Programming Assignment 1 (Part II)

(100 points)

Assigned Date: Wednesday, October 8, 2014

Extended Due Date: 4:00 PM Wednesday, October 22, 2014

Educational Goal

Become familiar with the informed search strategy A* search.

Requirements

Implement the Tower of Hanoi using 3 discs and 3 pegs. Initial state is aaa, **goal state is ccc**. Report the solution path from the initial state to the goal state.

- Informed Search: Design a heuristic function, explain why it is admissible and consistent, and calculate its effective branching factor b*, implement the A* search. The program should be able to avoid repeated state.

Submission Requirements

1. Your program should be well-documented. Variable names and function names should be self-descriptive. Major functions should be explained clearly in comments. The program outputs should be presented in a clear sequence.
2. Turn in the paper copy and soft copy of all the files of this assignment and the program outputs. Submit a single zipped file of all the files of this assignment through your UMassOnline account. Submit the paper copy along with the cover page in class. Paper copy should be bound firmly together as one pack (for example, staple, but not limited to, at the left corner). 5 points will be deducted for unbounded homework.
3. Name your file with AI_ lastname_firstname_pr1_partII. For example, student John Smith should name his file as AI_Smith_John_pr1_partII.zip.
4. No hard copies or soft copies results in 0 points.
5. Here are the requirements on how the students should show the code to me.

Demo Requirements

The instructor will check assignments in class on October 22. To run the demo efficiently, please pre-setup your demo and show the program to the instructor when everything is ready.