

Assessment Task 3: Challenge Question

Throughout this class I have been investing time in learning the language of Processing (not to be confused with open frame works which is a seperate coding language). We started covering a range of tutorials explaining various functions, shapes and processes.

The final assessment deliverable excited me the most as it combines to of my passions; audio and visual. As a musician and videographer, I am always on the lookout for new ways to produce both sound and visual art. For this reason, I decided to develop a Processing sketch that I imagine could be used as a performance medium. My final assignment includes a player that allows you to build up different tracks by the press of a button. All tracks begin at 0 volume as soon as the sketch runs for the first time. Changing the volume to a positive decibel value allows the tracks to play when pressed.

The sketch begins by importing the minim library in the set up. I originally used the audio player to play the tracks however it was causing each track to lag. Though this wasn't obviously noticeable, it was something that I was eager to fix. As the minimum library is able to process the audio files faster, the tracks were assigned to the minim player. I was satisfied when the tracks were able to be assigned to one individual key (true/false) as opposed to assigning one key to play the track and another key to mute it. Restricting the functions to keys 1-4 have allowed for a user friendly sketch requiring minimal practice or explanation.

In addition to the audio, the visual component can be seen in the background and the beat analysis functions. The background is changed with every key press (randomising colour values when keyPressed). I have also allocated various shapes that respond to the beat of the tracks by using beat analysis functions. This affects the radius of various abstract visuals that respond to the music in real time. To add depth and detail to these draw functions, I also assigned the opacity values to the beat analysis, meaning the visualisations fade in response to the radius size (the smaller the radius, the lower the opacity).

The last aspect of my audio visual program is the background graphics that are imported using a small section of an inspiration I found online (<https://www.youtube.com/watch?v=gHpxRv4MBBA>). This code was a massive inspiration however as I wanted the Processing sketch to feel as customised as possible, I decided to only include a small portion of this project. I loved how this programmer has created an abstract visualisation that corresponds with audio so well. I included my own music by downloading the Processing sketch folder and replacing the audio track. I was surprised to see how well it works and will look at creating my own version of this as my skills develop. I wanted to add dynamic interest to my background so I included the floating cubes element.

I believe I have learned quite a lot in this class. To improve my sketch, I would have liked to have spent more time on the visual elements. As I spent quite a lengthy amount of time trying to get the audio samples to play in perfect unison, I had a short amount of time to determine the visuals. In relation to the beat analysis, the instruments correctly determine the beat however the visuals don't correlate to each beat when more than one instrument track is playing (the beat analysis works perfectly when a track is played solo. Once another track is un-muted, the beat analysis automatically relates to track 1 and overrides all visuals. I would have like to perfect this to work simultaneously however I am happy they do work independently.

I have thoroughly enjoyed my time in this class and look forward to my future endeavours as a beginner level coder. I intend to master this language and eventually move into open frame works (which is not Processing) to create my own creative code sketches.