Xtreme9.0 - Zoom In

Some years ago, we had terminals there were capable of supporting only ASCII characters. We would like your help to construct a program, which given an input string and specific printing rules, produces the same text in a bigger layout.

Input Format

On the first line of input is an integer *n*, 1 <= *n* <= 100, representing how many columns each character will use when printed "zoomed-in".

The next line contains an integer *m*, 1 <= *m* <= 100, representing how many rows each character will use when printed "zoomed-in". Note that *n* and *m* are not necessarily equal.

The third line contains an integer *k*, 3 <= *k* <= 95, which indicates how many characters may need to be translated.

Following these first lines, are *k* descriptions of the "zoomed-in" characters, formatted as follows:

- On a line by itself, a single character, which has an ASCII value of between 32 and 126, inclusive
- *m* lines, each containing *n* characters, that give the "zoomed-in" representation of the character on the previous line

Following the descriptions of the zoomed in characters, is an integer number *x*, 1 <= *x* <= 500.

Finally there are *x* lines, each containing a string of up to 2,000 characters, and ending with a new line. The characters in this string will be chosen from the set of *k* characters previously specified.

Notes:

- We don't know if *k* sets (i.e. the descriptions of the k "zoomed-in" characters) are given in a sorted or random order.
- The "zoomed-in" version of an empty string is *m* blank lines (i.e. lines with only a newline character).

Output Format

For each of the *x* strings, you should output the “zoomed-in” version. Each string should begin on a newline.

Note: You should perform only the transformation that is specified. You should not add any space between your printed letters that is not in the transformation.

Sample Input

```
4
4
3
H
H  H
H%%H
H%%H
H  H
i

 ()

 II
 II
!
 II
 II
 II
 ()
1
Hi!
```

Sample Output

```
H  H ()  II
H%%H     II
H%%H II  II
H  H II  ()
```

Explanation

For clarity, we will add dashes where the spaces would appear in the output in this explanation. According to the input, each character will use 4 rows and 4 columns, and there are 3 characters that may be translated.

A capital H ('H') should be translated as

```
H--H
H%%H
H%%H
H--H
```

A lower-case i ('i') should be translated as

```
-()-
----
-II-
-II-
```

An exclamation mark ('!') should be translated as:

```
-II-
-II-
-II-
-()-
```

We are then asked to print the "zoomed in" version of the string "Hi!". The output would be the following (with spaces where the dashes are located):

```
H--H-()--II-
H%%H-----II-
H%%H-II--II-
H--H-II--()-
```