

Introduction to Programming II Project Log.

Project title: Music Visualisation

Topic: Lesson 7.2 Extending the apps.

1. Progress in this topic.

- a. I developed a MIDI keyboard in the project.
 - i. It plays some notes range from C4 to D5, using the mid keys in the keyboard (A - L)
- b. The visualisation for this topic (Fireworks), was implemented.
- c. I started with a new visualisation.
 - i. The new visualisation would be a circle drawn from vectors, that increases and decreases according to the music analysis.
- d. Some refactoring of the code was made, keeping the controls in a folder and a new folder for utilities.

2. Problems faced and solutions.

- a. I encountered some bugs in my code, that changes font colour and size due to the new Controls.
 - i. The solution for this was to use the p5 push and pop functions in order to save and exit a drawing state.
- b. I encountered some mistakes when implementing the Fireworks visualisation in my code.
 - i. This mainly was due to the structure differences of my project and the lesson code.
 1. E.g. My project uses a class structure, while the lessons use constructor functions.
 - ii. To overcome this, I had to do some debugging. The main problem was the use of the keyword "this" in the classes.
- c. The MIDI keyboard implementation was pretty straightforward, thanks to the p5 documentation and examples.
- d. For the new visualisation I have to think and go over some maths to calculate the vector point in the circle.
 - i. I believe this will be overcome using some trigonometry.

3. Plans over the next few weeks.

- a. The MIDI Keyboard development was planned for a 2 weeks span, as I could shortened the development time, I would focus to create 2 new visualisations:
 - i. I will finish the Circle visualisation.
 - ii. I will think of another visualisation to extend the app.
- b. After that 2 weeks, I would start with the development of a new feature for sound effects using the keyboard or a virtual pad.
 - i. I'm 50% confident that this development would start sooner than 2 weeks.