Spiral Message

locked

by bishop15

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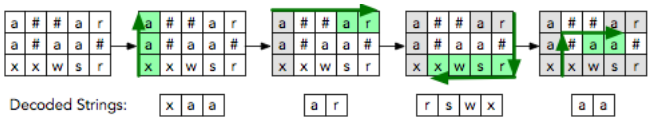
You've intercepted an encoded spy message! The message originated as a single line of one or more space-separated words, but it was encoded into an $n \times m$ matrix as a clockwise spiral starting in the lower left-hand corner. For example, the diagram below shows the decoding process for an encoded message:



The message is decoded spirally starting from the lower left-hand corner of the matrix and moving in the clockwise direction (i.e., up, right, down, left, up, right, etc.). From the starting position, you must clockwise-traverse the matrix, scanning characters and switching to the next clockwise direction each time you reach a boundary (i.e., an already-scanned character or the end of the matrix). Continue scanning characters in this manner until you've scanned all the matrix's characters into a single decoded string. The word separator for the decoded string is the hash mark (`#`).

Given n, m, and an encoded message, decode the message and print the number of words in the decoded message.

Input Format

The first line contains two space-separated positive integers describing the respective values of n and m.
Each line i of the n subsequent lines contains a string of m characters describing row i of the encoded message.

Constraints

- Each word consists of lowercase English alphabetic characters (`a` to `z`).
- The encoded message consists of words and hash marks (`#`). Each hash mark denotes a single space.
- $0 < n, m \leq 20$

Output Format

Print an integer denoting the number of decoded words.

Sample Input

```
3 5
a##ar
a#aa#
xxwsr
```

Sample Output

```
4
```

Explanation

The diagram at the top of the challenge demonstrates the decoding process for the given *Sample Input*. The decoded message is `xaa##ar#rswx#aa`. Because hash marks denote spaces, we can break the message into four words: `xaa`, `ar`, `rswx`, and `aa`. Thus, we print 4 as our answer.

Submissions: 1415

Max Score: 20

Difficulty: Easy

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Current Buffer (saved locally, editable)

Python 2

```
1  # Enter your code here. Read input from STDIN. Print output to STDOUT
```

Line: 1 Col: 1

Upload Code as File

Test against custom input

Run Code

Submit Code