# The Challenge Lap

Programming Assignment #2
CSC 481 – Spring '15

Problem Setting

The problem setup is the same as in the "Warm-up Lap" but with (randomly placed) obstacles in the path of the quagent.

As before, you are to write a program with the Java API that directs a quagent to walk once around the perimeter of a room. More specifically, once your quagent has spawned, 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. The following diagram illustrates a typical path.
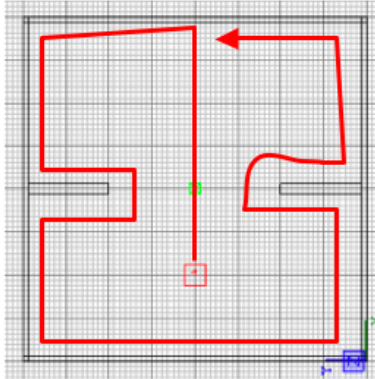
Once you reach the target point simply abandon the quagent (that is, call the 'close' command).

The additional complication is that in this room we have additional walls protruding into the room which you will have to circumnavigate. The room is available in the new version of the quake engine as Wallroom.

NOTE: do not hard code room dimensions or spawn point coordinates, we will be testing your code on rooms that you will not have seen!

Deliverables

(1) A zip file with your Java source code and the compiled Java class files and submit it at the Sakai website.
(2) An analysis/explanation of your obstacle avoidance strategy/code.

Submitting your Project

Submit your work by **Monday February 23rd 11:30pm**.

GRADING:
20% - obstacle avoidance explanation/report
10% - structure of the code/implementation
70% - correct execution of the program in various rooms