Daxuan Shu

204853061

CS 32

Winter 2017

Homework 2

Problem 2:

First 12 coordinates:(6,4) (6,3) (6,5) (7,5) (8,5) (8,6) (8,7) (8,8) (7,8) (6,6) (5,4) (4,4)

Problem 4:

First 12 coordinates:(6,4) (5,4) (6,5) (6,3) (4,4) (6,6) (7,5) (3,4) (4,5) (8,5) (2,4) (4,6)

The stack solution visits the cells in a depth-first order. It will keep searching until the dead end of the path and then backtracks to most recent intersection that has unexplored branches. Since we use stack to implement, the next step to search is the neighbor of current step with unexplored neighbor.

The queue solution visits the cells in a breadth-first order. It visits all the cells at distance 1 from the start point and then all points at distance 2, 3, etc. Because we use a queue to implement, it follows first in first out principle.