

PRACTICE

COMPETE

JOBS

LEADERBOARD

Q Search

PerfectStorm >

All Contests > Goldman Sachs Women's CodeSprint > Stringonomics

Stringonomics



🕻 by abizerl123

Problem

Submissions

Leaderboard

Discussions

Editorial

You are given a string ${\it S}$ consisting of lowercase English letters.

You are given another string P, that may or may not exist as a substring in S.

Given Q queries, where each query is of the form X and C, where X is a non-negative integer and C a character. For every query, you are supposed to change the index X (Assume 0 based indexing) of the string S to the character C.

You are supposed to find the minimum number of queries, when sequentially executed from the start, after which the string P no longer exists as a substring in S.

If the string ${m P}$ exists in ${m S}$ even after executing all the queries, print -1.

It is guaranteed that each index is only changed once, and once the string P ceases to exist in S, it would not reappear again later (If P never existed in S, it wouldn't reappear later on).

Input Format

First line contains $oldsymbol{T}$ number of testcases. For each testcase:

- The first line contains the string S.
- Next line contains the string P.
- Next line contains number of queries Q.
- Following Q lines contains X and C, space seperated.

Constraints

- $1 \le T \le 50$
- $1 \le |S| \le 2 \cdot 10^5$
- $1 \le |P| \le |S|$
- $1 \le Q \le |S|$
- $0 \le X < |S|$
- $oldsymbol{\cdot}$ is a lowercase English letter
- Sum of |S| and |P| over all T $\leq 7 \cdot 10^5$
- Sum of Q over all T $\leq 7 \cdot 10^5$

Output Format

For each testcase T, output a single integer denoting the minimum number of queries after which the string P ceases to exist in string S.

Sample Input 0

2 abcde bc 3 0 p 1 q 2 w abcde cde 2 0 t 1 z

Sample Output 0

2 -1

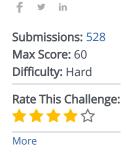
Explanation 0

First test case

- Initial a[bc]de
- First update p[bc]de
- Second update pqcde
 So after second update the string P is not in string S, so the answer is 2.

Second test case

- Initial ab[cde]
- First update tb[cde]
- Second update *tz[cde]*Even, after all the updates the string P is in the string S, so the answer is -1.



```
Python 3
                                                                          Ö
  #!/bin/python3
1
2
  import math
3
  import os
4
  import random
5
  import re
6
7
   import sys
```