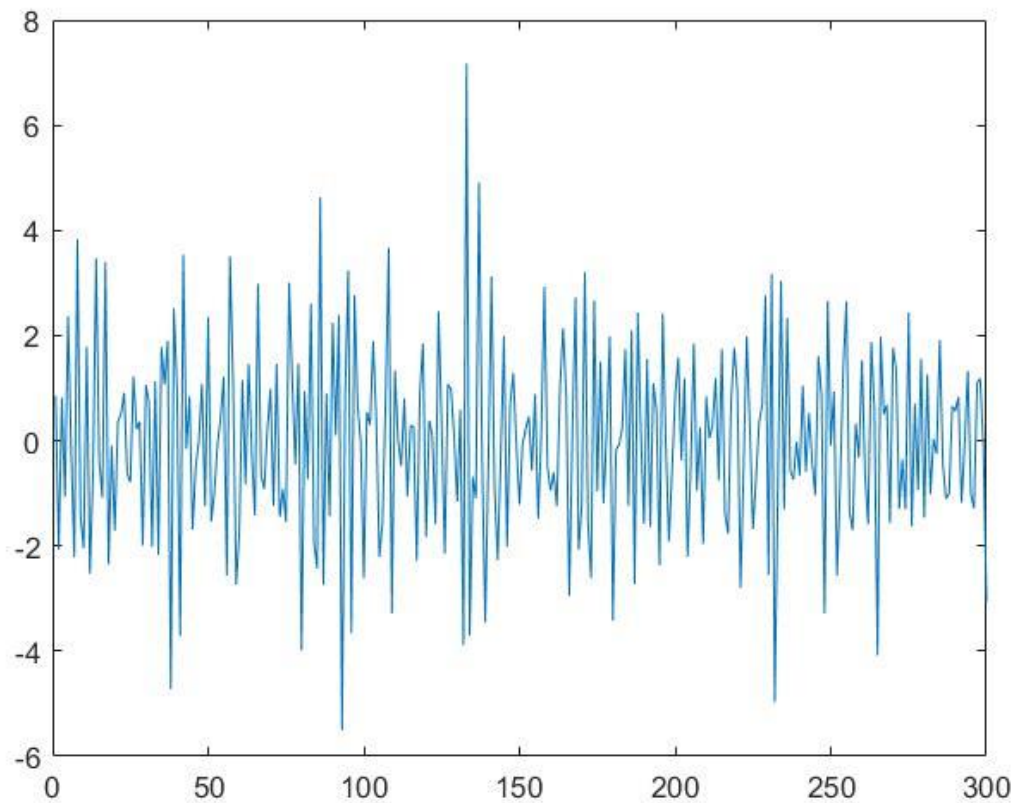Q2

MATLAB Commands Used:

Time series for Q2 is imported to MATLAB. Timeseries is imported as a table, which needs to be converted into an array.
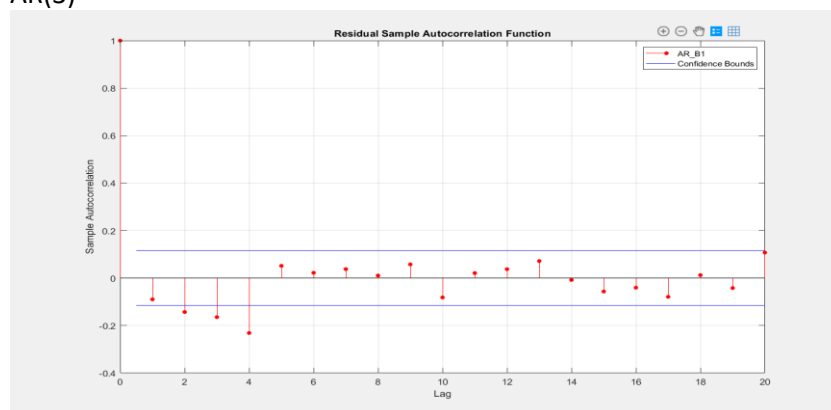
     B = table2array(EE627AHW2Q2);
     plot(B)

B is imported to Econometric toolbox to plot PACF and ACF.
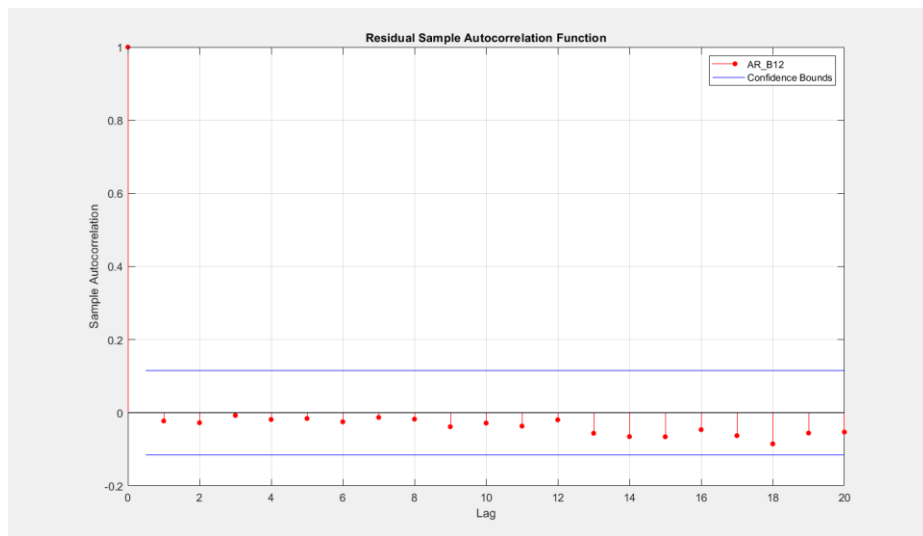Following which a model is created.
The models I created are given below with residual auto correlation:
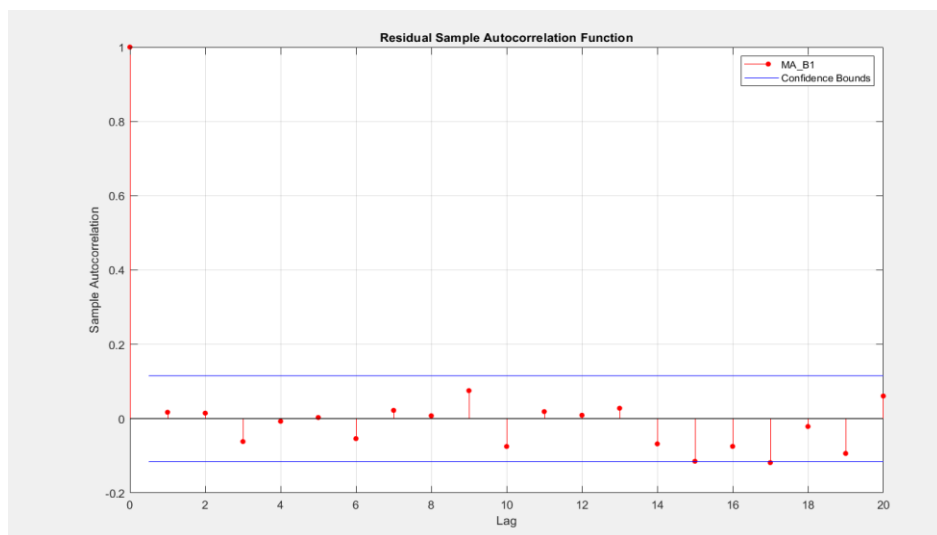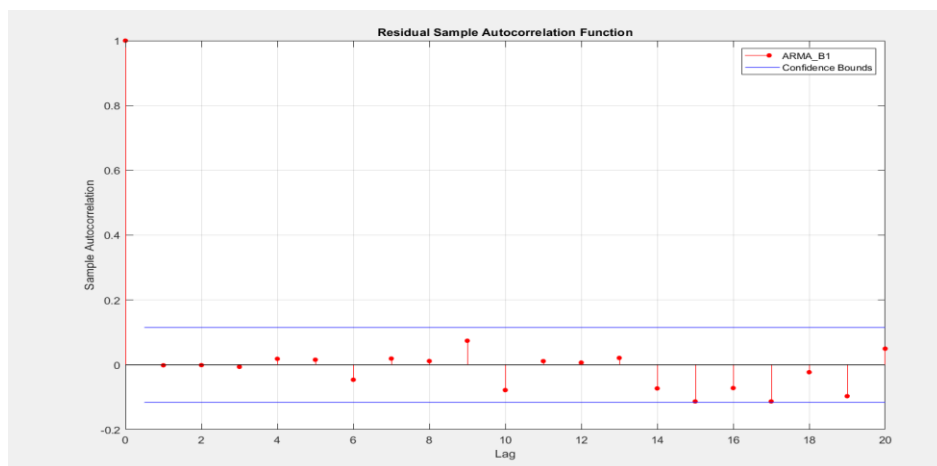
    i)   AR(3)

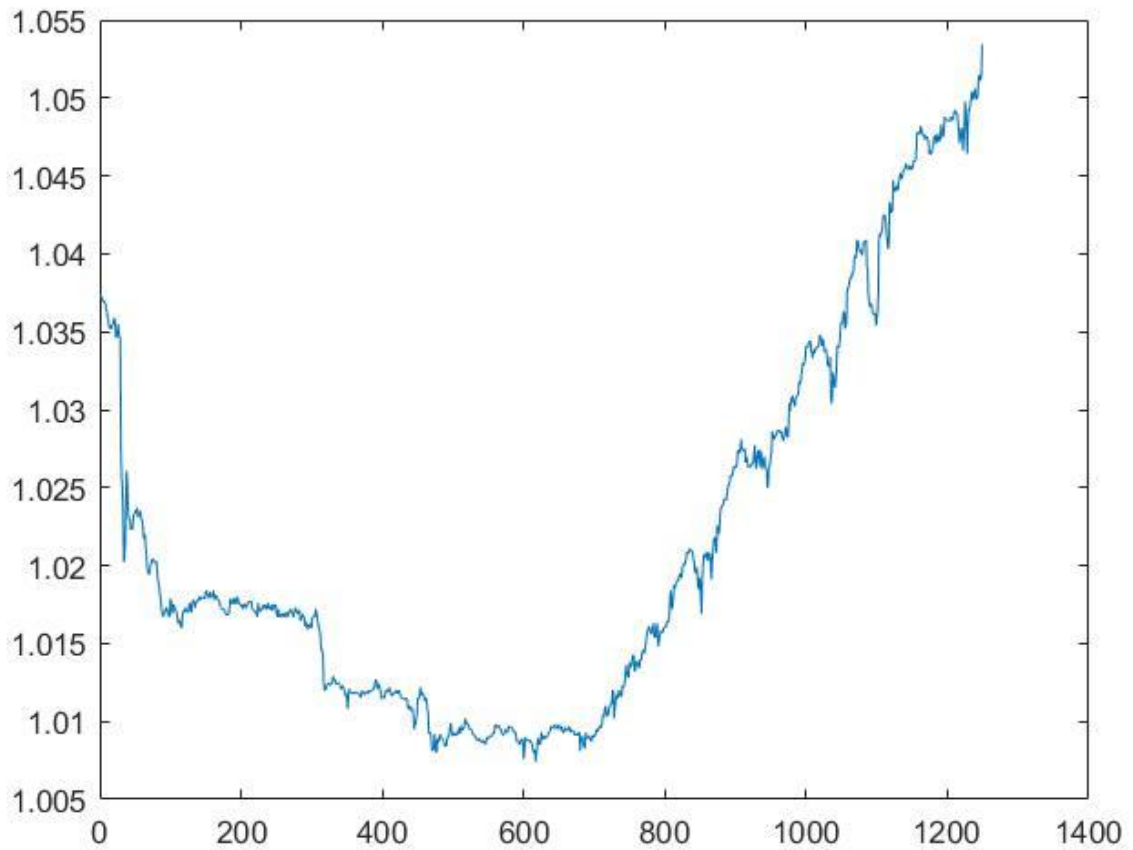ii)   AR(20)
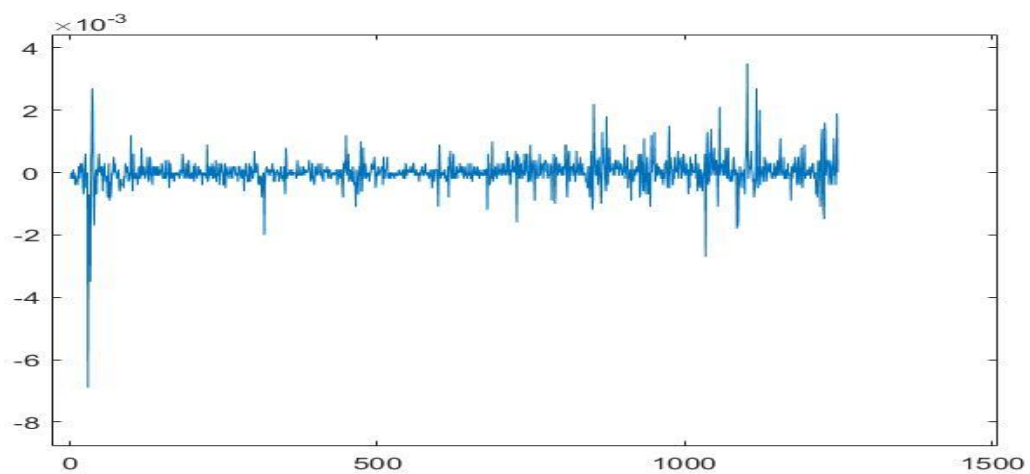

iii)   MA(3)

iv)   ARMA(3,3)

According to observation AR(20), MA(3) and ARMA(3) are best fit models. But since the one with least error terms are considered MA(3) would be a preferred model.
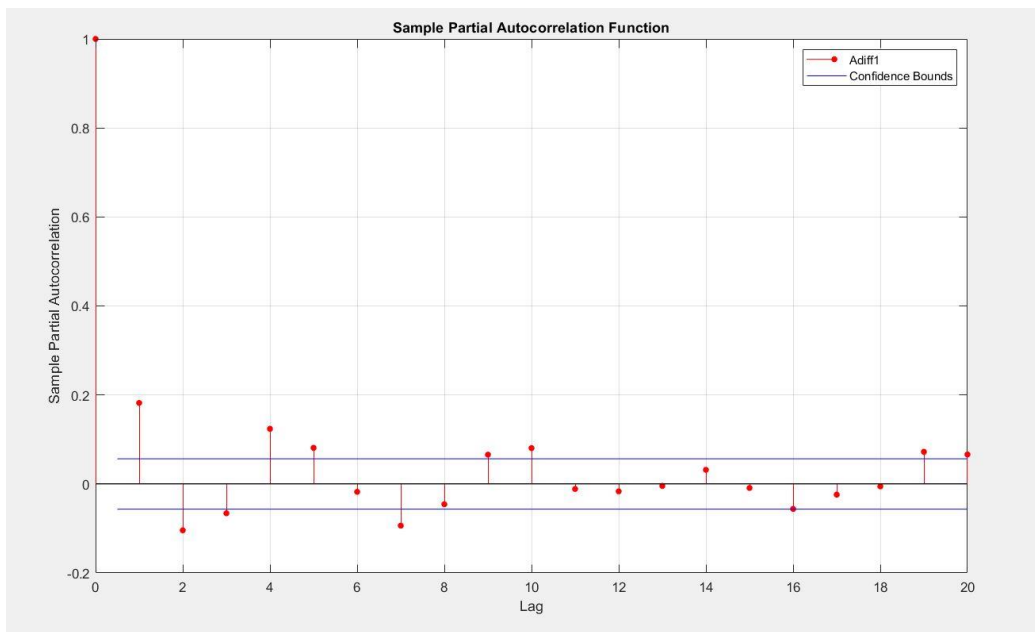
Q3

The time series is non – stationary thus, convert into stationary by taking difference. Using **diff(xt)** in MATLAB.
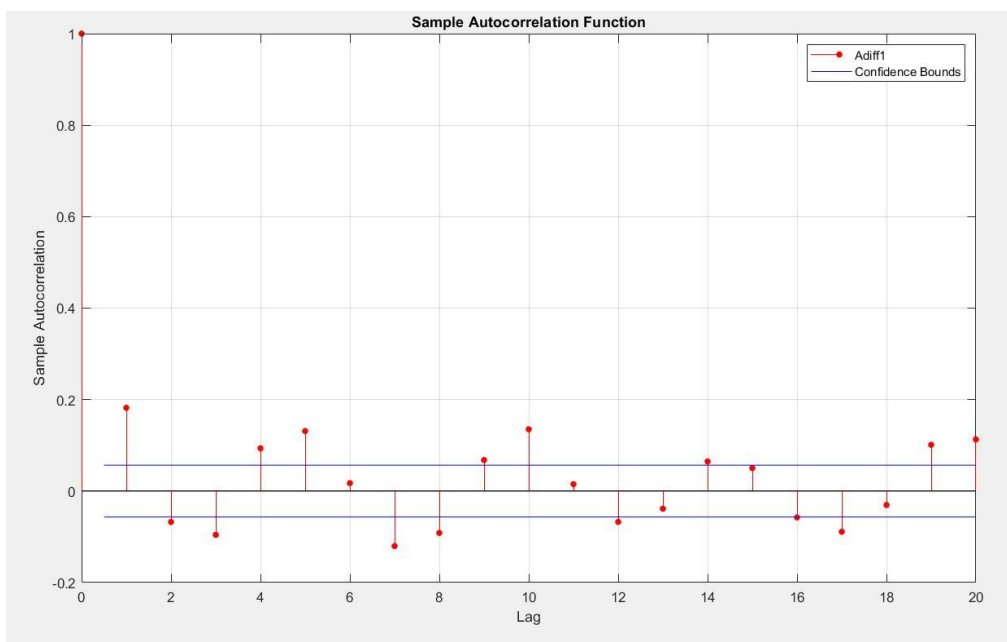

The Un-stationary signal is converted to Stationary Signal.
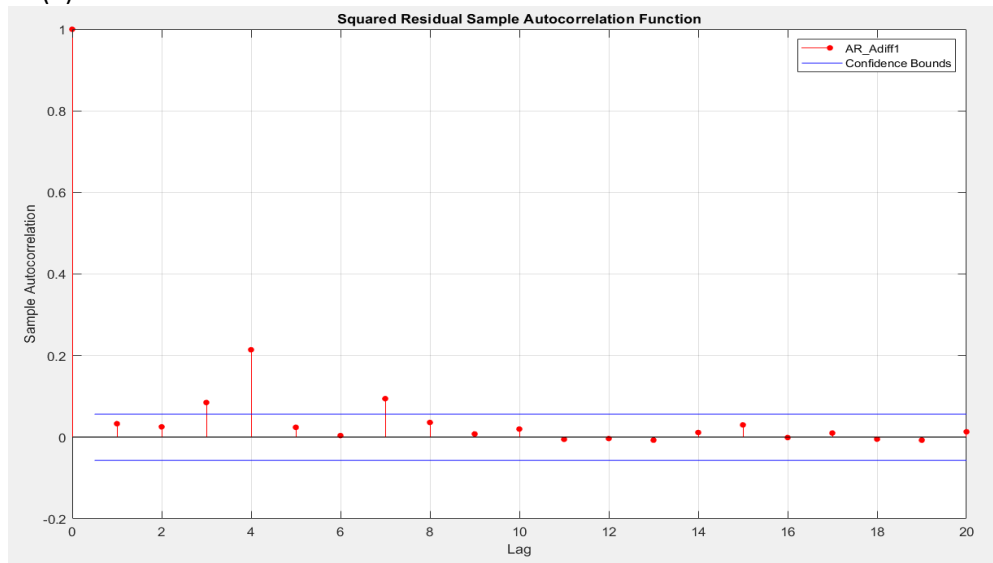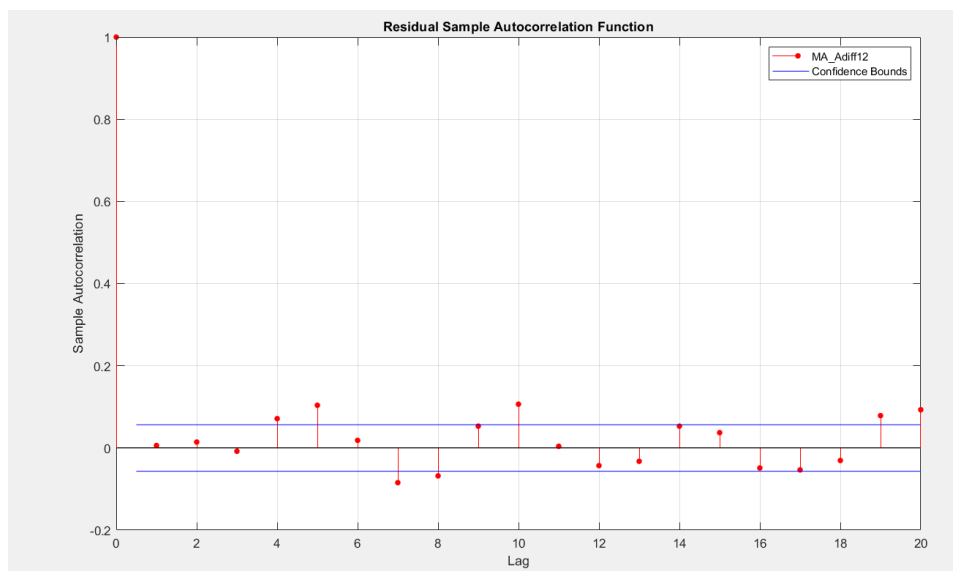
i)   PACF

ii)   ACF

Models:

i)   AR(3)

ii)   MA(3)

iii)   ARMA(3,3)

Residual Sample Autocorrelation Function