Figure 1. Old Interface of the VST Plug-In Created in JUCE

The above figure shows that of the old interface that was created by the previous year's IQP in order to create their VST Plug-In in JUCE. This is a classic sampler in which velocity is the main component that is "messed" once the sample is loaded into said sampler. However, there is room for improvement with this sampler, as velocity, volume, and dynamics are not the only way in which a sample can be manipulated within any type of sampler. Because of this, the said interface was improved by me, as seen in the following figure below.
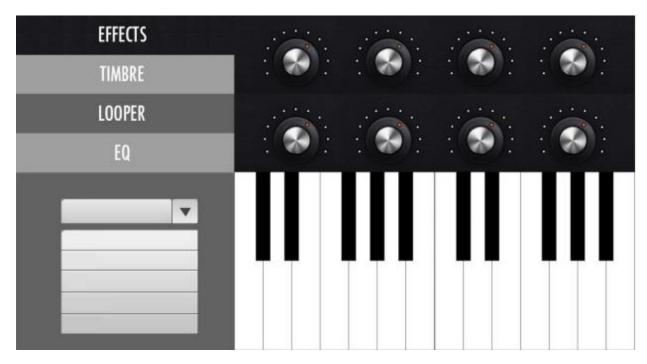
Figure 2. New Interface of the VST Plug-In Created in JUCE

As you can see from the other above figure, the new interface that was created above now has multiple levels of effects other than just velocity. There is also timbre, which can be used to change the way in which the sample / VST instrument is toned / played while in the sampler. There is also a looper that loops the sample, so that it can be manipulated once put into a loop, beat, or song in the playlist of your DAW. And there is an EQ to adjust the frequencies of the sound as well. Some additional effects that the next group should consider adding (other than that of velocity, timbre, looping, and EQ) are reverb, distortion, compression, chorus, flange, and gain. This would allow the sample to be manipulated in pretty much any way that is necessary for the song to need it to be. The only reason that said effects weren't added is primarily because there was a time restriction for this project (of which has already gone over (sorry about that again Professor)). However, reverb and distortion can simply be thought of as similar effects to timbre (as different instruments with timbre do technically function with different amounts of reverb and distortion (for example, an electric guitar was more reverb when amped, and more distortion than say an acoustic guitar as a reference point)). Compression and gain would not be too difficult to code in as well. And, neither would chorus and flange be too. Hopefully, you enjoyed this presentation of my plug-ins, and if you have any questions, comments, concerns, advice, or anything else that you would just like to share. Please feel free to contact me at srdavis@wpi.edu.