Vida Saffari
Professor Bennett
Creative Coding
12/14/18

Final Self-Assessment

1. *Critically analyze/evaluate how much time was spent learning syntax & structure, programming concepts vs. actually programming, and how does this reflect on the final quality of your end result.*

   I think that about 70-80% of my time was spent learning syntax and structure as well as new programming concepts. I was determined to learn various new concepts that we hadn't necessarily learned in class and therefore, I spent hours watching video tutorials, reading coding concepts in my textbooks, and looking at several different examples. After I felt that I had the concepts mastered, I then began actually programming and was able to experiment with everything that I had learned to create my intended results. This reflects on the final quality of my end result, because my project demonstrates that I mastered specific new concepts such as working with time, learning how to create 3D objects like spheres, and perlin noise since I invested most of my time in the learning process. In my final project, I was able to take the basic concepts I learned to the next level by playing around with variables and making basic shapes more creative and complex. This is a very important skill that I want to practice more with as I continue coding.

2. *Comment on your successes and frustrations with Processing and P5.js.*

   While working with p5 for my final project, there were moments of success and other moments of frustration. Since I was creating a time-based program that didn't need user interaction, I had to work with time and split up each page in an organized manner. This was frustrating because certain pages would work individually, but I would run into glitches and issues when it ran within the entire program. As a result, a lot of my time was spent debugging. It also was a long process to figure out how to work with time in p5, especially when trying to determine the best way to change each screen I created over time. This is because the time functions such as millis() or sec() only return a value of time, but don't necessarily allow you to run a certain function at a specific time. However, there were successes as I learned how to use arrays with frameCount in p5 to make screen changes as certain intervals of time passed. After testing out various ways to work with time by watching various tutorial videos and reading my textbook, it was very rewarding to find a way to work with time that was successful and organized!

3. *Compare and contrast OOP versus Procedural Programming.*

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OOP programming involves the use of classes and objects to do more with less code. It allows you to create methods for certain objects and have the objects perform these certain methods. Overall, OOP makes lines of code clearer and easier to read. On the other hand, Procedural Programming works by breaking down code into blocks based on their function and the procedures that need to be taken. Unlike with OOP, with Procedural Programming, it is challenging to make edits because even if only one line of code needs to change, essentially all lines of code that relate to that section or function must also be altered. This makes the process of making adjustments in code a much longer and more challenging process. As a result, OOP can be a wiser choice when programming because it makes it easier to make changes to variables, find and fix bugs, and is much more organized and easier to follow.

4. *Specifically considering your final project: What programming concepts solidified in your final project? What did you learn with reference to programming? Did you have a break through?*

In my final project, I was really able to bring together many concepts that I had learned in class throughout the semester. I was able to review them, ensure that I had them mastered, and even take some of them to the next level. In my final project, I specifically solidified the programming concepts of creating arrays, which used to be an area of weakness for me. I was also able to work with sound and image files, which was an area that I felt quite rusty in. I solidified my skills in OOP by creating objects that had different methods to follow. I also played around with various variables and focused a lot on using loops because I felt very weak in that area before this project. After this final project, I finally had a breakthrough with arrays and loops after practicing with them many times. I feel very comfortable with arrays and loops now, which was a learning gap that I am so glad I filled. Finally, I was able to learn various new concepts in programming such as working with time and noise, which I can't wait to continue strengthening as I continue with coding.

5. *Specifically considering your final project: Were you able to resolve your own bugs? What tricks did you learn in the process to help? Did you do any debugging?*

Since my final project was complex and involved a lot of code, I did run into many bugs. I mostly solved the bugs on my own, but also reached out to the TA and classmates as well for debugging. I was able to debug most of my code on my own and learned various techniques to do so. First, I would start by re-reading through my lines of

code section by section. I found it helpful to re-read line by line because I would often find little errors this way. I would also block out certain sections of my code to see if it would still run when it was blocked out. By doing this, I was able to identify which section of my code the bug was associated with. In addition, I would sometimes take out parts of my code and paste it into another sketch so that I wasn't overwhelmed by the other lines of code and could focus on each section to find where the errors were. Using print statements and using the browser's javascript console was also helpful. There was one screen that I spent hours trying to debug and it was frustrating, but I made sure to take it step by step and reach out for help to fix it.

6. *How do you think you'll move forward with programming? will you keep doing it ? How does this relate to other classes you are either taking or wish to take?*

Yes! I will most definitely continue with coding as it is one of the most fascinating classes that I have ever taken! I really enjoyed learning how to program and get creative with my coding through this class. I really appreciate how this class allowed me to incorporate coding with creativity. I also loved how I learned to send specific messages with code and make an impact on an audience. I have interests in app as well as web design and development. The skills I learned in this class in regards to programming as well as organizing pseudo code will be extremely beneficial for these interests and I will make sure to take app development and web development classes as a result. Programming is new passion that I have uncovered and I can't wait to see all the various things I can apply it to. I will continue practicing with code and experimenting with it. I plan on making a portfolio of work as well. In addition, I hope to learn different programming languages, so I will make sure to take those classes throughout my college career.