Final Project ECE 101 Report

Team: Patrick Phillips, Carter Bordeleau, Piyush Saini, Alexander Prideaux, Rukayat Akinola, Nana Kwame Nyarko Anson, Jacob Palmer

In summary, for our final project, we designed and implemented code to make the robot

Speak the word it is about to write and then write the string that the user inputs.

In order to achieve the goal of the project, we decided that this was an example of a control system, thus, we first had to create functions that would write each individual letter.

Some of the tricky parts to writing the letters included making sure that the robot would always start and end in the same place facing the same direction so that the next DrawX() function would operate correctly. Another tricky thing was that the robot did not have any way to stop writing, thus we needed to trace back over the letter the same way so that it would not appear like there are a bunch of stray lines across the word. It was also challenging to coordinate letter size between team members to ensure regularity. The last most difficult part of the project was just coding together as a team. We all had our own different ideas about how the implementation might work, had inconsistency in sizes or style of the letters or did not know where exactly the robot should start and end.

The tasks were set out as follows: each person took 1/6 of the alphabet, and then Carter, the one who came up with the idea, would implement the main algorithm that looped through the string and called draw function for each individual letter -what we described as “gluing up the code”. We all learned a lot doing the project and refreshed our python coding skills.

A demonstration of the robot: <https://youtu.be/F4RM4APbDec>