PROJECT LIST

A. Three audio signals are provided to you (bass.wav, drums.wav and guitar.wav).
   1. Extract a segment from each audio signals (from 10^{th} second to 20^{th} second of each audio signal). Listen to each signal.
   2. After step 1, combine all the three signals and listen to the final audio signal.
   3. Increase the bass part of the signal (obtained in step 2) to 3 times. Listen to the audio and see the difference.
   4. Gradually increase the amplitude of the drums in the audio signal obtained in step 3. Listen to the audio obtained.
   5. Create a stereo audio signal by combining all the three audio signals given in step 1.

   [PS: you can record or include a song as a 4^{th} signal]

B. Record a speech signal having three to four sentences (pauses in between). Analyze and try to remove the silences in the speech signal. Listen to the new audio signal.
   [Hint: Break it into frames and try to analyze each frames].

C. Five speech signals are provided to you (one.wav, two.wav, three.wav, four.wav and five.wav). Recognize the given test/unknown speech signal (test.wav and test2.wav) using correlation concept.

D. Signal Analysis: Determine the average heart beat per min of an ECG signal provide to you (ecg.txt). The ECG signal was captured at 100 Hz and total number of samples=6000.
   [Hint: identify the largest peaks in the positive side of signal. This will refer to the heart beat.]