Web Audio - Step Sequencer

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ATIAM 2022-2023

Step Sequencer

Following the different steps for the step sequencer project, I started by setting it up with the 'basics' instructions:

- Master volume
- Effects lines
- BufferSource creations
- Beat follower track
- Move forward in the score
- dBToLinear function

Then, I added some personal elements to go further into its functioning (Improvements part):

- Addition of the ability to start and stop the system with buttons
- Addition of a controllable reverb, which can be activated with buttons and sliders (the reverb comes in at the end of the chain, on the master)
- Addition of the ability to modify the BPM from the user interface
- Modification of the user interface to make it more accessible

For the creation of the reverb, I have used a function that permits to create an impulse response, and then I used it with a Convolver() to obtain the aforesaid reverb.

Finally, the user interface of the step sequencer looks like the figure 1.
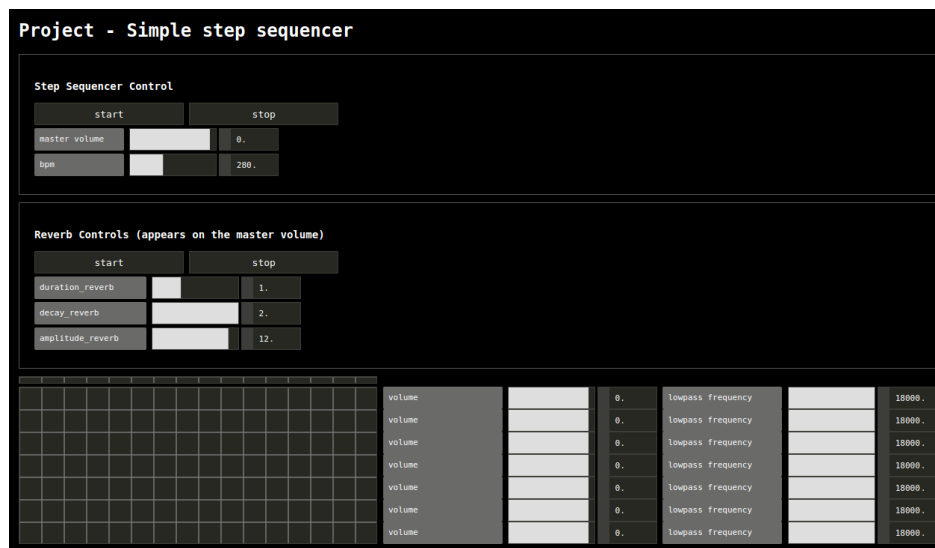

Figure 1: Final Interface of the Step Sequencer

To use it, you just need to start the StepSequencer by clicking on the *start button* in the Step Sequencer Control Part. In the same part, you can also control the *master volume* and the *BPM*.

Then, in the second part, you can add a reverb to the master. With this reverb, you have control over certain parameters such as the *duration* and the *decay* of it, and another adjustment on the volume can be used with the *amplitude_reverb* slider.

In the last part, you can play with the step sequencer itself, and create the pattern you want. You have some additional controls on the *volume of each sample* that is used in the step sequencer, and on the *cutoff frequency of the lowpass* that is added to each sample.