

ASTU ICPC CLUB

Abrham-Tac-Toe

Filename: Tictac

The Problem

Abrham has had a long day at the office and wants to take a break by playing some Tic-Tac-Toe, only he wants to make it a little more interesting than your everyday game of Tic-Tac-Toe. Rather than having a boring 3 x 3 board, Abrham decides to use a random number generator each time he starts the game to decide the dimensions of the board. The game is won if either "X" or "O" controls all of the boxes on a single row or column. (Abrham thinks diagonals are crooked and doesn't like them so much, so he is not awarding any victories for consecutive diagonal pieces.) Given a game board, Abrham needs you to tell him if "X" wins, "O" wins, or there is no winner. You are guaranteed that each board will be valid, containing either an equal number of X's and O's or one more X than O, and only one team will have a winning configuration on the board.

The Input

The input will begin with a single integer n indicating the number of games to be played. For each game, the input will begin with 2 integers, x and y , where $2 \leq x \leq 10$ and $2 \leq y \leq 10$ indicating the size of the game board. Next, x lines of input will follow defining the game board. Each of these lines will contain exactly y symbols from the set $\{'X', 'O', '-'\}$ each separated by a space. The character, '-', indicates a square on the board that was not filled by either player.

The Output

For each game, output a single line with one of the following formats:

Game #N: Huzzah! X is victorious!

Game #N: Success! O has conquered the board!

Game #N: Oh no! Neither of the players won!

depending on the outcome of the N^{th} game. N represents the 1-based game number.

Sample Input

```
2
4 3
X O O
O X X
X X O
X O X
4 4
X X X X
O X X -
X O X O
```

Sample Output

```
Game #1: Oh no! Neither of the players won!
Game #2: Huzzah! X is victorious!
```

0 X 0 0