

Yellow Pages

Write a program that accepts the telephone number information of users, consisting of first name, surname, and telephone number. Then, accept queries to search telephone numbers from name and surname input, or vice versa.

Input

The first line is an integer N.

The next N lines will be user information, each line consisting of a first name, a surname, and a telephone number, each separated by a space.

Line N+2 is an integer M.

The next M lines will be either a first name and a surname (in case we want to look for the phone number) or a telephone number (in case we want to look for the full name).

Output

The corresponding telephone number or full name, depending on the query. If they cannot be found, print "Not found".

Example

Input (from keyboard)	Output (on screen)
5 Anthony Stark 086-111-1111 Henry Pym 087-222-2222 Robert Banner 088-333-3333 Steven Rogers 089-444-4444 Natasha Romanoff 091-555-5555	087-222-2222 --> Henry Pym Steven Rogers --> 089-444-4444 Monica Rambeau --> Not found 911 --> Not found
4 087-222-2222 Steven Rogers Monica Rambeau 911	