16/11/2017 HackerRank



Hamming Distance





You are given a string S, consisting of N small latin letters 'a' and 'b'. You are also given M queries to process. The queries are as follows:

- C l r ch: all the symbols in the string, starting at the l^{th} , ending at the r^{th} become equal to ch;
- S $l_1 r_1 l_2 r_2$: swap two consecutive fragments of the string, where the first is denoted by a substring starting from l_1 ending at r_1 and the second is denoted by a substring starting at l_2 ending at r_2 ;
- R l r: reverse the fragment of the string that starts at the lth symbol and ends at the rth one;
- W l r: output the substring of the string that starts at the l^{th} symbol and ends at the r^{th} one;
- H $l_1\ l_2\ len$: output the Hamming distance between the consecutive substrings that starts at $l_1\$ and $l_2\$ respectively and have the length of len.

Everything is 1-indexed here.

Input Format

The first line of input contains a single integer $N^{\,-}$ the length of the string.

The second line contains the initial string \boldsymbol{S} itself.

The third line of input contains a single integer M $^-$ the number of queries.

Then, there are M lines, each denotes a query of one of the types above.

Constraints

$$\begin{aligned} &1 \leq N \leq 50000 \\ &1 \leq M \leq 75000 \end{aligned}$$

Total number of characters printed in W-type queries will not exceed $2 \cdot 10^6$

For C-type, R-type, W-type queries: $1 \le l \le r \le N$; ch equals either a, or b

For S-type queries: $1 \leq l_1 \leq r_1 < l_2 \leq r_2 \leq N$

For H-type queries: $1 \leq l_1, l_2 \leq N$; $l_i + len - 1 \leq N$; $1 \leq len \leq N$.

Output Format

For each query of the type W or the type H output an answer on the separate line of output.

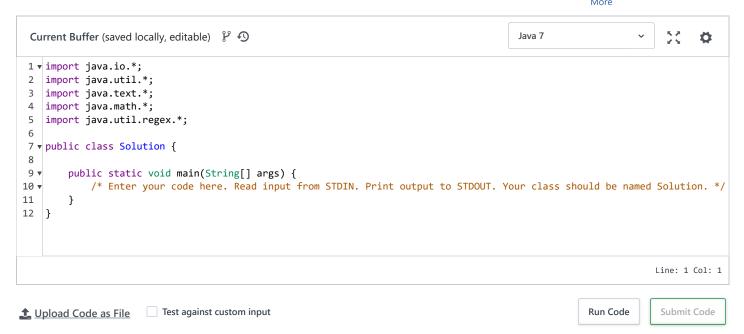
Sample Input

```
10
aabbbabbab
10
R 1 5
W 3 8
C 4 4 a
H 2 1 9
S 5 9 10 10
H 1 2 9
C 3 3 b
H 7 8 2
C 2 9 a
S 7 9 10 10
```

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Sample Output

> f y in Submissions:<u>967</u> Max Score:150 Difficulty: Expert Rate This Challenge: ☆☆☆☆☆



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