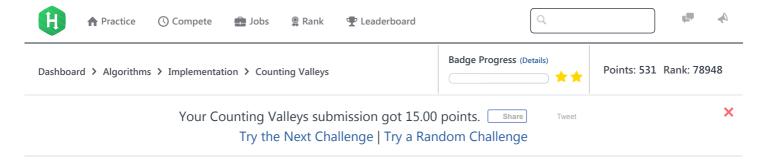
12/24/2017 HackerRank



Counting Valleys



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 i^{th} 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.

12/24/2017 HackerRank

Submissions:24612
Max Score:15
Difficulty: Easy
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```
Current Buffer (saved locally, editable) & 🗸 🖸
                                                                                           C + +14
                                                                                                                              \Diamond
 1 ▼ #include <iostream>
 2 using namespace std;
 4 int main()
 5 ₹ {
         unsigned int n; //denoting the number of steps in Gary's hike.
 6
 7
         cin>>n;
 8
         if(n>=2 && n<=1000000)
 9 ▼
         {
10 ▼
             char S[n];
             int sea_level=0, Ans=0;
11
12
             for(unsigned int i=0; i<n; ++i)</pre>
13 ▼
14 ▼
                  cin>>S[i]; //character in the array describes Gary's [i]th step during the hike.
15 ₹
                  if(S[i]=='U')
16
                      ++sea_level;
17 ▼
                  if(S[i]=='D')
18
                      --sea_level;
19
                  if(sea_level==0 && S[i]=='U')
20
                      ++Ans;
21
             }
22
         cout<<Ans<<endl;</pre>
23
         }
24
         return 0;
25
    }
26
                                                                                                                    Line: 26 Col: 1
                       Test against custom input
                                                                                                        Run Code
                                                                                                                      Submit Code
1 Upload Code as File
```

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