Counting Valleys *

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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

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

Sample Input

8

UDDDUDUU

Sample Output

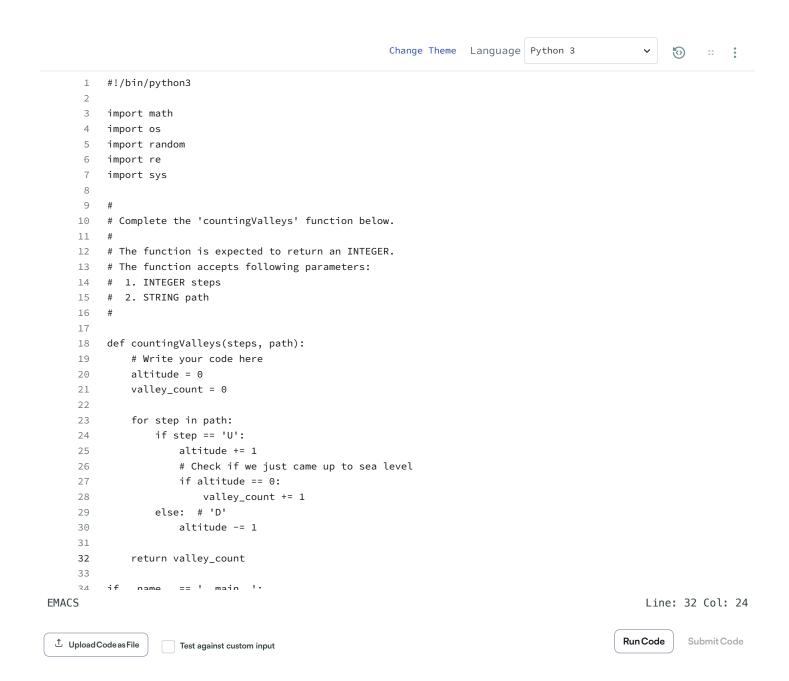
1

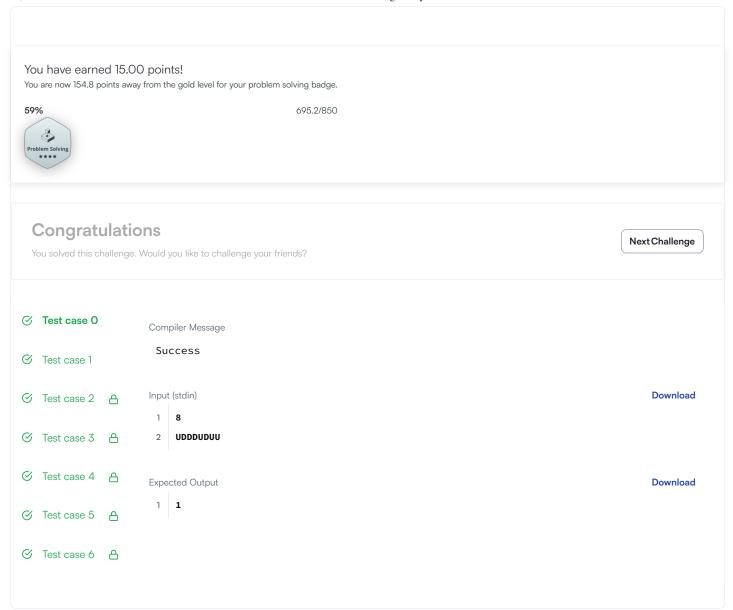
Explanation

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



The hiker enters and leaves one valley.





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