

B. Pasha and String

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Pasha got a very beautiful string S for his birthday, the string consists of lowercase Latin letters. The letters in the string are numbered from 1 to $|S|$ from left to right, where $|S|$ is the length of the given string.

Pasha didn't like his present very much so he decided to change it. After his birthday Pasha spent m days performing the following transformations on his string — each day he chose integer a_i and **reversed** a piece of string (a segment) from position a_i to position $|S| - a_i + 1$. It is guaranteed that $2 \cdot a_i \leq |S|$.

You face the following task: determine what Pasha's string will look like after m days.

Input

The first line of the input contains Pasha's string S of length from 2 to $2 \cdot 10^5$ characters, consisting of lowercase Latin letters.

The second line contains a single integer m ($1 \leq m \leq 10^5$) — the number of days when Pasha changed his string.

The third line contains m space-separated elements a_i ($1 \leq a_i$, $2 \cdot a_i \leq |S|$) — the position from which Pasha started transforming the string on the i -th day.

Output

In the first line of the output print what Pasha's string S will look like after m days.

Examples

input
abcdef 1 2
output
aedcbf
input
wxyz 2 2 2
output
wxyz
input
abcdef 3 1 2 3
output
fbdcea

Codeforces Round #297 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

greedy

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 