

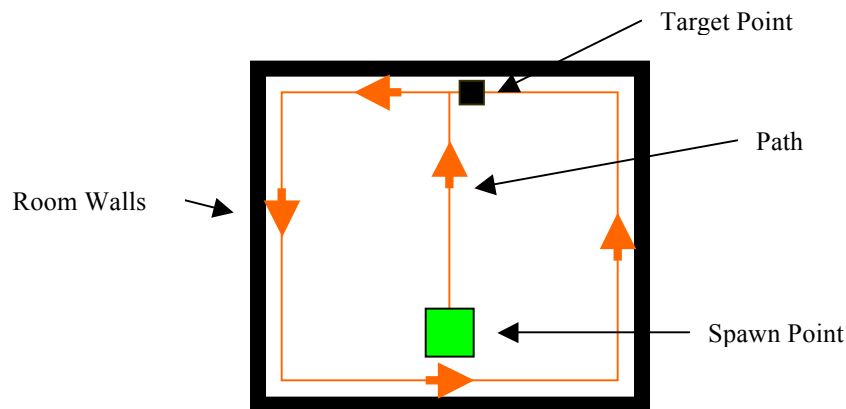
# The Warm-Up Lap

Programming Assignment #1

CSC 481 – Spring '15

## Problem Setting

Using the 'Empty Room' quagent world you are to write a program with the Java API that directs a quagent to walk once around the perimeter of the room. More specifically, once your quagent has spawned in the Empty Room walk straight to a wall. Upon reaching the wall, turn left. Walk until you reach the end of this wall then turn left again. Continue to walk along the perimeter of the room until you are back at the point where you first encountered the wall. Please note that the target point of your lap does not have to be exactly the point where you first encountered the wall because exact locations are difficult to reach with the quagents. However, it should be close to the point where you first encountered the wall. The following diagram illustrates a typical path.



Once you reach the target point simply abandon the quagent (that is, call the 'close' command), this will kill the quagent at the spot where it is standing.

You should pick a quagent programming the quagent config file appropriately and implement your solution for this quagent. **NOTE: do not** use the soldier! Please hand in your config file as part of your program source.

You can either use the 'rays' command to see walls or you can simply 'bump' into walls. **Your controller should be FSM based – it's probably a good idea to start with a diagram.**

**No teamwork allowed – this has to be your own work!**

## Things you will be graded on

- Your quagent actually completes a lap *along* the wall – 70%
- Your controller is FSM based – 20%

- Elegance of your solution (i.e. a well designed program), code structure, and commenting – 10%

### ***Submitting your Project***

Submit your program by zipping your Java source code (including your config file!) and the compiled Java class files and submit via Sakai by **Wednesday February 11th 11:55pm**.

Good Luck and have Fun!