Counting Valleys



An avid hiker keeps meticulous records of their hikes. During the last hike that took exactly steps steps, for every step it was noted if it was an uphill, U, or a downhill, D step. Hikes always start and end at sea level, and each step up or down represents a 1 unit change in altitude. We define the following terms:

- A mountain is a sequence of consecutive steps above sea level, starting with a step up from sea level and ending
 with a step down to sea level.
- A *valley* is a sequence of consecutive steps *below* sea level, starting with a step *down* from sea level and ending with a step *up* to sea level.

Given the sequence of *up* and *down* steps during a hike, find and print the number of *valleys* walked through.

Example

$$steps = 8 \ path = [DDUUUUDD]$$

The hiker first enters a valley **2** units deep. Then they climb out and up onto a mountain **2** units high. Finally, the hiker returns to sea level and ends the hike.

Function Description

Complete the counting Valleys function in the editor below.

counting Valleys has the following parameter(s):

- *int steps*: the number of steps on the hike
- string path: a string describing the path

Returns

• int: the number of valleys traversed

Input Format

The first line contains an integer steps, the number of steps in the hike.

The second line contains a single string path, of steps characters that describe the path.

Constraints

- $2 \le steps \le 10^6$
- $path[i] \in \{UD\}$

Sample Input

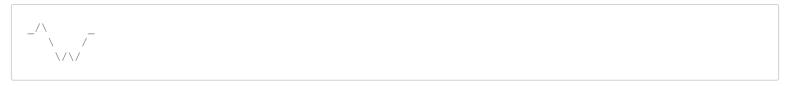
8 UDDDUDUU

Sample Output

1

Explanation

If we represent $\underline{}$ as sea level, a step up as $\underline{}$, and a step down as $\underline{}$, the hike can be drawn as:



The hiker enters and leaves one valley.