

Project 1 Part 1

Joshua Westbrook & Arifur Rahman

1 The maps

The map files are available at <https://github.com/Joshua-Westbrook/AIproject1maps>

They are also in the folder that opens after unzipping the .zip file attached and importing it into Eclipse as an existing project.

2 The algorithm

The algorithms can be found in in the searches package. The UCS algorithm is fully implemented in SearchAlgo.java but uses UCS.java so it has a specific name. A* and Weighted A* overwrite the $h(n)$ being zero in UCS with them using either the heuristic from DistanceHeuristic.java or the heuristic times the weight. Unfortunately the algorithms do not seem to be working fully properly. There is no error where Weighted A* sometimes returning a cheaper path than A*. We have not been able to figure out the cause yet.

3 Optimizations

No optimizations have been done beyond that of following the UCS/A*/Weighted A* rules.