John Kornet

Assignment 1 Writeup

My solution was to add steering scripts for each steering and have the messaging system decide what to call. Steerings that included other steering components were called and reused. For the input manager, the solution was to run a method in an “input manager” class that checked for inputs, and then relayed a message with an index where the message was then processed and executed. It was a very bare-bones solution, but the only one I could come up with that wouldn’t take an exorbitant amount of time.

I faced a whole lot of challenges during the development of this project, namely; most of the time I couldn’t tell you what I was looking at through at least half of the project. Reverse-engineering the engine while having never seen the inside of a game engine before was daunting. I am extremely grateful to my classmates who helped me understand the basics and gave me guidance on this project. By the time I got to wander and chase I felt fairly comfortable with the system and the other steerings (minus some debugging speed bumps) went rather smoothly. A specific challenge I had was when I was completely lost at the beginning of the assignment I would hardcode values to observe change, and then when I went back to actually work on the assignment I would sometimes accidentally leave the hardcoded bits in there, and that would break the code. I had a problem in arriveAndFace steering where arrive was setting the player position and face was changing the player rotation acceleration, which just negated face steering, which took me a bit to figure out why that was happening. I struggled a little bit with keeping faceSteering’s values from going negative. My most recent challenge, which is still not fixed, is that I set up a way for the enemies to update their steering in Game.cpp. It actually works perfectly, but when I hit the “d” key while it’s running, I get a crash in a script I’ve never even seen before deep in DeanLib about some check between left and right returning a wrong value. I left that bit commented out, but besides that it does work.

If I had to give further improvements, other than getting the arrows to update without causing a niche crash, I would say that I would maybe change my face steering. As it works now, it does not slow when it approaches facing its target, so for a constantly moving target, it goes to max acceleration all the time. I could add a limiter that checks the distance in angles between facing the target and the current face, but I decided not to because 1) it’s pretty fun to look, 2) it still technically fulfils the requirement of face steering, and 3) it makes wander look truly ”random,” so I feel like in that respect it fulfils wander’s requirements even more.