Share

Tweet

X

Try the next challenge

Problem

Submissions

Leaderboard

Editorial 🖰

You are given a square grid with some cells open (.) and some blocked (X). Your playing piece can move along any row or column until it reaches the edge of the grid or a blocked cell. Given a grid, a start and a goal, determine the minmum number of moves to get to the goal.

### Example.

$$grid = ['...', '.X.', '...']$$

startX = 0

startY = 0

goal X = 1

goal Y = 2

The grid is shown below:

...

. . .

The starting position (startX, startY) = (0,0) so start in the top left corner. The goal is (goalX, goalY) = (1,2). The path is  $(0,0) \rightarrow (0,2) \rightarrow (1,2)$ . It takes 2 moves to reach the goal.

#### **Function Description**

Complete the minimumMoves function in the editor.

minimumMoves has the following parameter(s):

- string grid[n]: an array of strings that represent the rows of the grid
- int startX: starting X coordinate
- int startY: starting Y coordinate
- int goalX: ending X coordinate
- int goalY: ending Y coordinate

#### Returns

int: the minimum moves to reach the goal

#### **Input Format**

The first line contains an integer  $m{n}$ , the size of the array grid.

Each of the next n lines contains a string of length n.

The last line contains four space-separated integers, startX, startY, goalX, goalY

## Constraints

- $1 \le n \le 100$
- $0 \le startX$ , startY, goalX, goalY < n

```
Sample Input
```

## **Sample Output**

3

## **Explanation**

Here is a path that one could follow in order to reach the destination in 3 steps:

$$(0,0) o (2,0) o (2,2) o (0,2)$$
.

```
Change Theme Language C#
                                                                                                   1
              //create a stack and put the values of predecessors in stack
165
              var stack = new Stack<(int, int)>();
166
              (int Item1, int Item2) val = (goalX, goalY);
167
              while(val.Item2 != -1 && val.Item1 != -1)
169
              {
170
                  stack.Push((val.Item1, val.Item2));
171
                  val = preDesMatrix[val.Item1, val.Item2];
172
173
              return stack.Count - 1;
          }
174
175
176
      }
177
178
      class Solution
179
180
          public static void Main(string[] args)
181
182
              TextWriter textWriter = new StreamWriter
      (@System.Environment.GetEnvironmentVariable("OUTPUT_PATH"), true);
183
              int n = Convert.ToInt32(Console.ReadLine().Trim());
184
185
186
              List<string> grid = new List<string>();
187
              for (int i = 0; i < n; i++)
188
189
                  string gridItem = Console.ReadLine();
190
191
                  grid.Add(gridItem);
192
```

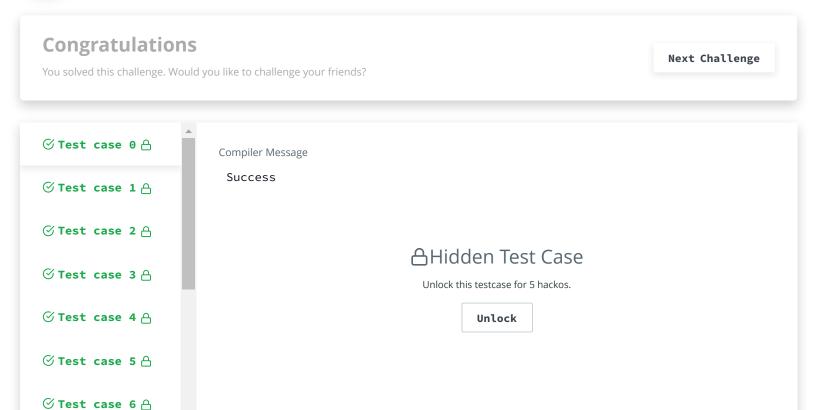
Line: 174 Col: 6

# You have earned 30.00 points!

These points will also count towards your progress in the Problem Solving Badge.

13% 1020/2200





Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature