**EXPERIMENT NO: 1 - Introduction to signal processing using Octave**

1. Generating signals: Using built-in commands in Octave, generate different waveforms such as, exponential curves, etc. Plot them as a function of time. Ex.:etc., for .
   1. Label the axes clearly.
   2. Plot two different curves on the same graph and use legends and different colours/line styles to distinguish them
   3. Use a time resolution of T=0.01 seconds and plot the discrete version of all the signals given above.
2. Importing different file formats: \*.txt files, \*.wav files: Read the data from different file format and plot them on graphs.
   1. Import the ECG data from ***ECGData.txt*** file. Plot the data using plot command.
   2. Import the files ***RainFallIndia\_Jan.txt*** and ***RainFallIndia\_July.txt*** which contain the average rainfall during the month of January and the month of July across India. Plot the distribution using histogram.
   3. Load ***track001.wav*** and play the audio.
3. Writing to files: Generate data and save it to files:
   1. Generate a random sequence and save it to a text file
   2. Generate sin wave form with changing every ½ sec.

Keep sampling frequency of 2500 Hz and write it into a wav file and listen.

1. Write a simple user-defined function to find the area of a circle given the radius. The function should also plot the circle on a graph.

*List of useful functions: sin, cos, exp, plot, stem, hist, textread/textscan, wavread, sound, wavwrite.*