Introduction to Programming II Project Log.

Project title: Music Visualisation
Topic: Lesson 8.4 Debugging Skills

1. **Progress in this topic.**
   a. The visualisation for the circle visualisation was fully implemented.
      i. This circle is drawn from vectors that increase and decrease according to the music analysis.
      ii. Some mathematical analysis was made that took me longer than expected. *See figure 1.*
      iii. However, when implementing the code, I found out that the mathematics was already implemented in the Firework visualisation.
   b. I started with the development of the Effects Pad.
   c. I have lost some of the time advantage I had reported in the Project Log of the academic week 14.
      i. I've planned to use that time advantage to work and implement a new visualisation, but this could not be done.
2. **Problems faced and solutions.**
   a. I could not implement change of colour along the vertex in p5.js
      i. An idea of the visualisation was to create different colour lines that were rotating along the circle.
      ii. However, in the Github repository, an issue was opened indicating that it is not possible to change colours for each vertex stroke in the figures.
      iii. The response of a p5.js developer was the following:
         1. *"thanks for reporting. this is tracked here. currently we don't support per vertex coloring in p5.js."*
         2. See link to the issue [here](#).
      iv. I'm thinking that I could:
         1. Use the functions beginShape() and endShape() several times inside the for loop while keeping the reference of the angle I'm drawing.
            a. This would create several shapes that would be seen as a single circle.
         2. However, I'm very happy with the resulting visualisation and I've lost some days of advantage I had in the previous weeks.
            a. If at the end there is some time of advantage, I would try this idea.
   b. The effects pad is not behaving as expected.
      i. I have implemented the effects pad first effect with p5.Delay and it works correctly with the sound loaded in the preload.
         1. When a new sound is loaded in the draw function, the delay effect is not working as expected.

ii. When calling other effects, like p5.Reverb, the effects have a different behaviour that the p5.Delay.

    1. This was unexpected, since all effects classes, like p5.Delay and p5.Reverb are extending the class p5.Effect.

iii. A solution has to be implemented in the academic week 17.

    1. This would involve some investigation of the p5.Effect implementation and its interaction with the sound channels.

3. Plans over the next few weeks.

  a. Holidays.

    i. I would be out of office for the whole academic week 18.

  b. Finish the Effects Pad.

    i. The plan is to finish by the start of the academic week 18.

  c. Finish a new visualisation.

    i. I would start working on this visualisation in the academic week 19, and the plan is to finish in that same week.

Figure 1.