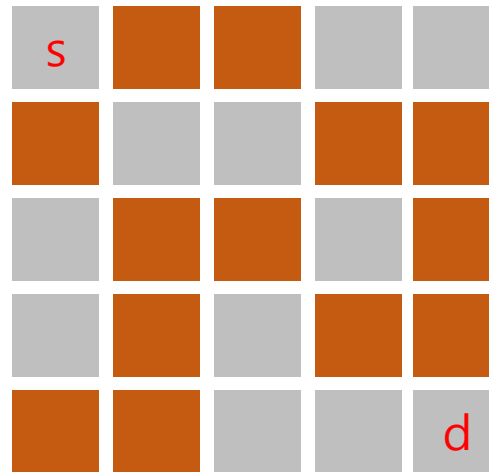


maze

미로 찾기

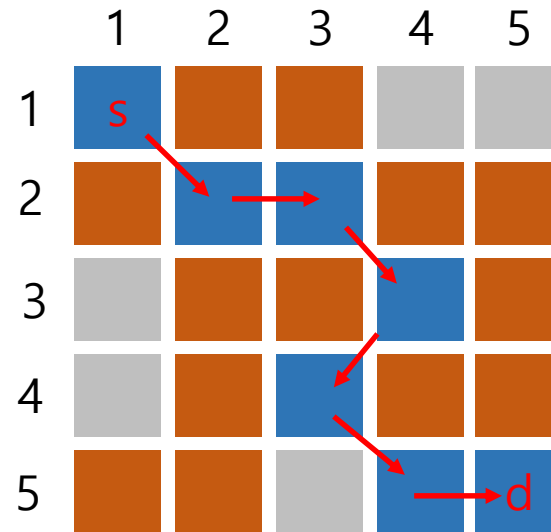
start



destination

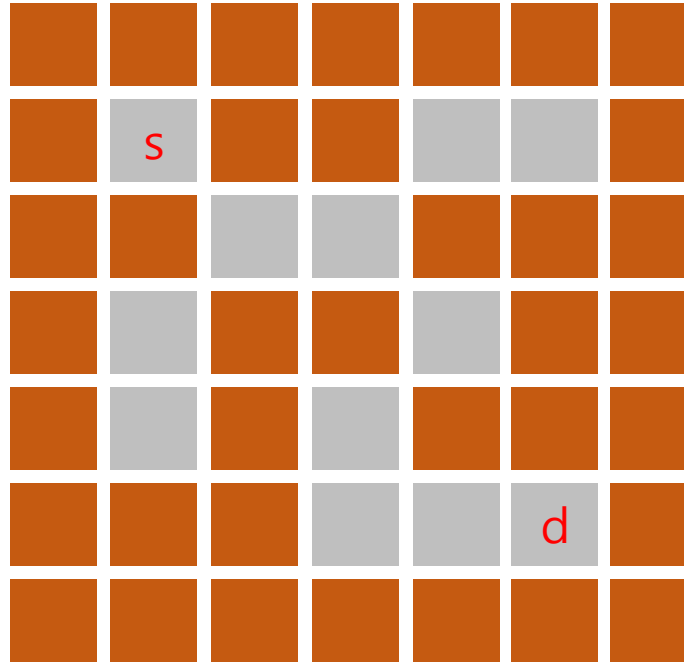
미로 찾기

경로 : (1, 1) -> (2, 2) -> (2, 3) -> (3, 4) -> (4, 3) -> (5, 4) -> (5, 5)



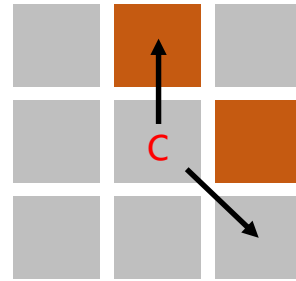
미로 배열

미로 위, 아래, 옆에
행과 열을 하나씩 추가
→ 구현 편의성!



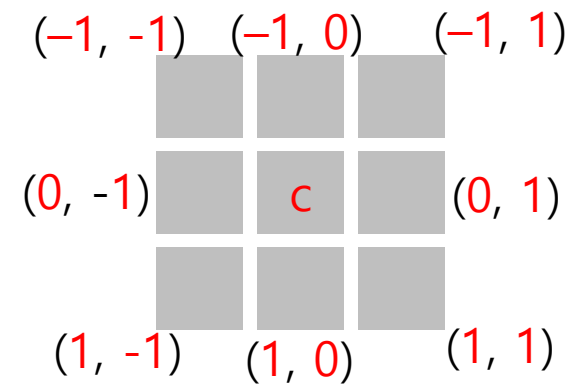
direction

(c.row-1, c.col+0)



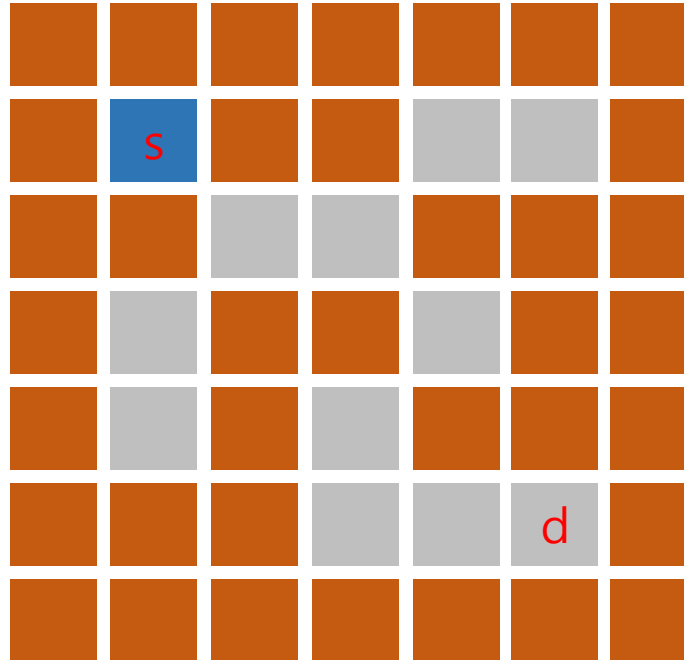
(c.row+1, c.col+1)

direction



Path 1  : mark  : current position

1. Start 위치를 mark 하고
스택에 push
2. S의 위는 무조건 막혀 있으므로
이동 시도는 dir[2]부터 시작

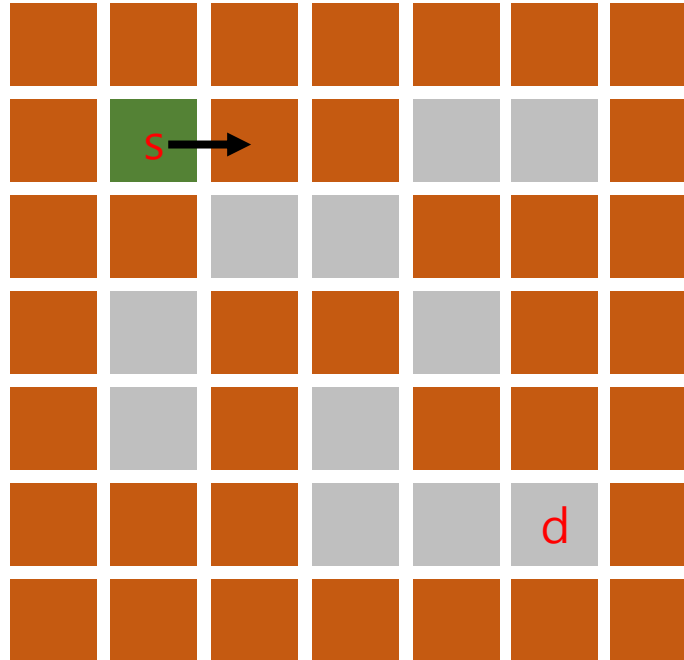


(1, 1, 2)

STACK

Path 2  : mark  : current position

1. 스택에서 pop 해서
2. 현재 위치 (1, 1)
3. 이동 시도 방향은 dir[2]

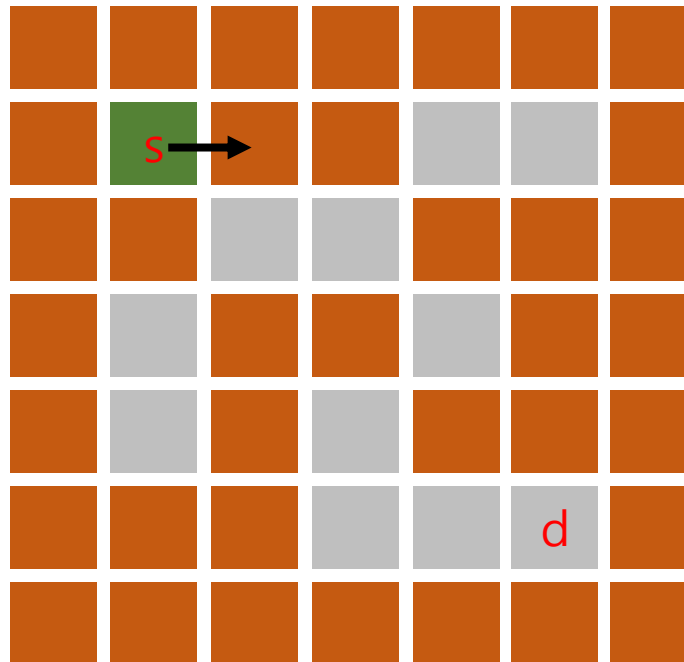


Row : 1
Col : 1
Dir : 2

STACK

Path 3  : mark  : current position

1. Next_row : 1, next_col : 2
2. 이동 방향이 막혀 있으므로
3. Dir을 1 증가시킴



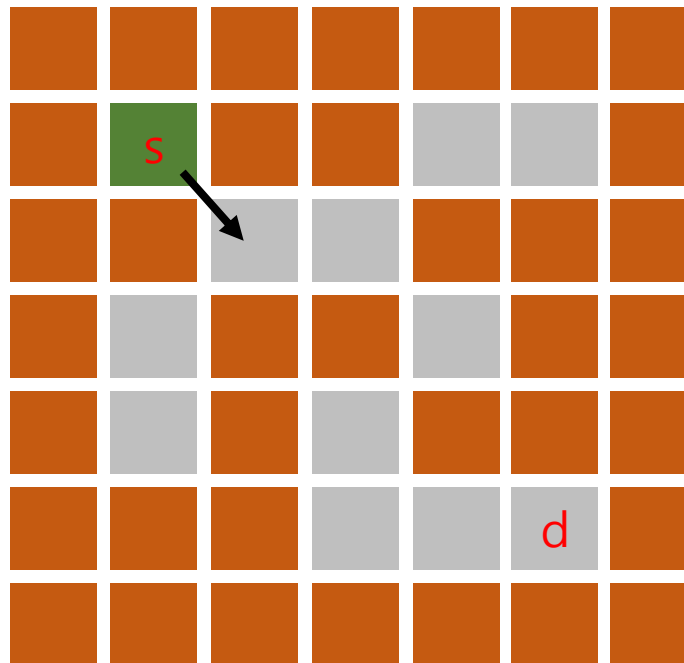
Row : 1
Col : 1
Dir : 2

Next_row : 1
Next_col : 2

STACK

Path 4  : mark  : current position

1. Next_row : 2, next_col : 2
2. 이동 시도



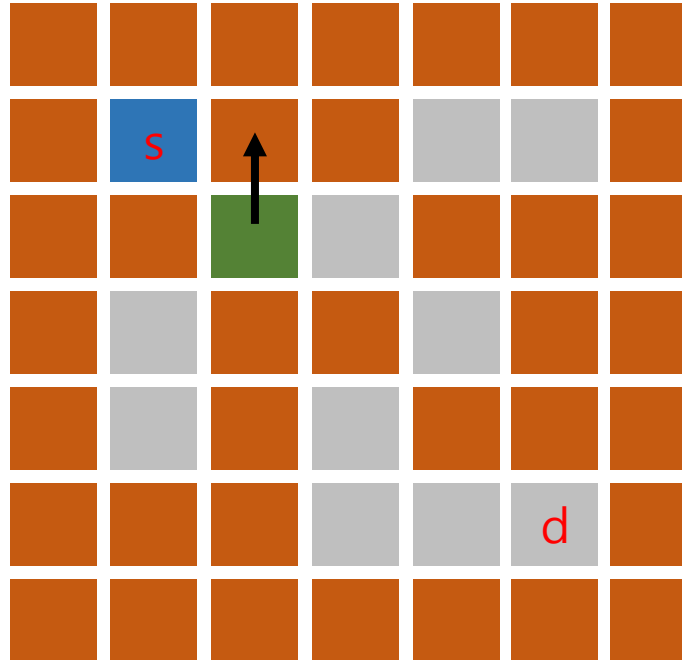
Row : 1
Col : 1
Dir : 3

Next_row : 2
Next_col : 2

STACK

Path 5  : mark  : current position

1. (2, 2)로 이동 가능하므로
2. 이동하려는 위치를 mark
3. Stack에 현재 위치 push
4. 현재 위치를 (2, 2)로 바꿈
5. 이동 가능 여부는 dir[0]부터 탐색하므로 dir은 0



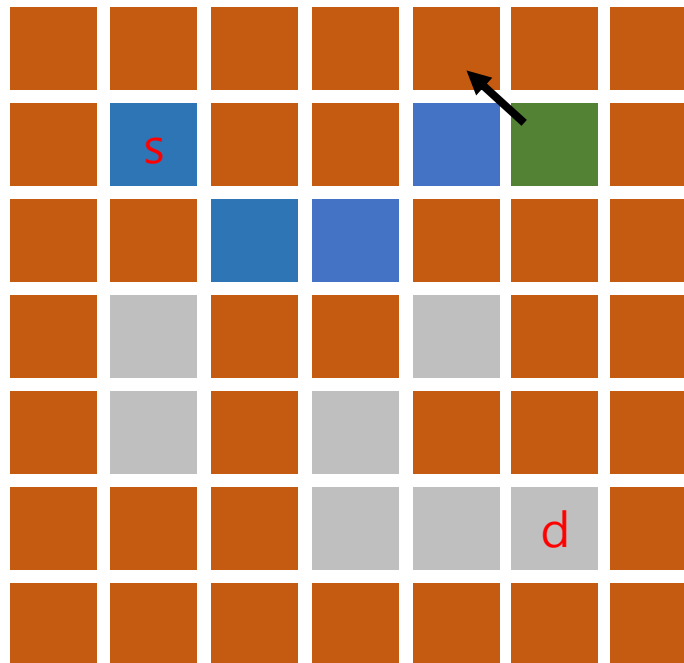
Row : 2
Col : 2
Dir : 0

(1, 1, 3)

STACK

Path 6  : mark  : current position

1. Next_row : 0, next_col : 4
2. 이동 시도
3. 이동 불가능
4. 다음 방향을 알아보려고
dir을 1 증가시킴
5. Dir이 8이 되면 모든 방향을
탐색했다는 의미
6. 이 경우 왔던 방향으로
되돌아간다
7. 스택에서 pop



Row : 1
Col : 5
Dir : 7

Next_row : 0
Next_col : 4

(1, 4, 2)

(2, 3, 1)

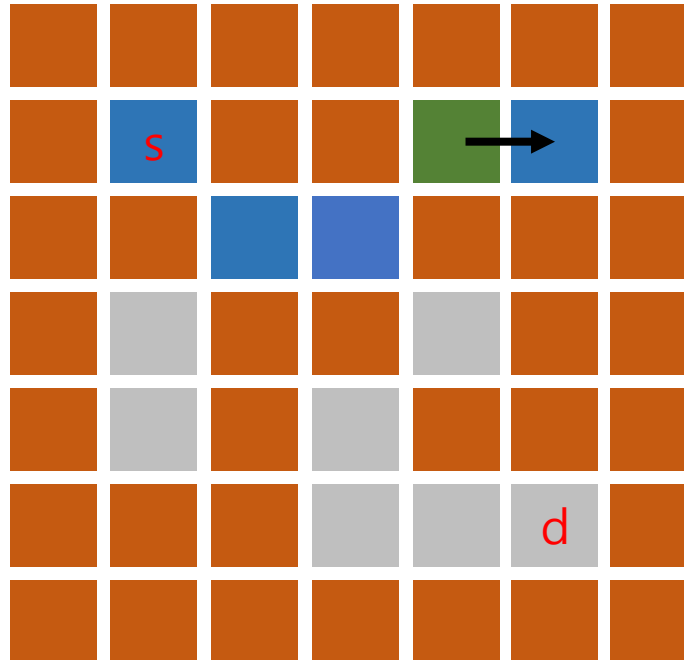
(2, 2, 2)

(1, 1, 3)

STACK

Path 7  : mark  : current position

1. Row : 1, col : 4, dir은 2
2. 다른 방향으로 이동 가능한지 차례대로 검사한다



Row : 1
Col : 4
Dir : 2

(2, 3, 1)

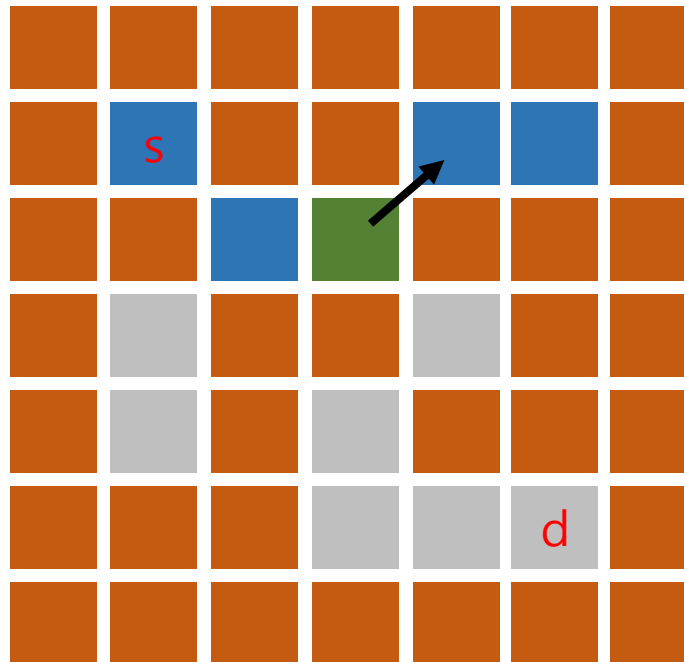
(2, 2, 2)

(1, 1, 3)

STACK

Path 8  : mark  : current position

1. 이 경우 모든 방향이 방문 혹은 막혀 있으므로
2. 스택에서 pop



Row : 2
Col : 3
Dir : 1

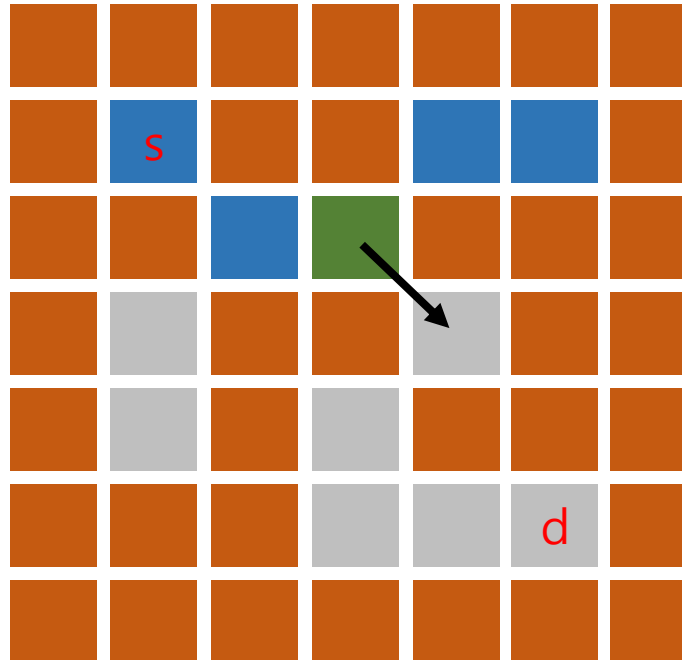
(2, 2, 2)

(1, 1, 3)

STACK

Path 9  : mark  : current position

1. Row :2, col : 3, dir : 3일 때
2. 이동 가능하므로
3. 이전 과정을 반복하며
4. 스택을 쌓는다



Row : 2
Col : 3
Dir : 3

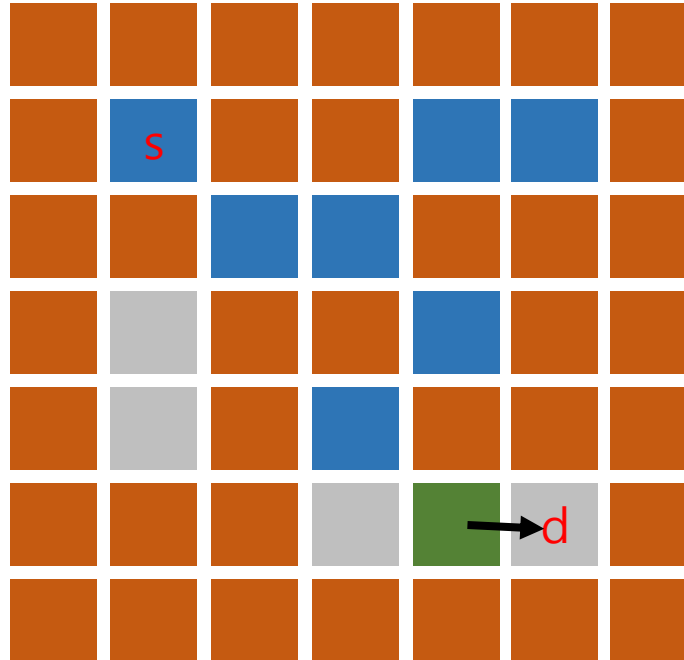
(2, 2, 2)

(1, 1, 3)

STACK

Path 10  : mark  : current position

1. Row :5, col : 4, dir : 2일 때
2. Next_row : 5, next_col : 5
3. 목적지에 도달



Row : 5

Col : 4

Dir : 2

Next_row : 5

Next_col : 5

(4, 3, 3)

(3, 4, 5)

(2, 3, 3)

(2, 2, 2)

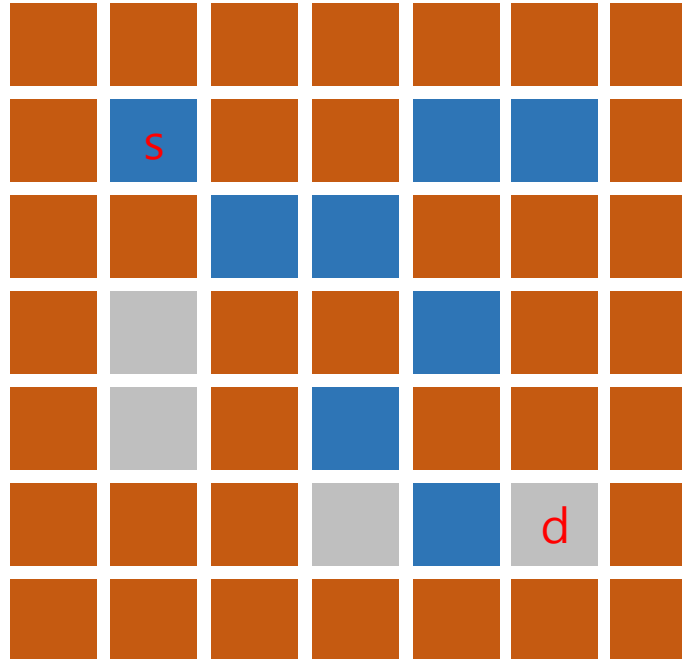
(1, 1, 3)

STACK

Path 11  : mark  : current position

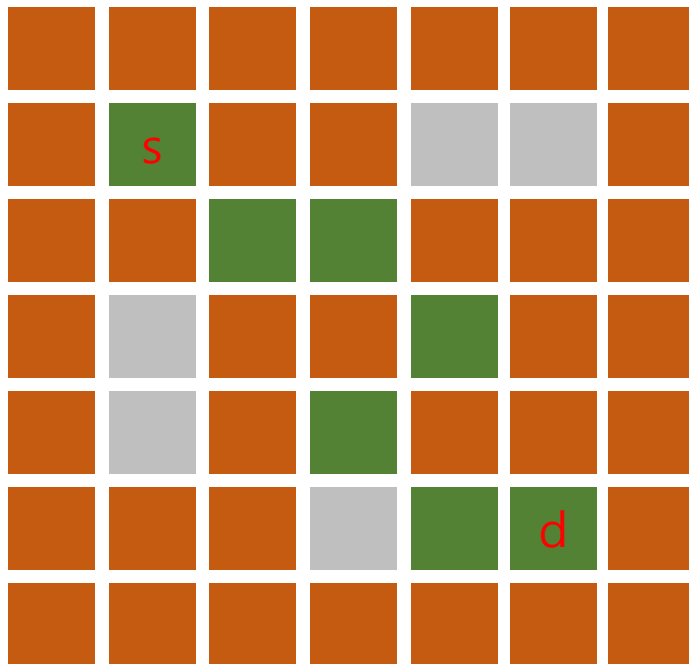
1. 현재 위치와 목적지를
2. 스택에 쌓고
3. Found 변수를 True로!!

Found = True



(5, 5, 0)
(5, 4, 2)
(4, 3, 3)
(3, 4, 5)
(2, 3, 3)
(2, 2, 2)
(1, 1, 3)

STACK



STACK