

CS4358 – Interactive Multimedia

Develop an interactive multimedia project in Processing, evaluate and document

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**Overview**

For my project I focused on adressing many key elements to the program. I first wanted to make it more visually and aurally pleasing, so I loaded different samples, and adjusted backgrounds, colour schemes, shaped, etc.

Some of the main functions that I added were as follows:

Master and individual volume knobs: I ran the master between 2 and 102 and subtracted the difference later (due to an interference between this and my dropdown list). I then multipled this by the individual volume knobs which ran between 0.01 and 0.99 with the difference subtracted and applied it to the samples.

Play/Pause/Stop Buttons: This function was to limit the need for a keyboard in using the program. The stop button stopped the sequencer and returned the playhead to 0 while the pause button leave the playhead remaining where it was. The play button then commences the loop.

Buttons to adjust Tempo: This was another simple function to limit the need for a keyboard. I added a + and – button to the tempo meter which when clicked slow or speed up the tempo.

Move playhead with arrows (step function): I inserted a keypressed function so that you can move the playhead using the left and right arrows so that you can start the sequencer at any point that you wish.

Dopdown List: I wanted to use this function to make the sequencer more versatile. I Made the dropdown list to change the samples played by the sequencer, so that you could get different ‘kits’. I loaded a rock and techno kit in as examples, while the opportunity remains to load more kits through the code.

Glitch tweaks: There was a number of inconvenient glitches in the original code which I aimed to iron out. A big nuicence was that the update function did not overwrite the button ID unless it was overwritten with another button. This meant that you cpould not use the other click functions without toggling the buttons on the sequencer. I solved this by inserting an argument that writes the button ID to -1 when the mose is outside the sequencer area.

Another glitch was that the playhead would not move when you used the ‘step’ function using the arrows while the sequencer was paused, which I solved by inserting more code.

I feel that the changes I made to the sequencer were a huge improvement on the way it was previously set up, making it much more visually and aurally pleasing as well as making it much easier to use and much more versatile. I added new functions that make it more useful and a much better tool.

**Evaluations**

1. This was one of the better sequencers I played with. I liked the visual aestethics and the sample choices were great. The drop down menu is useful and allowed the changing of samples which I thought was a really clever idea. The rock kit in particualar sounds like an actual professional sequencer. As regards functionality, the play, pause, and stop buttons all worked correctly and the tempo could be adjusted on screen with the mouse as well as with the up/down button style that was provided in the example.
2. This was a good sequencer I thought. The drop down menu to choose kit’s is really cool. The ability to use the master volume and individual sample volume’s in harmony was something that I didn’t manage to accomplish in my own sequencer. The sequencer itself looks quite cool and performs well overall.
3. Overall, this is a nice sequencer. I actually thought it functioned as well as a professional sequencer might do. The user was able to control play, pause and stop functions but also was able to change where the playbar was in the sequence by using the left and right arrow keys which I thought was very handy. The drop down menu was a good idea.