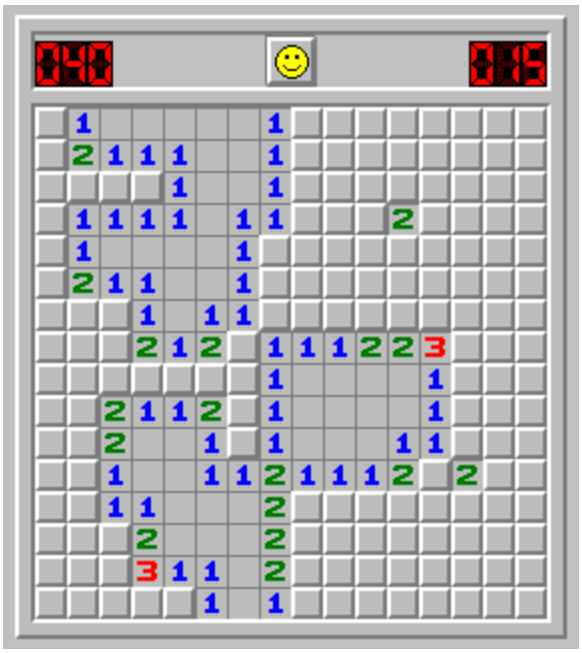
MINESWEEPER

WE HAVE A CHALLENGE FOR YOU!

Write a command-line based, object-oriented application that will print out the correct hints for a given Minesweeper board configuration.



BACKGROUND INFORMATION

Minesweeper is a single-player puzzle video game played on an *n* by *m* field of squares. The objective of the game is to clear a field containing hidden "mines" without detonating any of them, with help from clues about the number of neighbouring mines in each square

ASSIGNMENT BRIEF

Write a command-line based, object-oriented application that will first accept the size of a field followed by the configuration of the mines in that field. The application will then print out the field with the blank (unmined) squares filled in with the appropriate hints.

INPUT

The program first accepts a line containing two integers *n* and *m* (where $0 < n,m < 100$) which will stand for the number of lines and columns of the field respectively.

The program will then read *n* lines, each containing *m* characters that represent the squares. Each safe square is to be represented by a period (.) character and each mined square is represented by a star (*) character.

OUTPUT

The output should contain the field with the safe squares listing the number of adjacent mines to that square.

EXAMPLE

The input:

```
3 5
**...
.....
.*...
```

Will return the output

```
**100
33200
1*100
```

OTHER CONSTRAINTS/DETAILS

Please take note of these further requirements:

- Output should be undecorated – no headings, ascii lines or other formatting
- The solution must be object-oriented and demonstrate your OO knowledge

LANGUAGE CHOICE AND SUBMISSION

Candidates can choose to implement their solution in C++, Java, C# or any other OO language they're most familiar with.

Submissions must be a ZIP archive of all source files required to build and run your program, along with any necessary instructions.

Please do NOT send compiled executables, even in archive form.