**Home Work 2 (Submission electronic through Blackboard)**

**Due Date: Oct 25, 2022.**

**The video comments on simulations will be available.**

* Get bit error rates (BER) as functions of Eb/N0 using simulation described in lecture notes. Codes are attached. Code “bpsk.m” produces BER for one value of Eb/N0 (a measure of signal to noise ratio). Add additional loop to get the BER curve.
* Visualize signal fragments from the simulation code. Don’t change the code but use signal intervals of 100 samples extracted from various stages of the code: (1) original (0,1) binary signal (“data” array); (2) (+/-1) binary signal (“data1”); (3) oversampled signal (“data2”); (4) pulse shaped signal (“data3”); (5) noisy signal (“data4”); (6) data after receive (matched) filter (“data5”). Use Matlab plot function for visualization. Preferably plot all of them together using subplot feature
* Other than plotting signal fragments in time domain as explained above, plot Fourier spectra using plotspec.m function for the same signal fragments used above, i.e. applying it to 100 samples of (1) oversampled data; (2) pulse shaped data; (3) noisy data; (4) data after receive filter.