Lab 3: Drawing with Cricket Cars

Lab professors: Adam Norton, Ellen Wetmore, and Holly Yanco

Start in lab: Tuesday 9/25 or Thursday 9/27

Due: At start of lab on Tuesday 10/2 or Thursday 10/4 (due Tuesday for Tuesday lab students; Thursday for Thursday lab students)

In this lab, you are given a small, round mobile robot that carries around the Super Cricket. The robot has two motors: one drives the left wheel and the other drives the right wheel. Your task is to program the robot to draw a pattern on the paper in the provided arena.

Materials: Super Cricket, Cricket car, markers

Process:
1. Get a Cricket car. You’ll need to return the car at the end of lab or at the start of lab next week if you wish to take it home.
2. Put your Super Cricket in the car, securing it in place with the plastic stand-offs. Plug in the motors.
3. Program your Cricket car to draw spirograph-like patterns in the drawing arenas (keep in mind the drawing arena is only 2 feet by 2 feet). Show your drawing to one of the lab professors.
4. Remove your Cricket from the robot car before returning it (either at the end of the lab period or next week)
5. Turn in your completed drawing (either at the end of lab or at the start of next lab) with the code used written on it, and sign it.
6. Document your process (Lab write-up)

Lab write-up:

Write a one-page description including:
1. Your name
2. A discussion of how you developed the patterns your Cricket car drew, any challenges you faced, etc.
3. You should also include a print out of your program with your lab write up. Additionally, please e-mail your code to Adam (anorton@cs.uml.edu).
4. Any other thoughts or ideas