

Kirito and the Magic Spell

Assignment 2

Computer Programming

Due date: TBA

Problem Statement: Kirito and his friends set out on a quest to retrieve the magic item, Excalibur, which is buried deep inside the ancient ruins crawling with monsters. To enter the ruins, the team needs to activate an N-length magic sequence which comprises a series of 'a's and 'd's denoting activation and deactivation of the spell. Kirito's team has limited magic power and hence can make a total of M actions. An action is defined as:

- 1) Changing an element from 'a' to 'd' or
- 2) Changing an element from 'd' to 'a'.

Given N, M and the sequence, output the maximum length of consecutive a's that can be formed.

Input

The first line comprises three integers N, M denoting the length of the sequence, the maximum number of actions possible.

The second line consists of the sequence.

Output

A single integer denoting the maximum length.

Constraints

$$1 \leq N \leq 10^6$$

$$0 \leq M \leq N$$

Time Limit: 1 sec

Memory Limit: 256 MB

Sample Test Case

| Input | Output |
|---------------------|--------|
| 11 2 aadaddadaaa | 6 |

Explanation

We can activate spells at indices 5 and 7 to form the new sequence: aadadaaaaa which has 6 consecutive 'a's.