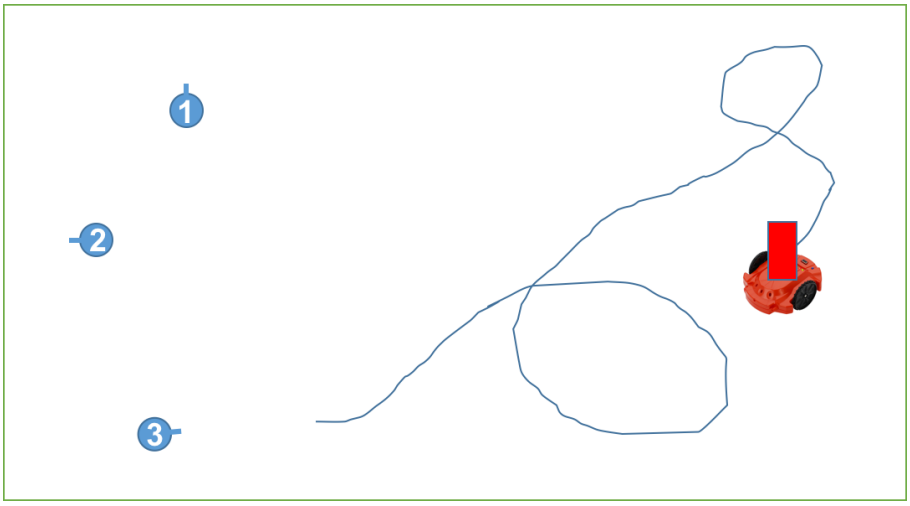
CS 3630 FINAL PROJECT
Due: Thursday, May 5th

11:30am Demo
3pm code submission

Following up on all your prior successful work in navigation and surveillance, PatrolCorp has invited you to participate in a competition event on May 5th to help develop the ultimate security platform – an interceptor robot that will not only observe, but also track down intruders.

During the competition, your robot will have 5 minutes to track down and tag an intruder as many times as possible. You will be scored based on the number of tags, as well as whether the intruder was moving or stationary.

The competition area will consist of a rectangular arena, approximately 60”x90” (see figure below). PatrolBot employees (the TAs) will provide a Scribbler robot that will impersonate an intruder. The intruder robot will be clearly marked with a large red marker (just as in the images from Lab 4). The intruder robot will be placed within the arena at a designated spot that is unknown to you. It will remain stationary for the first 2 minutes, and then proceed to move randomly throughout the arena.



Your robot will be placed at one of three starting locations, also unknown to you prior to the competition. Once placed on the field, your robot may move around to tag (physically bump into) the intruder robot. Once your robot tags the intruder, your robot will be picked up and placed at the next starting location (we will cycle through starting locations 1, 2, 3, 1, 2, 3…etc). The intruder robot will not be moved after it is tagged

Scoring:

The competition will be scored as follows:

- Tagging stationary intruder (minutes 0-1): 5 points
- Tagging moving intruder (minutes 2-4): 10 points
- Running into the wall continuously for 30 seconds and being replaced at the start: -2 points

Optional final round competition:

The 20 top-scoring teams will have the opportunity to compete in an additional competition round where they will go head-to-head and try to tag each other. The top 3 teams will be awarded mystery prizes.

Grading Rubric:

Grade	
100/100	> 20 points
90/100	16-20 points
80/100	11-15 points
70/100	6-10 points
60/100	1-5 points
Determined on individual basis	0 points

Submission:

Submit a zip file containing your code (Lastname1Firstname1_Lastname2Firstname2_code.zip) to Canvas by 3pm on May 5th.

Each partner should also complete the peer evaluation form (please complete this even if you a working without a partner).

Notes:

- The intruder robot will be directly visible from the first starting location, but may not be directly visible from the other starting locations.
- The arena boundary will be defined by white walls made out of foam board.
- You may reuse any code from prior assignments if you wish.