**PROGRAMMING PROJECT INITIAL SPECIFICATIONS**

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**PROGRAM OVERVIEW:**

I will be using the Minim external library for processing 3 to create an audio visualizer. The concept will be to create a very artistic and abstract visualization of the various frequencies of the song being used. Additionally, beatmapping might also be used to react rhythmically to the music as well as hard coded animations to add variation. This project will be very experimental and thus I’m not completely sure what can be added further, however the minim library is full of different functions. This project will be heavily emphasizing sheer aesthetic and all code will be done to make the visualization look nicer and nicer progressively.

**DESCRIPTION OF USER INPUT:**

Due to the nature of this project, user input will be limited to the song being used. I am planning on allowing the user to upload their own track to be visualized or perhaps have input from online sources such as soundcloud, however I am not sure if either are possible.

**DESCRIPTION OF PROGRAM OUTPUT:**

An aesthetically pleasing audio visualization that will feature beatmapping and frequency mapping that is synchronized perfectly with the frequency and beat of the music input. Hard coded animations will also be added that do not react to audio, instead float around the screen or change colours/alpha etc. Heavy focus on visual output. As well as outputting the audio unchanged.

**RELEASE SCHEDULE**

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| **Release Name** | **New incremental features of this release** |
| **Alpha 1.0** | **Audio is successfully uploaded and is recognized by the code** |
| **Alpha 1.1** | **Simple/Rudimentary line visualization similar to conventional LED level detectors that reacts to volume/gain level** |
| **Alpha 1.2** | **Line visualization now reacts to certain frequencies of the audio input** |
| **Alpha 1.3** | **Line visualization now reacts to beat mapping of audio input** |
| **Alpha 2.0** | **Line visualization is now scrapped and a new circular basic visualization created** |
| **Alpha 3.0** | **Multiple circular visualizations are layered on top of one another, all reacting to separate things (volume, beatmap, frequency)** |
| **Beta 1.0** | **Focus on aesthetic design of the visualizer** |
| **Beta 1.1** | **Subtle hard coded animations are added for variation** |
| **Beta 1.2** | **Animations of alphas/colours** |
| **Release Build 9.1** | **Possible UI/Menu for user upload of music** |
| **Release Build 9.2** | **Possible soundcloud audio input via hyperlink** |