

Yellow Pages

Write a program to read telephone number information of users, consisting of their full name and phone number. Then, receive queries to either search for a phone number based on the full name provided, or search for the full name based on the phone number provided.

Input

The first line is an integer **N**.

The next **N** lines contain user information consisting of first name, last name, and phone number separated by a space.

Line **N+2** is an integer **M**.

The following **M** lines contain either a full name (if searching for phone number) or phone number (if searching for full name).

Output

The phone number or the full name depending on the query. If not found, display **Not found** (as shown in example).

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	