**Add to your framework the following function to distinguish between two subjects.**

This function takes paths for two ECG folders of two subjects A & B and a test ECG folder., its sampling frequency ‘Fs’, the minimum ‘miniF’& maximum frequency ‘maxF’ of the signal and new sampling frequency ‘newFs’ as an input and then do the following:

1. Filter the signal using FIR filter with band [miniF, maxF].
2. Resample the signal to newFs only if newFs doesn’t destroy the signal, else show a message to the user “ newFs is not valid” and continue executing the next instructions.
3. Remove the DC component.
4. Normalize the signal to be from -1 to 1.
5. Compute Auto correlation for each ECG segment.
6. Preserve only the needed coefficients for the computed auto correlation.
7. Compute DCT.
8. Use template matching to compare the non-zero values of the computed DCT and label each ECG segment in the test folder as subject A or B.
9. Display original signal, after autocorrelation, after preserving the needed coefficients of autocorrelation, DCT and the label of each test case.