Assignment 1: additive synthesis

Description:

Implement a synthesizer based on additive synthesis.

Additive synthesis is implemented summing multiple sinusoidal oscillators with different frequencies and gains.

Your implementation should include 4 oscillators.

The first oscillator is controlled in frequency by a MIDI input. Its gain is controlled in the GUI.

Both the gain and the frequency of the remaining three oscillators is controlled individually from the GUI. The frequency of each of these oscillators should be expressed in terms of frequency offset from the principal one (i.e. the one controlled by MIDI).

The output will be the sum of the four oscillators.

Output:

- a brief presentation of your work (max 5 minutes) that will be given to the class
- a more detailed report in which you illustrate your audio plugin and its implementation (max 8 pages).
- a link to a repository containing the code (e.g. on GitHub) with minimal comments.