The Goal

MIME types are used in numerous internet protocols to associate a media type (html, image, video ...) with the content sent. The *MIME type* is generally inferred from the extension of the file to be sent.

You have to write a program that makes it possible to detect the MIME type of a file based on its name.

Rules

You are provided with a table which associates *MIME types* to file extensions. You are also given a list of names of files to be transferred and for each one of these files, you must find the *MIME type* to be used.

The extension of a file is defined as the substring which follows the last occurrence, if any, of the dot character within the file name.
If the extension for a given file can be found in the association table (case insensitive, e.g. TXT is treated the same way as txt), then print the corresponding *MIME type*. If it is not possible to find the *MIME type* corresponding to a file, or if the file doesn't have an extension, print `UNKNOWN`.

Game Input

Input

Line 1: Number `N` of elements which make up the association table.

Line 2: Number `Q` of file names to be analyzed.

`N` **following lines:** One file extension per line and the corresponding *MIME type* (separated by a blank space).

`Q` **following lines:** One file name per line.

Output

For each of the `Q` filenames, display on a line the corresponding *MIME type*. If there is no corresponding type, then display `UNKNOWN`.

Constraints

0 < `N` < 10000
0 < `Q` < 10000

- File extensions are composed of a maximum of 10 alphanumerical ASCII characters.
- *MIME types* are composed of a maximum 50 alphanumerical and punctuation ASCII characters.
- File names are composed of a maximum of 256 alphanumerical ASCII characters and dots (full stops).
- There are no spaces in the file names, extensions or *MIME types*.

Example

Input

```
3
3
html text/html
png image/png
gif image/gif
animated.gif
portrait.png
index.html
```

Output

```
image/gif
image/png
text/html
```