Computational Creativity Lab 2 Report
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The initial Idea was to try and implement FM synthesis but by using any type of wave from sine, sawtooth, triangle, and square. Therefore, it seemed like a good idea to create a wave generator to easily vary the type of wave. However, I did not succeed in implementing FM Synthesis using different wave shapes, most likely because of gaps in my understanding about the concept, and not knowing the feasibility of my steps..

As a contingency, a simple additive synthesizer was done using the wave generator that was created for the initial task.

Modules:
The Wave Generator: Outputs a wave according to user choice. For the generation of triangular and square waves, some patches were used from the tutorial indicated on aulaglobal (http://www.pd-tutorial.com/english/ch03s05.html). These patches were only slightly modified for our purposes and are in pd-tutorial-patches/. There is an option to input Frequency and Amplitude by inlets, this was done in the hope of connecting the wave generator to better interfaces. Left inlet is amplitude, right inlet is frequency

The Enveloper: This is a work in progress. It gives give an option to either play the synthesis result as a drone or with an envelope (just a simple ADSR message). It was supposed to be multiplied by whatever will be input to the dac. It seems that there maybe a bang or so missing. It was kept because it would be nice to get feedback on what was missing :)

To run, use main_patch_additive.pd.

Limitations:
- Enveloping is not working
- There should be more user friendly input/output for the frequencies especially, to allow for easier utilization
- Something I could not avoid is this ‘clicking’ sound when any of the wave generators is turned on

The audio file is just a demonstration but it is limited because no work was done on how to interface.

Recording:
I sincerely apologize but the recording subpatch did not work in pd, and there was no time before 4pm to record in an alternative way. The created sound files do not play back.