**COSC343 – Assignment 1**

Individual Report – Group 1

Our group first brainstormed the step we needed to take to complete task 1.

We split it into moving the robot to tile 1, getting it to drive to tile 10, moving down from tile 10 to 55, then looking through each row of the red zone with sonar to determine the position of the tower. We all worked together on testing and adjusting figures for accuracy.

I created the initial skeleton code which consisted of the imports, Robot class, main method, is black method, is white method, move forward method, rotation method, and move tiles method. As well as working on the corrections method and move rows method.

I made the move tiles method originally to move until the sensor found a black tile but was later changed by the other three to move in increments, which we then later tweaked to be more efficient. I then altered the corrections method with Alec and Zack to get it to work with both the tile section and row section. Alec and I increased the success rate of the move rows method as there were issues with overshooting. Zack and I got the corrections method finished with a high success rate and alleviated Issues with constant driving and not checking, as well as changing the angle before reversing to place the robot more in the centre of the previous black tile to reduce the number of corrections required overall.

Zack Molloy worked on the move tiles method, corrections method, and move rows method. He got the move rows section to work better with the initial mock-up from what Alec had already done for that method. Zack also worked on the corrections method with me to remove bugs such as constantly moving forward instead of doing the correction and getting the measurements and distance to be consistent.

Alec Fraser Worked move tiles method, corrections method, move rows method, sonar method, go down method, and result method. Alec created and finished the sonar, go down and result methods to get the robot to find the tower, by testing and using distances to find the appropriate figures to determine where the tower was on in the red zone. He also did a large portion of the move rows and correction method which was edited and changed by Zack and me.

Nick Sheetz worked on the move rows method, corrections method, and code commenting.

Giving advice and input into these methods as well as doing all the commenting. He also helped complete and improve our move rows and corrections method by suggesting checking, reversing and then correcting.

Overall there was a trend of joint discussions and ideas as well as implementation of the code. The biggest hurdle was finding the correct way to implement the algorithms we discussed as well as constantly running into hurdles where we had to rewrite methods and previous implementations did not work correctly mostly in the corrections method.