Program Name: fax.cpp   **Input File: fax.dat**

The secretarial staff of a particularly large office building has to physically deliver received faxes to the recipients' offices from a central communications room. The secretaries would prefer to have the faxes arranged in a stack so that they can do the least amount of walking. Fortunately, the building's offices are numbered such that if the faxes are sorted by room number, the secretaries can save the wear and tear on their shoes.

Your program is to read in a directory for the building. The directory lists the names of the people in the building (in alphabetical order by last name and then first) along with their office number. To make things easier, names are given with the underscore character substituted for any spaces. Your program should then read the names of the fax recipients and print the order of the stacked faxes (ascending by office number of the recipient). Note that if there is more than one fax for a recipient, you will only print the recipient's name once.

For example, if you were given the building directory:

Office Occupants	Office Number
LUCILLE_BALL	7245
JAN_BRADY	7327
GOOFY_DRIVER	1646
DONALD_DUCK	934
PORKY_FRIEND	6453
WEASER_MANN	6069
MINNIE_MOUSE	3852
ALFALFA_NADER	17
STIMEY_RASCAL	4583
DARLA_ROSE	9275
FROGGY_SINGER	23812
BUCK_WHEAT	582

And the list of recipients was:

WEASER_MANN, BUCK_WHEAT, GOOFY_DRIVER, LUCILLE_BALL, DARLA_ROSE, BUCK_WHEAT

Then your program would print the names of the recipients in the following order:

BUCK_WHEAT
GOOFY_DRIVER
WEASER_MANN
LUCILLE_BALL
DARLA_ROSE

Input
Input to your program starts with the number of occupants (1<=NUM_OCCUPANTS<=100) that indicates the number of occupants in the building directory. The next NUM_OCCUPANTS lines of input each contain a single occupant with the name starting in column 1 of the line, followed by a single blank character, followed by the office number (1<=OFFICE_NUMBER<=999999). There is only one occupant per office number and that occupant's name will appear only once in the directory. Line number (NUM_OCCUPANTS+2) contains a single integer (1<=NUM_FAXES<=100). The next NUM_FAXES lines of input will each contain exactly 1 recipient name on the line by itself starting in column 1. All names consist of up to 30 upper case alphabetic characters. All recipients will have an office in the building directory.

Output
Output from your program consists of a list of the recipient names (each occurring only once) for all recipients of one or more faxes. The list of names should be sorted in ascending order by the office number in which that recipient can be found. Each recipient's name should each be on a line by itself starting in column 1.

Example: Input File
```
12
LUCILLE_BALL 7245
JAN_BRADY 7327
GOOFY_DRIVER 1646
DONALD_DUCK 934
PORKY_FRIEND 6453
WEASER_MANN 6069
MINNIE_MOUSE 3852
ALFALFA_NADER 17
STIMEY_RASCAL 4583
DARLA_ROSE 9275
FROGGY_SINGER 23812
BUCK_WHEAT 582
6
WEASER_MANN
BUCK_WHEAT
GOOFY_DRIVER
LUCILLE_BALL
DARLA_ROSE
BUCK_WHEAT
```
Output to screen
```
BUCK_WHEAT
GOOFY_DRIVER
WEASER_MANN
LUCILLE_BALL
DARLA_ROSE
```