

pseudocode

CREATE visited list

SET FINISH coordinations

FUNCTION DFS(x,y):

START

IF (x-1,y) is 1 OR NOT outside OR NOT visited:

ADD to stack (x-1,y)

ELIF (x,y-1) is 1 OR NOT outside OR NOT visited:

ADD to stack (x,y-1)

ELIF (x,y+1) is 1 OR NOT outside OR NOT visited:

ADD to stack (x,y+1)

ELIF (x+1,y) is 1 OR NOT outside OR NOT visited:

ADD to stack (x+1,y)

GET last element from Stack and add to visited list

GET new coordinations from last element

IF new coordination equal coordinates of FINISH

RETURN TRUE;

CALL DFS(new coordinations)

Big O Notation

$O(M \times N)$ -> M width, N height