H   🏠 Practice   🕐 Compete   💼 Jobs   🎖 Rank   🏆 Leaderboard   🔍   💬① 📢   H nachomonllor ⌄

All Contests ⟩ RookieRank ⟩ Counting Valleys

Counting Valleys   🔒 locked

by **pkacprzak**

| Problem | Submissions | Leaderboard | Discussions | Editorial |

Gary is an avid hiker. He tracks his hikes meticulously, paying close attention to small details like topography. During his last hike, he took exactly n steps. For every step he took, he noted if it was an *uphill* or a *downhill* step. Gary's hikes start and end at sea level. We define the following terms:

- A *mountain* is a non-empty 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 non-empty 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 Gary's sequence of *up* and *down* steps during his last hike, find and print the number of *valleys* he walked through.

Input Format

The first line contains an integer, n, denoting the number of steps in Gary's hike.
The second line contains a single string of n characters. Each character is $\in \{U, D\}$ (where `U` indicates a step *up* and `D` indicates a step *down*), and the ith character in the string describes Gary's i^{th} step during the hike.

Constraints

- $2 \le N \le 10^6$

Output Format

Print a single integer denoting the number of valleys Gary walked through during his hike.

Sample Input

```
8
UDDDUDUU
```

Sample Output

```
1
```

Explanation

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

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

It's clear that there is only one valley there, so we print 1 on a new line.

f 🐦 in

Submissions: 1941

Max Score: 15
Difficulty: Easy

Rate This Challenge:
⭐⭐⭐⭐⭐

More

Current Buffer (saved locally, editable) ⑂ ↺   C# ⌄   ⤢ ⚙

```csharp
1   using System;
2   using System.Collections.Generic;
3   using System.IO;
4   class Solution {
5       static void Main(String[] args) {
6           /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be
        named Solution */
7
8
9           int n = int.Parse(Console.ReadLine());
10          string s = Console.ReadLine();
11          //string s = "UDDDUDUU";
12
13          int nivel = 0;
14
15          bool valle = false;
16
17          int total_valles = 0;
18
19          for (int i = 0; i < s.Length; i++)
20          {
21              if (s[i] == 'U')
22              {
23                  nivel++;
24              }
25              else if (s[i] == 'D')
26              {
27                  nivel--;
28              }
29              if (nivel < 0 && !valle)
30              {
31                  valle = true;
32              }
33              else if (valle && nivel >= 0)
34              {
35                  total_valles++;
36                  valle = false;
37              }
38          }
39
40          Console.WriteLine(total_valles);
41
42      }
43  }
```

Line: 9 Col: 9

⬆ **Upload Code as File**   ☐ Test against custom input   **Run Code**   **Submit Code**

Join us on IRC at #hackerrank on freenode for hugs or bugs.

Contest Calendar | Interview Prep | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature