This is the group project. Each group consists of 1, 2 or 3 students. You should submit the time series dataset in .csv format and the .ipynb file with code, plots and text comments. Each plot and each estimated model should be commented.

1. [2] Take any time series of monthly or quarterly periodicity with seasonal pattern.

   Clearly describe the source you use.

2. [10] Visualize the time series. Try to use different plot types. Split your time series into train and test parts.

3. [5] Decompose the time series into three components (trend, seasonal part, noise) and plot them.

   Here you may use ETS model or any other decomposition technique.

4. [10] Make forecasts using Random Forest or Gradient Boosting.

   Clearly describe the features you create. You may use any additional predictors.

5. [10] Make forecasts using appropriate model of ETS class.

6. [10 + 5 bonus for something extraordinary] Surprise me part! Make forecasts using any statistical model or machine learning algorithm of your choice. Try to be creative!

7. [3] Compare the three approaches by the forecast quality on the test set. Choose the best approach.

8. Add some fun to your project! :)