Project report

Tyler James:

buildGraph

robotFinder

Nick Pistolis:

moveRobot

Joint effort:

itemFinder

entityMove

Our graph search algorithm was a custom made one that runs at an O (n^2) complexity. It is basically a modified DFS. We chose to use this structural design because we felt as if having to pass only one parameter with access to the entire graph would be of more use then having to pick and choose which things each function would need. Based on the sample input provided in the documentation our Robot is able to navigate its way to the exit without running into any obstacles.

buildGraph- Builds the graph and manages data

moveRobot- tells the robot where to go as well as error checks if its next available space is unavailable

itemFinder- returns an entity/obstacle that has a false value for moved

robotFinder-returns the location of the robot

entityMove- tells the entities where to move