

PROJECT SPECIFICATIONS:

Write a program that uses recursive function to identify the path in a given maze. The layout of the maze is written in a file called “mazexxx.txt” (xxx represent three digit, maze123.txt) that contains a two dimensional array. The array has ‘0’, ‘1’, ‘S’, ‘F’ as its values. ‘0’ indicates the square that is blocked and ‘1’ indicates the square that you can go through. ‘S’ indicates the starting square and ‘F’ indicates the finishing square. See below for an example layout of a maze.

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	1	1	1	0	1	1	1	1	0
0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
0	1	1	1	1	1	0	0	1	1	1	1	1	1	0
0	1	0	0	0	1	0	0	1	0	0	0	0	0	0
0	1	1	1	1	1	0	0	1	0	0	0	0	0	0
0	0	0	1	0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	0	0	0	0	0	0	1	0	1	0
0	0	0	1	1	1	1	1	1	1	0	1	0	1	0
0	1	0	0	0	0	0	0	1	0	0	1	0	1	0
0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
0	1	1	1	0	0	0	0	1	0	1	1	1	1	0
0	0	0	1	0	0	0	0	1	0	1	0	0	0	0
0	S	1	1	1	1	1	1	1	0	1	1	1	F	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Your program should also display the found path by drawing ‘X’ along the path (see below) and write the maze with the found path to another file called “solxxx.txt” (e.g., sol123.txt).

	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	X	X	X	X	X	X	X	X	0	1	1	1	1	0
0	X	0	0	0	0	0	0	X	0	0	0	0	1	0
0	X	1	1	1	1	0	0	X	1	1	1	1	1	0
0	X	0	0	0	1	0	0	X	0	0	0	0	0	0
0	X	X	X	1	1	0	0	X	0	0	0	0	0	0
0	0	0	X	0	0	0	0	X	X	X	X	1	1	0
0	0	0	X	0	0	0	0	0	0	0	X	0	1	0
0	0	0	X	X	X	X	X	X	1	0	X	0	1	0
0	1	0	0	0	0	0	0	X	0	0	X	0	1	0
0	1	0	0	0	0	0	0	X	0	0	X	0	0	0
0	1	1	1	0	0	0	0	X	0	X	X	1	1	0
0	0	0	1	0	0	0	0	X	0	X	0	0	0	0
0	S	X	X	X	X	X	X	X	0	X	X	X	F	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

OTHER REQUIREMENTS

1. Make sure to start working on your project early and make steady progress.
3. Make sure that you give proper names to your variables and program files.

4. Make sure that your program is nicely indented and has meaningful header and inline comments.
5. Make sure to use functions to make your code more readable.
5. Make sure to thoroughly test your classes using a driver program before you hand in your program.

WHAT TO TURN IN

Upload your source code, testing plan and all the output generated from your program for the given testing files.