Komal Prakash

304980756

CS 32 Homework 2

Problem 2:

1. (4,3)
2. (3,3)
3. (5,3)
4. (5,2)
5. (5,1)
6. (6,1)
7. (7,1)
8. (8,1)
9. (8,2)
10. (6,3)
11. (4,4)
12. (4,5)

Problem 4:

1. (4,3)
2. (4,4)
3. (5,3)
4. (3,3)
5. (4,5)
6. (6,3)
7. (5,2)
8. (4,6)
9. (5,5)
10. (5,1)
11. (4,7)
12. (6,5)

The two algorithms are different in that a stack follows a last in, first out pattern while the queue follows a first in, first out pattern. Because of this, the two algorithms visit the cells in the maze in a different order. The stack follows a depth-first search, where you go deeper and deeper till you hit a dead end and then go back to the position where you had a choice and try again. On the other hand, a queue will visit the cells in concentric circles (breadth-first search) and this guarantees the most optimal solution for a maze.