Lab 8 Instructions

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Minesweeper

Minesweeper is a game played on a 2D grid with hidden information. Each cell on the grid is either a mine or an open space. For this question we will be reading in a 2D grid meant to represent a Minesweeper board, and then reading in pairs of coordinates given by the user.

Input Format

The input format for your program will always be of the following format:

- First there will be two integers separated by whitespace, which represent the width and the height of the grid respectively.
- Then will following a number of X and O characters equal to width*height. However, each of these characters could have any amount of whitespace between them. These X and Os represent the 2D grid where an X represents a bomb and an O represents an open space.
- Then your program will receive pairs of integers until it receives EOF, each of these pairs of integers is meant to represent an (x,y) coordinate on your grid. However, as often is the case in computing, our y dimension will increase as we go *down*, not up.

Your programs behaviour

Your program must read in the grid from standard input, and then read each of the pairs of coordinates.

For each coordinate read in your program must then print out a message depending on if that coordinate is a bomb or an open space.

- If that cell represents a bomb then your program will print BOMB!
- If that cell represents an open space then your program will print out how many bombs are adjacent to that cell.

Sample inputs

Sample inputs are provided in the repository, make sure to test them with the sample executable to get an understanding of the program.