

# Problem J

## Suffix Sorting


**Problem ID:** suffixsorting

**CPU Time limit:** 1 second

**Memory limit:** 1024 MB

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**Source:** KTH CSC Popup 2005

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### Input

The input consists of less than 10 test cases. Each test case begins with a line containing a non-empty string  $s$ , of length at most 100 000. Then follows a line containing an integer  $n$  followed by  $n$  integers  $q_1, \dots, q_n$ , where  $0 \leq q_i < \text{length}(s)$ , each indicating a query.

### Output

For each test case, output a line containing  $n$  integers  $p_1, \dots, p_n$ , where  $p_i$  is the starting position of the  $q_i$ 'th smallest suffix of  $s$ .

#### Sample Input 1

```
popup
5 0 1 2 3 4
Popup
5 0 1 2 3 4
Suffixes are jolly fun, eh old chap?
7 35 3 18 33 26 6 2
```

#### Sample Output 1

```
1 4 0 2 3
0 1 4 2 3
17 18 19 20 21 22 23
```