USACO 2022 US Open Contest, Bronze
Problem 1. Photoshoot

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Time Remaining: **3 hrs, 21 min, 38 sec**

Submitted; Results below show the outcome for each judge test case

* 3.3mb 1 3ms	* 3.3mb 2 3ms	* 3.3mb 3 15ms	* 3.3mb 4 11ms	* 3.3mb 5 3ms	* 3.3mb 6 7ms	* 3.4mb 7 17ms	* 3.4mb 8 17ms	* 3.4mb 9 17ms	* 3.4mb 10 17ms	* 3.4mb 11 17ms

English (en) ▾

Farmer John, desperate to win the award for best cow photographer at the county fair, is trying to take the perfect photograph of his N cows ($2 \leq N \leq 2 \cdot 10^5$, N even).

Farmer John owns cows of two potential breeds: Guernseys and Holsteins. To make his photo as aesthetic as possible, he wants to line up his cows so that as many Guernseys are in even-numbered positions in the line as possible (the first position in the line is an odd position, the next is an even position, and so on). Due to his lack of strong communication with his cows, the only way he can achieve his goal is by asking even length "prefixes" of his cows to reverse themselves (a prefix consists of the range of cows from the first cow up to the jth cow for some position j).

Please count the minimum number of reversals required for Farmer John to achieve his goal.

INPUT FORMAT (input arrives from the terminal / stdin):

The first line of input contains the value of N.

The second line contains a string of length N, specifying the initial ordering of the cows from left to right. Each 'H' represents a Holstein, while each 'G' represents a Guernsey.

OUTPUT FORMAT (print output to the terminal / stdout):

Output the minimum number of reversals needed on a single line.

SAMPLE INPUT:

```
14
GGGHGHHGHHHGHG
```

SAMPLE OUTPUT:

```
1
```

In this example, it suffices to reverse the prefix consisting of the first six cows.

```
   GGGHGHHGHHHGHG  (Before)
-> HGHGGGHGHHHGHG  (After)
```

Before the reversal, four Guernseys were at even positions. After the reversal, six Guernseys are at even positions. It is impossible for there to be more than six Guernseys at even positions.

SCORING:

- Test cases 2-6 satisfy $N \leq 1000$.
- Test cases 7-11 satisfy no additional constraints.

Problem credits: Aryansh Shrivastava

Language: C

Source File: 选择文件 未选择任何文件

Submit Solution

Previous Submissions:

Fri, Mar 25, 2022 10:59:51 EDT (C++17)