# **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.

countingValleys 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**

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

### Sample Input

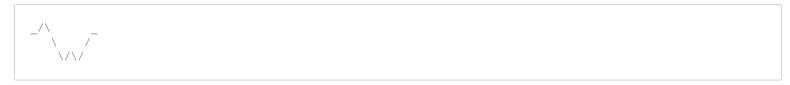
o UDDDUDUU

## **Sample Output**



## **Explanation**

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



The hiker enters and leaves one valley.