser.v94

7) Press the upload button (the one with the arrow heading upwards).

8) Select the file "Air_Data_Mult_Dec_For_SAS.sas7bdat"

9) Press Upload

10) Open SAS Forecast Studio

11) In the projects window press New.

12) In step 1 name the project "Air_Data_Multiplicatve_Decomposition" and press next.

13) In step 2 open the sasuser library, Select the "Air_Data_Mult_Dec_For_SAS" data set and press next.

14) In step 3 press next

15) In step 4 select Date as the time id variable.

16) In step 5 select Yt as the dependent variable.

17) In step 6 press next

18) In step 7 set 12 in the Change the number of periods to forecast (horizon).

19) In step 8 press finish.

20) In the Forecast Summary window double click on the Model Type box. What do you observer? Press close.

21) In the Forecasting view window, comment on the characteristics of the time series. Is your observation in line with the results of the previous step (model type)?

22) From a visual inspection, the time series model is additive or multiplicative?

23) Select the Series View window.

24) Select Plots -- > Decomposition Panel.

25) Select Multiplicative and press OK.

26) Observe the trend – cycle component, the seasonal component and the random component. If you need to see them separately press Plots -- > Components -- > Select the Component -- > Multiplicative.