The deadline for this project is **May 15th 2021**, 11.30pm

You will upload in the MS Teams Assignment **only one pdf** file (the written document + the code added at the end). The pdf will be verified with Turnitin.

Please include your name in the file name.

Requirements:

– Choose a time series (**any real data**, except for the The quarterly U.S. Gross National Product gnp and AirPassengers presented in Lab4). Look careful at it and make sure that it does not look like any of the two from the lab.

– Build a model for the time series that you choose – explain all the steps that you go through.

Important: you cannot use any ready-made function that receives the time series as input and provides the best model as output (like a black box). Instead, you can use the functions from the Labs, or similar ones.

– Use that model to forecast the next 20 values in the time series and plot them together with the initial time series.

The project will consist of two parts:

1. implementation (preferably in R, but Python is also allowed). **Attention:** you should not insert any comments that explain your code;
2. a written document, where you mention the steps that you follow: describe the datasets, plot the time series, interpret the results, plot different useful graphs, explain the choices that you make when building the model, argue why the model is the best (according to which criteria); the goodness of fit analysis etc. (between 2-10 pages).

Attention: you must indicate the source of the time series that you model. Also, all the resources (on internet, books) that you consult for the project must be cited.

You must work individually for the project.

You must present your project in order to be evaluated. The presentations will be scheduled in the last 2 weeks of the semester. The planning will be available on Moodle and MS Teams (30 minutes for each student).

If you have questions, my email is cidota@fmi.unibuc.ro

Marina Cidota

23.04.2021