DSP LAB: 21st / 23rd and 28th / 30th April, 2020 (LOCK DOWN PERIOD)

As you are aware we have to complete the semester's lab remotely by 3rd May.
For the remainder of the DSP Lab the following experiment has been designed:

Week 1

Please read the paper provided here:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2268248/.
The idea of the experiment was to study what aspects of sound features, particularly the location of the sound source and identity (recognition) of the sound are derived from the envelope (slow variations in the sound) and the fine structure (higher frequency fluctuations) in the sound. In the absence of any other cues, both the features are computed from the sound itself, that impinges on our eardrum and are encoded in the brain. Such information helps in terms of design of hearing aid algorithms and cochlear implant design.

As you will see the authors perform this study with sound chimaeras or mixtures, mixing envelope of one sound with fine structure of another. In the first week you are required to read and make a complete detailed block diagram of the different types of stimuli synthesized in this work.

Week 2

Please write a pseudo-code for the detailed stimulus synthesis.

Both week's work has to be directly submitted to your respective TAs (or otherwise), as done in the rest of the semester. Please do the submissions on the day of the lab. Please complete all pending submissions from the Lab within this period.