Computer assignment:

For an utterance of your choice, segment it into voiced and unvoiced sounds and then analyse the sounds, respectively. According to the analysis results, plot the following measurements:

- the entire speech waveform
- the short-time energy, E_n
- the short-time magnitude, M_n
- the short-time zero-crossing, Z_n
- the short-time autocorrelation
- the spectra
- the linear prediction filter coefficients
- the cepstrum

During the exercise, pay attention to the choices of window types, window sizes, and window shifts. Explain your choice and the obtained results.