Encipher

Description

Given an input password and a scramble key array, your encipher() function shows position codes for the password.

The following steps calculate the position codes if the password is `4225624` and the keys are `[6, 1, 8, 3, 4, 9, 0, 7, 2, 5]`.

1. The 1st digit of the password is `4`, so the 1st digit of the position codes is the keys' 5th (4+1) element. The 1st digit of the position codes is `4`.
2. The 2nd digit of the password is `2`, so the 2nd digit of the position codes is the keys' 3rd (2+1) element. The 2nd digit of the position codes is `8`.
3. The 3rd digit of the password is `2`, so the 3rd digit of the position codes is the keys' 3rd (2+1) element. The 3rd digit of the position codes is `8`.
4. The 4th digit of the password is `5`, so the 4th digit of the position codes is the keys' 6th (5+1) element. The 4th digit of the position codes is `9`.
5. The 5th digit of the password is `6`, so the 5th digit of the position codes is the keys' 7th (6+1) element. The 5th digit of the position codes is `0`.
6. The 6th digit of the password is `2`, so the 6th digit of the position codes is the keys' 3rd (2+1) element. The 6th digit of the position codes is `8`.
7. The 7th digit of the password is `4`, so the 7th digit of the position codes is the keys' 5th (4+1) element. The 7th digit of the position codes is `4`.

The position codes are `4889084.`

And please answer all 0 positions if the keys are not a legal scramble key array.

For the keys [6, 1, 8, 3, 4, 9, 0, 7, 2, 6] and the password is `4225624`, the first and last elements of keys are duplicated.

As a result, the keys are illegal. The position codes are `0000000`.

Input

Each case has two lines.

The first line contains an integer `p`, which is the password.

The second line contains ten integers, `k_i`, which are the keys.

Constraints:

- 0 <= `p` <= 2,147,483,647
- 0 <= `k_i` <= 9
- 0 <= `i` <= 9

Output

Output the position codes for the given case.

Please follow the output format:

position codes: {result}

Sample Input 1

```
4225624
6 1 8 3 4 9 0 7 2 5
```

Sample Output 1

```
position codes: 4889084
```

Sample Input 2

```
4225624
5 1 8 3 4 9 0 7 2 5
```

Sample Output 2

```
position codes: 0000000
```


Information

ID	mid_11
Time Limit	1000MS
Memory Limit	256MB
IO Mode	Standard IO
Created By	aster
Level	Low
Score	100
Tags	Show

Statistic Details