Several text files (area.txt, area2.txt, and area3.txt) contain two integers followed by rows and columns filled with different characters. Study the format of the text file area2.txt:

9 12  
..........00  
...0....0000  
...000000000  
0000.....000  
............  
..#########.  
..#...#####.  
......#####.  
...00000....

First, read and display the contents of this matrix to the screen.

Second, prompt the user for (row, col) coordinates (what are passed to your program through command line argument list). Note the character that is stored in that position. Replace that character with a ‘\*’. Then recur up, down, left, and right, (but NOT diagonally) and replace similar characters with ‘\*’. Study these two examples:

|  |  |
| --- | --- |
| Filename: area2.txt  Enter ROW COL: 1 2 \*\*\*\*\*\*\*\*\*\*00  \*\*\*0\*\*\*\*0000  \*\*\*000000000  0000.....000  ............  ..#########.  ..#...#####.  ......#####.  ...00000.... | Filename: area2.txt  Enter ROW COL: 1 3  ..........\*\* ...\*....\*\*\*\* ...\*\*\*\*\*\*\*\*\* \*\*\*\*.....\*\*\* ............ ..#########. ..#...#####. ......#####. ...00000.... |

Display this new matrix.

Hints: Filling an area, which is similar to escaping a maze, is naturally recursive. What are the base cases?