Maze Problems: 給定下面 pseudo code

問題為：給定一 entrance 和初始方向，求從 entrance 至 exit 的一條 path，而 maze size 為 m×p

且方向共有八个：✳

Pseudo code 如下：

```
initialize stack to the maze entrance coordinate & direction east
while (stack ≠ ∅)
    (i, j, dir) = pop(stack)
    while (there are more moves from current position)
        (g, h) = next move coordinate
        if ((g == m) && (h == p))
            return "success"
        if ((!maze[g][h]) && (!mark[g][h]) // legal move 或 未曾到過
            mark[g][h] = 1
            dir = next dir to try
            push(stack, (i, j, dir))
            (i, j, dir) = (g, h, north)
return "No path found"
```

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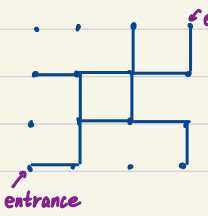
可見和 DFS 方法類似，持續走訪至無下一步可走，退回上 node 找該 node 相鄰步並使用 stack 減少 recursive call

0. Time complexity: $\theta(|V|+|E|) = \theta(mp)$

Example:




只要有岔路，就有 state transition 的不同

在 state space tree 有多个 subtree