

 POLITECNICO MILANO 1863	Academic Year 2021-2022 052483 Computer Music: Languages and Systems	JUCE Homework 3
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Subtractive Synthesis

Description:

Implement a synthesizer based on subtractive synthesis.

Subtractive synthesis is based on two blocks:

- a waveform generator
- a filter

From the GUI the user should be able to select the waveform type (e.g. different kinds of noise, sawtooth, square wave, etc.). The frequency of the waveform is controlled by a MIDI input. The output will be the filtered waveform.

Tools:

For the homework you can use one or more FIR or IIR predefined filters with fixed coefficients.

An option is to expand this plugin using the FIR and IIR filters implemented in the DSP module of JUCE and exposing their parameters in the GUI.

Look at the examples and tutorial provided by JUCE.

Output:

- A brief presentation and demonstration of your work that will be given to the class (max 5 minutes).
- A more detailed report in which you illustrate your system and its implementation (max 8 pages).
- A public repository in the general GitHub repository <https://github.com/polimi-cmls-22>. Add in your repo a general README file with a brief description of the project. Identify the repo as specified in the guidelines.