时间限制：C/C++/Rust/Pascal 3秒，其他语言6秒
空间限制：C/C++/Rust/Pascal 512 M，其他语言1024 M
64bit IO Format: %lld

题目描述

A string S consisting only of lowercase English letters is called **Capella-like** if and only if it satisfies all of the following conditions:

- The number of letters that appear an odd number of times in S is odd;
- The number of letters that appear a non-zero even number of times in S is even.

It can be shown that the string "`capella`" is Capella-like. However, the string "`arcaea`" is not Capella-like since there are 4 letters that appear an odd number of times, and "`lowiro`" is not Capella-like either since there is 1 letter that appears a non-zero even number of times and 4 letters that appear an odd number of times.

Now Yuki has a string S of length n consisting only of lowercase English letters. Yuki performs q operations on the string S: the i-th operation gives a position p_i ($1 \leq p_i \leq n$) and a lowercase letter c_i, modifying the character at the p_i-th position of S, denoted as S_{p_i}, to c_i. You need to find the length of the longest substring of S that is Capella-like before all the q operations and after each operation.

Recall that a string S' is a substring of S if and only if S' can be obtained by removing a possibly empty prefix and suffix from S.

输入描述:

> The first line contains two integers n and q ($1 \leq n \leq 2 \cdot 10^5$, $1 \leq q \leq 2 \cdot 10^5$).
>
> The second line contains a string S of length n consisting only of lowercase English letters.
>
> Each of the next q lines contains an integer p_i ($1 \leq p_i \leq n$) and a lowercase English letter c_i, representing an operation.

输出描述:

> Output $q+1$ lines. Each line contains an integer representing the length of the longest substring of S that is Capella-like before all q operations and after each operation.

示例1

输入 复制

```
6 4
ababab
```

C++（clang++18）

1

ACM模
请通过
入输出
出描述

运行结果 自测