Slide set 4 exercises

NOTE : you can merge the subprojects analyses into the same document, zip can contain all the exercise codes, there is no need to do separate zip packages, just one.
NOTE2: The classifier/predictor codes are expected to have training and testing phases and thus the data must be divided (close to) 80% / 20% ratio for training and testing.

Exercise 1

Copy the 'ARIMA_example.py' code, tidy it up (remove unnecessary parts) and modify it to analyze stock exchange data. For example, go to www.marketwatch.com , seek some company using magnifying glass, click stock value and then 'Historical Quotes'. You can download *.csv data from there, take 3 months (daily values) at minimum.

Try to find **minimum** (acceptable) predictor (AR, I, MA) that mimics the stock exchange data most accurately (test dataset) i.e. by minimizing the residual amplitudes. Modify the seasonality etc. parameters for that purpose. Return your analysis with images and zipped code.

Max 5 p.

Exercise 2

Copy the 'ARIMA_example.py' code, tidy it up (remove unnecessary parts) and import the pickle file: "Nepal_electricity_consumption_in_MWh.pkl" from 4th folder. The seasonality is very clear in this data.

Try to find **minimum** (acceptable) predictor (AR, I, MA) that mimics the electricity data most accurately (test dataset) i.e. by minimizing the residual amplitudes. Modify the seasonality etc. parameters for that purpose. Plot 400-500 samples from the input data and show prediction results with test data. Return your analysis with images and zipped code.

Max 5 p.