

'Tofu Deathmatch'

Programming Assignment #4
CSC 481 – Spring '08

Problem Statement

Your quagent will be placed in a room with obstacles and internal walls. Randomly placed throughout this room are pieces of tofu. The job of your quagent is to scour the room and find all of the available tofu and pick it up (our best approximation of eliminating the tofu...).

The goal is to develop a logic program that will steer the quagent through the obstacles and find as much tofu as possible. Given this, your program should consist of two major rule groups: (1) rules for steering the quagent (2) rules for identifying and picking up tofu.

This assignment is to be accomplished by teams of 2-4 members, you cannot submit work done by yourself.

The tofu positions are given in a config file available online.

Do not hardcode anything...we will be testing your code with alternative rooms and tofu positions!

NOTE: opening and parsing the quagent.config file does **not** count as a solution.

Deliverables

- (1) a list of team members that make up your team
- (2) a list of tasks that each member has performed for this assignment
- (3) a domain analysis document showing your analysis of steering and eliminating the tofu including goal trees.
- (4) your prolog source code

Submitting your Project

Submit your work by email to hamel@cs.uri.edu by **Monday March 10th 8am**.

Grading

- 20% - domain analysis report & team member task lists
- 20% - structure of the code/implementation of the goal-based problem decomposition
- 60% - correct execution of the program in various rooms

Bonus Points

Your team can enter their quagent brain in a race. We will hold this race Tuesday, March 11th, during class. The top three quagent brains that find all the tofu the fastest in a room specifically designed for this purpose will earn 20 points, all other entries will earn 10 points as long as they finish the race.

Please indicate on your program submission whether you want to enter the race or not.