**TEAM 2 - WEEK 3 REPORT - FEB 13th - 408i SPRING 2022**

**Michael Delatte**

This week Michael spent time finishing up his maze solver. It currently only allows for random movements of the robots, but will soon have implementations for real algorithms like having the robots explore every branch as they become available. Otherwise, they will wait, as to not follow the first robot down a dead end. He is also making plans with his machine learning professor to have a conversation about the best methods to use for the 3 robots maze use case.

By the end of the week, Michael spoke with his ML teacher and confirmed that reinforcement learning was likely to be the best strategy. He is now trying to learn how to implement this type of machine learning so that we can test the algorithm as soon as the robots are functional.

**Wesley Catbagan**

This week Wesley spent the majority of his time creating an arduino file that allows us to map the location of the robots. He was able to successfully map the robot in a 2D array. Once he was able to get that part of his work done, he spent the rest of the time fine tuning the parameters for the map and the robot to make sure that the map is accurate. Moving forward we will have to find a way to implement this code with Erik’s PID controller and Michael’s maze solver. His task for this week is to continue to finetune and test the map’s accuracy by using manual motor inputs.

**Erik Bryson**

Back to the drawing board at least for my aspect of the mission, that is, controls. After a loyal attempt at creating a PID controller for smooth control of the motors, I was embracingly unsuccessful. I kept thinking that I was going to get it with each new idea and turn of a stone. However, it was a heap of complexity that steamed more and more with each shovel of manure. But my team's development all starts with me, so I am stepping back to create a very simple algorithm that will get the ball rolling in terms of our robot going down the line. Goals to complete before going into the lab this Tuesday is 1. Follow line 2. Detect turns 3. Take turns 4. Detect end of line 5. Turn around at end of line. Then in lab: Choreograph the robots controls and maneuvering in relationship with the other two modules of Data management & mapping and Oversight & decision making.