**Problem2: first 12 (r,c) coordinates popped off the stack by the algorithm**

(6,4) (6,3) (6,5) (7,5) (8,5) (8,6) (8,7) (8,8) (7,8) (6,6) (5,4) (4,4)

1 2 3 4 5 6 7 8 9 10 11 12

**Problem4: Given the same main function and maze as are shown at the end of problem 1, what are the first 12 (r,c) coordinates popped from the queue in your queue-based algorithm?**

(6,4) (5,4) (6,5) (6,3) (4,4) (6,6) (7,5) (3,4) (4,5) (8,5) (2,4) (4,6)

1 2 3 4 5 6 7 8 9 10 11 12

**How do the two algorithms differ from each other? (Hint: how and why do they visit cells in the maze in a different order?)**

The algorithm of stack is a depth first search algorithms whereas the algorithm of queue is a breath first search algorithms.

The algorithm of stack: using stack, we visit cells in the maze in a way that once we start diving into a branch, we keep going until there is no way to go, then we start from back to the last junction and dive into another branch, until we finally finish all the branches and sub-branches and maybe sub-sub-branches, or until we find the end point.

The algorithm of queue: using queue, we visit cells in the maze in a way that every time we move one step into each branch, and find all the possible sub-branches or ways at that position, then we go one step into each sub-branches or sub-ways, like spreading in a net in every direction at the same speed, until we find the end point or finish all the possible ways.