CART 254 - Fall 2024 - Kaisa Catt

My Journey as a Creative Coder

At the beginning of this course, my relationship with programming was defined by limited experience and a lingering sense of disconnection. I had an understanding of Java fundamentals, some JavaScript through HTML, and only heard of p5.js. Programming felt like a utilitarian tool and chore, disconnected from my creative aspirations. My earlier programming classes left me frustrated and uninspired with the focus on memorizing precise syntax, tracing for-loops/while-loops/arrays, error types, and algorithmic efficiency over creativity and showing my learning through multiple choice exams. I envisioned a future where I would be more of a "human spell-checker" than an artist or innovator. A previous professor once made a comment about programming in the class saying something like "if you want to do well in this class you can't learn by trial and error" which I found… Not very encouraging and affects me despite it being no more of a passing comment. It left me feeling like perhaps programming wasn't right for me and I was what was incompatible due to being unable to regurgitate code with perfect syntax, learn best from my previous mistakes and am prone to making small errors that add up.

This course has been transformative in reshaping my understanding of programming. Not only did I solidify my grasp of foundational concepts like if-statements, loops, arrays (and so on) and object-oriented programming, but I also began to see how these tools could be used to create deeply intricate, visually appealing, and conceptually rich projects. What struck me most was how simple visuals often mask the underlying complexity of their code. This realization gave me a new appreciation for creative coding as a medium that blends technical precision with artistic expression and exploration.

Learning p5.js felt natural to me in a way other programming environments haven't. Its emphasis on visuals and interactivity align with my interests as a computation student and creative. The shift in focus—from sterile syntax exercises to dynamic, engaging, and (most importantly) personal projects—brought back a sense of joy and curiosity I hadn't felt in programming for a while. This structured yet flexible approach to learning coding basics has been a revelation. If I had learned this way from the beginning, I might never have felt the resentment I once harbored towards programming.

I've also found that p5.js offers a unique way to bridge the gap between computation and creativity. For instance, features like the mouseDragged() and keyPressed() functions allow for intuitive user interaction, while the ability to manipulate shapes and colors opens up endless artistic possibilities. These tools have shown me that programming doesn't have to feel rigid or formulaic—it can be playful, experimental, and deeply personal.

One of the most significant changes in my creative practice is how I now view the balance between technical reliability and artistic vision. Previously, my discomfort with programming

often led me to overcompensate with the visual and artistic elements of my projects. While the outcomes were sometimes aesthetically pleasing, they lacked robustness and technical refinement. For instance, in my Mod Jam project, I focused heavily on visuals and overlooked some of the functional issues that became apparent during testing.

This course has helped me recognize the importance of building a strong technical foundation to support my creative ambitions. By improving my understanding of debugging and program structure, I can now approach my projects with greater confidence. For example, I've gained comfort working with nested loops, conditionals, and object arrays—tools that allow me to create dynamic, interactive systems. At the same time, I've learned to appreciate the importance of testing and reliability, even in creative projects.

That said, challenges remain. I still struggle with doubts when I encounter a roadblock in my code, and I often fall into "rabbit holes" when trying to troubleshoot or refine my work. This tendency to deviate from my original plan has been both a learning opportunity and a limitation. In the future, I want to develop strategies to manage my time more effectively and stay focused on the core goals of my projects.

Looking ahead, I feel closer than ever to owning the title of "creative coder." Before this course, I identified more with the "creative" part than the "coder" part. This course has helped bridge that gap by presenting programming in a more accessible and creative context. For example, creating generative art pieces has shown me how code can be a tool for exploration rather than just execution. Similarly, strengthening my knowledge about object-oriented programming has given me a new way to organize and manage complex projects, which is invaluable for someone like me who tends to get lost in the details.

One area I hope to explore further is the intersection of sound and visuals in creative coding. While I've dabbled in using p5.js for visual effects, I'm intrigued by the idea of incorporating audio elements to create more immersive experiences. For example, I'd like to further experiment with using the p5.sound library to generate music or sound effects that respond dynamically to user interactions. I've started to experiment with the p5 sound library which you may come to see in my final project.

I'm also excited about the potential to integrate programming more seamlessly into my artistic practice. I can envision creating projects that respond to user input or adapt in real-time, opening up new dimensions of audience engagement. While I still have a long way to go in mastering these techniques, this course has given me a solid foundation and a renewed sense of possibility.

Reflecting on my journey, I realize that my understanding of creative coding has evolved significantly over the course of this semester. I no longer see programming as a rigid set of rules to be memorized but as a flexible and powerful tool for expression. This shift in perspective has not only improved my technical skills but also reinvigorated my passion for creative exploration.

In the future, I want to continue building on what I've learned in this course. Specifically, I'd like to focus on improving my problem-solving skills and developing more efficient workflows. I also want to push myself to tackle projects that are technically ambitious, even if they feel intimidating at first. By embracing challenges and learning from my mistakes, I hope to grow as both an artist and a coder.

This course has been a pivotal moment in my journey as a creative coder. It has shown me that programming doesn't have to be at odds with creativity—in fact, the two can enhance and enrich each other in unexpected ways. I'm excited to see where this newfound confidence and understanding will take me in the years to come.
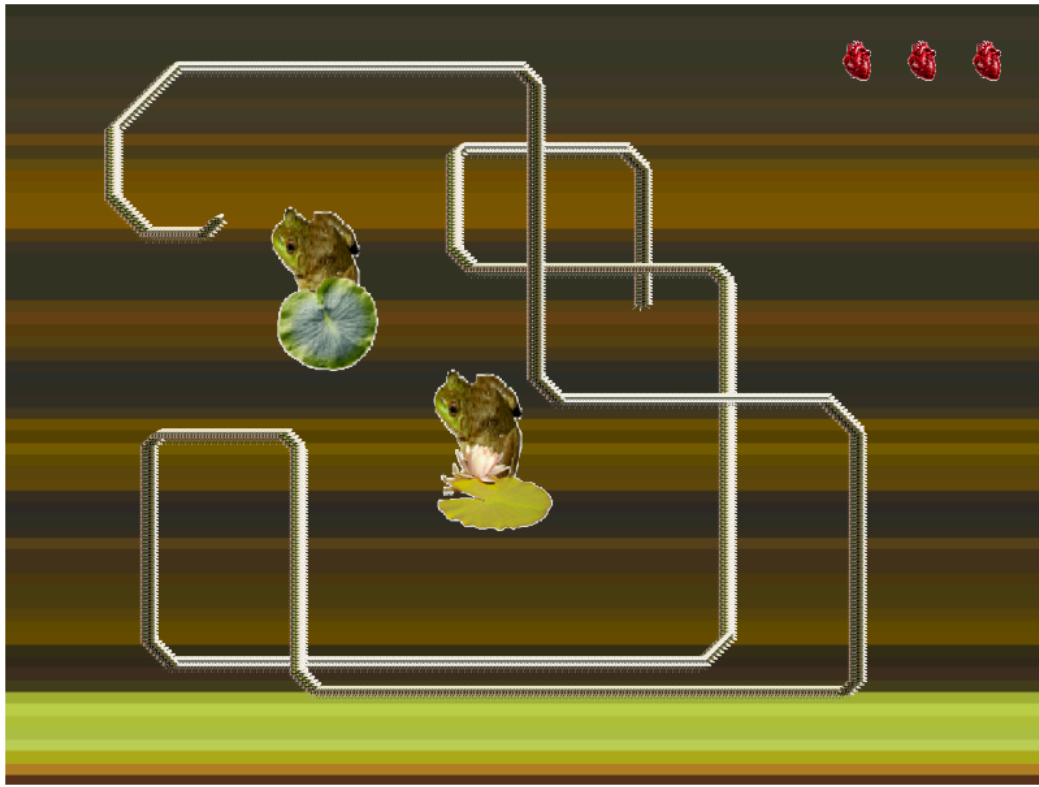
Reflecting on my main projects this semester:
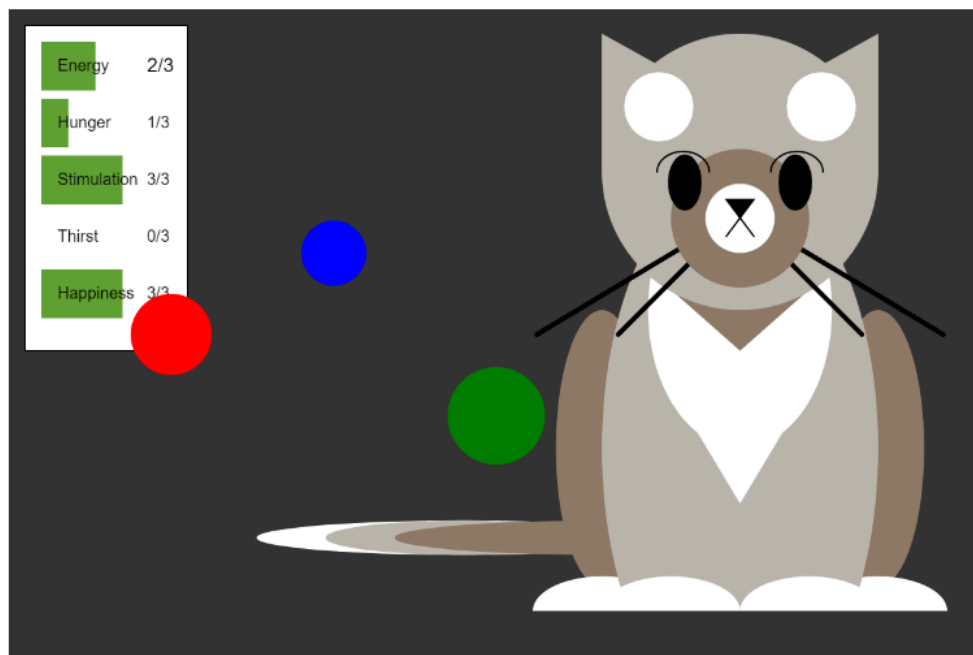
Art Jam: I focused mainly on visuals.

Hearts: 3
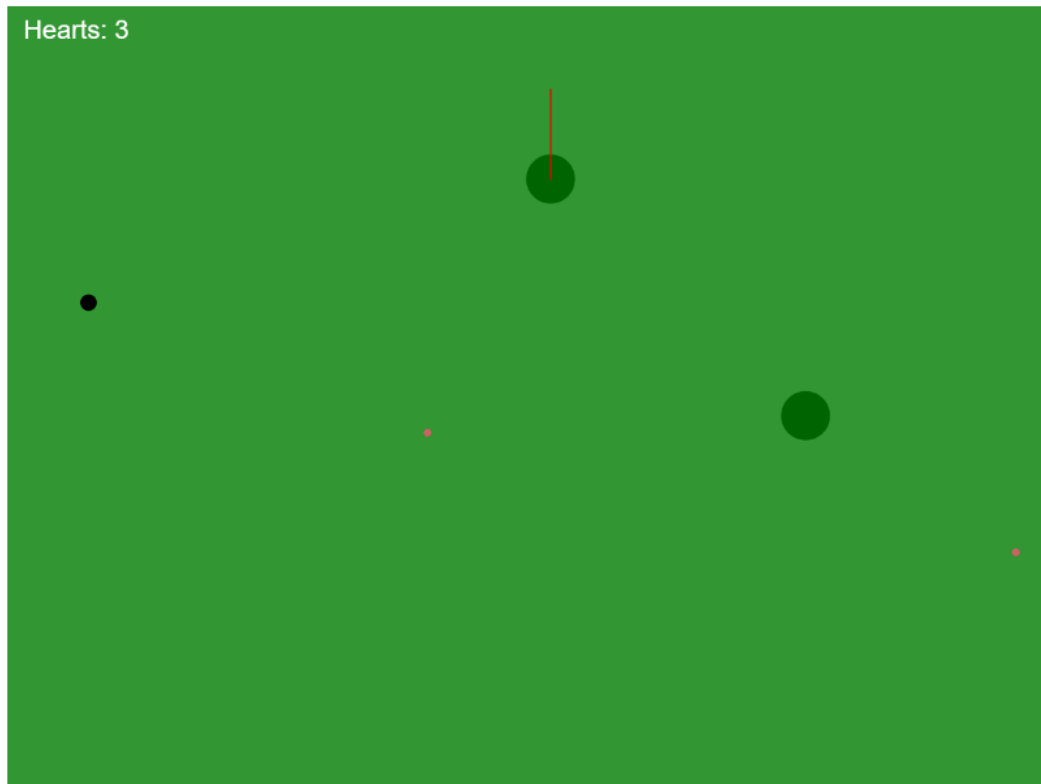
Mod jam v1: Looking back I should have stuck to working the most on the code itself as it better fits the assignment brief for the mod jam. I was really excited about being able to implement my own assets in a game finally but underestimated the work required.

Mod Jam v2: I enjoyed the process of trying to implement my own assets. However, it could have used a lot more testing and fine tuning due the complexity of the game. I really liked the visual effect of the fly and definitely will keep playing around with the programming and visual concepts I explored.