

Problem A

Snakey String

Time Limit: 1 second Memory Limit: 1GB

A *snakey string* is a fancy rendering of an otherwise normal string of text. When a string is made snakey, it is placed on a 2D grid such that the following conditions are met:

- The first character of the string is on the first column of the grid, the second on the second column, . . . , and the last on the last column.
- Each character in the string occupies either the row directly above or directly below the row of the previous character.

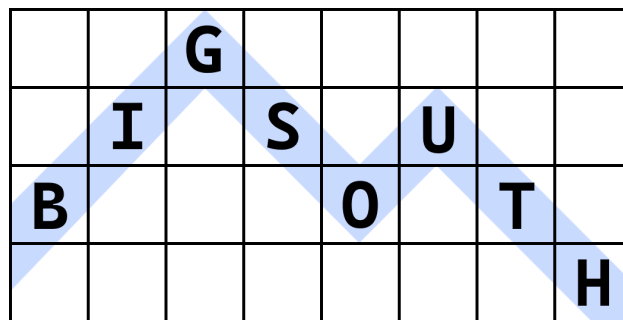


Figure A.1: The snakey string in the sample case.

Given a snakey string, can you recover the original string?

Input

The first line of input contains two integers r and c ($2 \leq r, c \leq 100$), the number of rows and columns of the grid.

The next r lines each contain c characters that form the 2D grid containing the snakey string. Empty cells are encoded with a period, while uppercase letters (A–Z) represent characters in the original string. Every column in the grid contains exactly one uppercase letter. It is possible that some rows do not contain any uppercase letters.

Output

Output a single string, the original string that was used to build this snakey string.



Sample Input 1

```
4 8
..G.....
.I.S.U..
B...O.T.
.....H
```

Sample Output 1

```
BIGSOUTH
```