

FilteringData

Engineers often need to load a series of measurements stored in a file, implement filters that filter-out the noise on the measurements and further plot the time-series to make observations on the data. In this project you will implement the first two of these three steps: data reading, filtering and plotting (already implemented in the project).

A data file("USDTRYtable.txt") is given to you that contains the table of USD to TRY conversion rates by TCMB(Turkiye Cumh. Merkez Bankasi) across a large period of time. Draw.java contains the static method *plot2D* which can be used to plot the data specified in an array of double's.

Your task is to implement:

- 1- The 'readDoubleArray' method in DataFileReader.java, which takes in the file name in a String object and returns the data in an array of double's.
- 2- Implement the 'movingAverage' method in FilteringData.java, which takes in the data (in an array) and the number of samples to be used a moving average (https://en.wikipedia.org/wiki/Moving_average) filter and return the data after filtering.

Once you implement these methods and run the project, you should get an output like the following screen view (where the original data is shown in black and filtered data in red):

