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### Reflective Essay

At the beginning of the course, I had most of the things we've learned in our CART 256 class in my memory. Variables, functions, keyboard inputs, states were easy for me to pick up. Arrays and object-oriented programming were a bit more difficult to understand, especially when it came to classes, and the for-loops we had to use were easy to understand at first, but it got a bit confusing when we would insert loops within loops and so on and so forth. Sound was also a bit difficult to understand, due to it being more of an extra thing to learn in order to make our games more interesting. While it was easy to include in code, a lot of glitches could occur if the line wasn't called in the correct function. Other than the p5 library, the p5 sound library was the only other library we had briefly looked into before the end of the course. We had not yet learned how to link libraries to our program, due to this one being linked beforehand. We explored different libraries this year, for each of our jams, each with varying degrees of difficulty.

I find that the Game Engine Jam was the project where I had the most creative liberty. The Voices Jam did allow for creativity with the narrative. The sci-fi examples given in class helped me figure out in what direction I wanted my game to go in and what kind of tone I wanted to set for my players. As for the AI Jam, I ended up having a very similar idea to that of one of my classmates, which made me try to find something to make it stand out, which also relied on the "story" I was trying to portray. While the Voice and AI Jam were interesting, I find that it was very limiting with the types of games you could make and a lot of the creative factor depended on any interesting gimmick you could come up with, at least in my case, which left me feeling like my games were a bit lackluster and not as entertaining as the ones I had made the previous semester. When going into the Game Engine Jam, I was a bit nervous that I would have trouble with it, mainly due to the fact that we were using classes, something that I was not used to. As I further developed my game, I found myself getting a bit more used to using classes in my programming and being able to properly structure and organize my code. However, if I had more time, I would like to try and find ways to link each class to the other like we did in CART 256 with the Juggle Garden exercise, where we had one main JavaScript file and other classes for the objects in the game. I think it would help greatly with the overall organization of my code unlike my final for last semester. Also, learning how to use sprite sheets helped immensely with how I wanted my game to be structured. Having an object change its appearance when the player interacts with it makes my game feel livelier, and hopefully a bit more immersive, as the player has to press a button to open a cabinet, fix a frame, etc. It also makes the game more interesting

visually, as instead of remaining static, the frame changes so that the object being interacted with appears more dynamic and reflects your actions. I would like to see how I can make two sprites interact, rather than base the actions simply on the protagonist's position, possibly as a way to explore hitboxes if the engine permits it. Understanding tweens was a bit confusing to me. If I had more time to look into them, I'd like to understand what you could include in them and how the repeat function works. I mainly used it to make sprites and text fade in and fade out, but I would like to see what else they can do. I had some ideas that I had to drop in order to save time, but I would like to explore how to create text boxes and inventory system. Interacting with other characters would make the space the character explores more lived-in, and an inventory system would help organize any items that the player collects and allow them to browse their collection to see what they could use when facing a tough situation.

In the future, I'm interested in trying my hand at different game engines to see what I could make with them. I may be inclined to give Unity another shot. I'd like to push myself to make games outside of my comfort zone and to really try and push myself to try out new things. Some genres that I'm interested in exploring and even making are platforming games, fighting games and point-and-click adventure games. I have a lot of stories in my mind that I'd like to write, and this medium would help me share them and hopefully create a meaningful connection with the audience and the characters. Also, I'd like to try out different programming languages. While p5 JavaScript is very helpful for more artistic creations, it may not be the best language to use when trying to make a full-length game. However, it has helped me understand various aspects of coding and will hopefully help me make parallels with other programming languages. I'm also hoping to make a game with other people and work together to achieve something interesting. I've made some decent games in this class, but to discuss ideas with other people and do something together would be both engaging as well as challenging. I'm sure I'd have to work with others when pursuing a career in programming and I'd like to experience that early on and get to see how it would feel like.