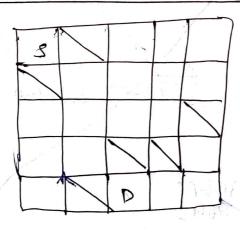
Harshit Hiremath

10/11/20

Al - Lab Test 1

Program 4:

A* Scarch with endidean distance :-



Pseudocode:

def f (curr-state, goal-state):

h = sqrt ((cur-state. n - goal-state. x) ++2+(cur-state.y) - goal-state.y) ++2)

return h

de a-star-search: (and see dest)

def asturscarch (gnd, src, dest):
if is Valid (src. first, src. second) == false:

retum

if is Valid (dest first, dest . Second) = = false:

if is Destination (src. first, src. second, dest):

octum grid # Alorealy at destrution

x = grid.x; yy = grid.y

edid = f(gnd, dest)

Da

if grid[n][y] == 2:

print "found at "id, "id", (x, y)

return True

elif gnd[x][y] = = 1:

print "wall at 'xd, xd", (n. y)

return false

elif grid [N][y] == 3:

print "visited rd, rd", (N, y)

return False.

#1 = Nall # 2 = deavailable block 3= visited block.
grid [vi][y]=3

if ((n Klen(grid)-1) and astarsearch (n-1,y)) or (y>0 and astarsearch (n,y-1)) or n> and actarsearch(n-1, y)) or

(y < len Cyrid)-i and astrisearch (x,y-1)):

return True

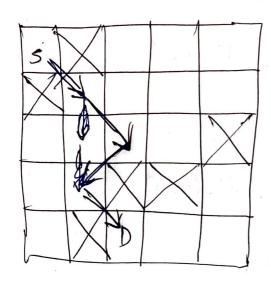
return False.

astarscarch (o, o).

Hence, Letth At & search with on using enclidean function is included.

Hom

Harrit Hiremorth



Transersal: -

$$(0,0) \rightarrow (1,1) \rightarrow (2,2) \rightarrow (3,1) \rightarrow (4,2)$$

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