

Contest Duration: 2025-08-16(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250816T2100&p1=248>) - 2025-08-16(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250816T2240&p1=248>) (local time) (100 minutes)

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## D - Substr Swap

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 400 points

### Problem Statement

You are given length- $N$  lowercase English strings  $S$  and  $T$ , and  $M$  pairs of integers  $(L_1, R_1), (L_2, R_2), \dots, (L_M, R_M)$ .

Perform the following operation for  $i = 1, 2, \dots, M$  in order:

- Swap the  $L_i$ -th through  $R_i$ -th characters of  $S$  and the  $L_i$ -th through  $R_i$ -th characters of  $T$ .
  - For example, if  $S$  is abcdef,  $T$  is ghijk1, and  $(L_i, R_i) = (3, 5)$ , then  $S$  and  $T$  become abijkf and ghcde1, respectively.

Find the string  $S$  after performing the  $M$  operations.

### Constraints

- $1 \leq N \leq 5 \times 10^5$
- $1 \leq M \leq 2 \times 10^5$
- Each of  $S$  and  $T$  is a length- $N$  lowercase English strings.
- $1 \leq L_i \leq R_i \leq N$
- $N, M, L_i$ , and  $R_i$  are integers.

## Input

The input is given from Standard Input in the following format:

```
N  M  
S  
T  
L1  R1  
L2  R2  
:  
LM  RM
```

## Output

Output the  $S$  after performing the  $M$  operations.

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### Sample Input 1

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```
5 3  
apple  
lemon  
2 4  
1 5  
5 5
```

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### Sample Output 1

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```
1pple
```

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Initially,  $S$  and  $T$  are apple and lemon, respectively.

- After the operation for  $i = 1$ ,  $S$  and  $T$  are aemoe and 1ppln, respectively.
- After the operation for  $i = 2$ ,  $S$  and  $T$  are 1ppln and aemoe, respectively.
- After the operation for  $i = 3$ ,  $S$  and  $T$  are 1pple and aemon, respectively.

Thus, the string  $S$  after the three operations is 1pple.

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### Sample Input 2

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2026-01-02 (Fri)  
05:28:39 +11:00

```
10 5
lemwrbogje
omsjbfggme
5 8
4 8
1 3
6 6
1 4
```

## Sample Output 2

[Copy](#)

```
lemwrfogje
```

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#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc419%2Ftasks%2Fabc419\_d%3Flang%3Den&title=D%20-

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