

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 countingValleys 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

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

Sample Input

```
8
UDDDUDUU
```

Sample Output

```
1
```

Explanation

If we represent `_` as sea level, a step up as `/`, and a step down as `\`, the hike can be drawn as:

```
_/\_ _
 \  /
  \/ /
```

The hiker enters and leaves one valley.