

Problem J

Not a Classic String Problem

Time Limit: 1 Second
Memory Limit: 512 megabytes

There is a classic string problem: You are given two strings A and B , and your task is to find the number of appearances of string A in string B .

Dr. Hung does not want the problem to be that easy, so he gives you two strings S, T , and q queries. Each query has two pairs of indices (i, j) and (u, v) . For each query, Dr. Hung asks you to find the number of appearances of string $X = S_i S_{i+1} \dots S_j$ in string $Y = T_u T_{u+1} \dots T_v$.

Input

The first line contains string S ($1 \leq |S| \leq 2 \times 10^5$).

The second line contains string T ($1 \leq |T| \leq 2 \times 10^5$).

The third line contains q ($1 \leq q \leq 5 \times 10^5$).

In the next q lines, each line contains four integers i, j and u, v .

Output

The output has q lines, each line contains a single integer indicating the number of appearances.

Sample Input

Sample Output

abb	3
ababababb	1
5	2
1 2 1 7	1
2 3 2 9	4
3 3 4 7	
1 2 2 4	
1 1 1 9	