GP 503 Geophysical Signal Processing

Assignment-1:
Write a MATLAB code to
(i) Generate a random time series of 5000 data points (all whole numbers)
(ii) determine the Autocorrelation function (ACF) values at $\tau=\pm\,4000$ and Plot the ACF as function of τ.

Assignment-2:
Write a MATLAB code to
(i) Generate two sets of random series, each consisting of 5000 data points (all whole numbers)
(ii) Determine the CCF values at $\tau=\pm\,4000$ and Plot the CCF as function of τ.

Generate the ACF and CCF plots for the above data by using (i) your own code and (ii) the MATLAB in-built function. Superpose ACF and CCF plots with those obtained by respective codes. Submit (i) your own code, (ii) the code with MATLAB in-built function and (iii) respective ACF and CCF plots.