Ryan Hawkins
Clobber Bot Writeup
Due Sunday December 17th, 2017

This write-up is an explanation in how I built my clobber bot intend for it to work. This was a fun program and I wish we would have had more time to work on it and compete against each other. This was an individual project and I did not work with anyone. Since it was extra credit I can understand though.

I started creating my box I started looking to shoot other players. Killing other players was more important to me to start as running from bullets only lasted so long before you were killed and lost. Below this paragraph is some photos of drawings I made up to help me figure how to shoot at other players. To get x & y of my character I would just my bot printing out their coordinates and that gave me a pretty good idea how to do it. One area I have a bug in seems to be when my bot shoots at another player, and for some reason, changing the direction they shoot in that section of my code does not correct the behavior. I am wondering if somehow the bot is attempting to wrap around the bullet, because even though my bot was shooting at the enemy, it was exactly in the opposite directions. I never found out why, and tried to fix this in the best way to possible but I am not really sure how "fixed" I would consider it. Either way it does the job most of the time.

Something I will talk about but never successfully implemented was dodging bullets. I attempted to start moving away from bullets and found that the actions were more likely to get me killed than helped. Due to time limitation, personally I did not figure out in time how to do so and did not add it with the code as I felt no reason for it to take up space and distract from reading the rest of my code. I know during break I will try to figure out what I was doing wrong as this was my favorite program from this class during the semester. This fact of not moving properly from bullets forced me to move in a rather random fashion, and while I thought that would be worst for me than when I was trying to move to the side of a bullet I found it to protect me better. The biggest issue is where you spawn on the map, and to counter I attempted to run to a corner and hide, but what was happening is I was more than likely running into the bullets around me while my bot was attempting to run to the side. This ended up being a factor in leaving my bots action random.

In the end, I feel that my bot will do a decent job at attacking other bots. I do not have my algorithm down to a point where it eliminates a guaranteed target right away or even if there is only one other bot (as stated above with shooting in the opposite direction), this is due most part to shooting either up, up and right and right and so forth with left rather than in the direct path of another bot. If my bot ends up in a bad place on the map it can end pretty fast for me, while most of the time I find my bot will last. I wanted to finish more of the project but between other classes and the things I needed to do for them I did not have the time I wish I could have during a finals week. Due to my projects having poor grades and not knowing our 3rd project grade I have been very worried I will be shy of a passing grade and did not want to miss turning in what I could complete. I know that on the grades it says in the end the professor will have say about how the grades are weighted and hope my hard work in the class with homework and tests outshine my poor grade in projects enough to pass. Either way thank you

for the semester I have enjoyed the discussions of Artificial Intelligence and the way you have conducted class was helpful to learning about the material.