

Minimum Step by Knight | Graph | Love Babbar DSA Sheet [Explanation + CODE] 🔥

```
8- class Solution {
9- public:
10-     int minStepToReachTarget(vector<int>&KnightPos, vector<int>&TargetPos, int n){
11-         // Code here
12-         int x1 = KnightPos[0];
13-         int y1 = KnightPos[1];
14-         int x2 = TargetPos[0];
15-         int y2 = TargetPos[1];
16-         int a[1001][1001];
17-         if(x1==x2 and y1==y2){
18-             return 0;
19-         }
20-         for(int i=0;i<n;i++){
21-             for(int j=0;j<n;j++){
22-                 a[i][j]=0;
23-             }
24-         }
25-         queue<pair<int,int> > q;
26-         q.push(make_pair(x1-1,y1-1));
27-         while(!q.empty()){
28-             auto cur=q.front();
29-             int i=cur.first;
30-             int j=cur.second;
31-             q.pop();
32-         }
```



Type here to search

10:18 / 13:56




Channel content - YouTube Studio x Steps by Knight | Practice | Geeks x +

practice.geeksforgeeks.org/problems/steps-by-knight5827/1

```
50 if((i-1)>=0 and (i-1)<n and (j-2)>=0 and (j-2)<n and a[i-1][j-2]==0){
51     a[i-1][j-2]=a[i][j]+1;
52     q.push(make_pair(i-1,j-2));
53 }
54 if((i+1)>=0 and (i+1)<n and (j-2)>=0 and (j-2)<n and a[i+1][j-2]==0){
55     a[i+1][j-2]=a[i][j]+1;
56     q.push(make_pair(i+1,j-2));
57 }
58 if((i-2)>=0 and (i-2)<n and (j-1)>=0 and (j-1)<n and a[i-2][j-1]==0){
59     a[i-2][j-1]=a[i][j]+1;
60     q.push(make_pair(i-2,j-1));
61 }
62 if((i+2)>=0 and (i+2)<n and (j-1)>=0 and (j-1)<n and a[i+2][j-1]==0){
63     a[i+2][j-1]=a[i][j]+1;
64     q.push(make_pair(i+2,j-1));
65 }
66
67 }
68 return a[x2-1][y2-1];
69 }
70 };
71 // } Driver Code Ends
```

Average Time: 20m
Your Time: 18m 46s

Compile &



Practice

669

Problem

Editorial

Submissions

Doubt Support

C++ (g++ 5.4)

Test against custom input

Steps by Knight

Medium

Accuracy: 36.08%

Submissions: 6613

Points: 4

knightPos[] = {4, 5}

targetPos[] = {1, 1}

Output:

3

Explanation:

Knight takes 3 step to reach from (4, 5) to (1, 1):
(4, 5) -> (5, 3) -> (3, 2) -> (1, 1).

```
42 if((i-2)>=0 and (i-2)<n and (j+1)>=0 and (j+1)<n and a[i-2][j+1]==0){
43     a[i-2][j+1]=a[i][j]+1;
44     q.push(make_pair(i-2,j+1));
45 }
46 if((i+2)>=0 and (i+2)<n and (j+1)>=0 and (j+1)<n and a[i+2][j+1]==0){
47     a[i+2][j+1]=a[i][j]+1;
48     q.push(make_pair(i+2,j+1));
49 }
50 if((i-1)>=0 and (i-1)<n and (j-2)>=0 and (j-2)<n and a[i-1][j-2]==0){
51     a[i-1][j-2]=a[i][j]+1;
52     q.push(make_pair(i-1,j-2));
53 }
54 if((i+1)>=0 and (i+1)<n and (j-2)>=0 and (j-2)<n and a[i+1][j-2]==0){
55     a[i+1][j-2]=a[i][j]+1;
56     q.push(make_pair(i+1,j-2));
57 }
58 if((i-2)>=0 and (i-2)<n and (j-1)>=0 and (j-1)<n and a[i-2][j-1]==0){
59     a[i-2][j-1]=a[i][j]+1;
60     q.push(make_pair(i-2,j-1));
61 }
62 if((i+2)>=0 and (i+2)<n and (j-1)>=0 and (j-1)<n and a[i+2][j-1]==0){
63     a[i+2][j-1]=a[i][j]+1;
64     q.push(make_pair(i+2,j-1));
65 }
66 }
67 return a[x2-1][y2-1];
68 }
69 }
70 }
71 // Driver Code ends
```

Your Task:

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```
25     }
26     queue<pair<int,int> > q;
27     q.push(make_pair(x1-1,y1-1));
28     while(!q.empty()){
29         auto cur=q.front();
30         int i=cur.first;
31         int j=cur.second;
32         q.pop();
33
34         if((i+1)>=0 and (i+1)<n and (j+2)>=0 and (j+2)<n and a[i+1][j+2]==0){
35             a[i+1][j+2]=a[i][j]+1;
36             q.push(make_pair(i+1,j+2));
37         }
38         if((i-1)>=0 and (i-1)<n and (j+2)>=0 and (j+2)<n and a[i-1][j+2]==0){
39             a[i-1][j+2]=a[i][j]+1;
40             q.push(make_pair(i-1,j+2));
41         }
42         if((i-2)>=0 and (i-2)<n and (j+1)>=0 and (j+1)<n and a[i-2][j+1]==0){
43             a[i-2][j+1]=a[i][j]+1;
44             q.push(make_pair(i-2,j+1));
45         }
46         if((i+2)>=0 and (i+2)<n and (j+1)>=0 and (j+1)<n
47             a[i+2][j+1]=a[i][j]+1;
48             q.push(make_pair(i+2,j+1));
49         }
50         if((i-1)>=0 and (i-1)<n and (j-2)>=0 and (j-2)<n
```



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