

Student Info

Chulalongkorn University's Engineering student information consists of nickname, group, generation and department. Write a program to show information of students within a group, generation, or/and department we want, arrange it in alphabetical order according to nicknames.

Input

The first line is integer n represent a number of student information

For N lines after, describe each student information, consist of nickname, group, generation and department. (Nickname are guaranteed to not be the same)

The last line describe group, generation and/or department to find and show student information(Might not have all three information and might not be in the same order)

Output

Show student information that have input group, generation and department, arrange it in alphabetical order. Show **Not Found** if there are no valid student information

Example

Input (from keyboard)	Output (on screen)
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP Mark C 100 CP CP C	Art C 97 CP Mark C 100 CP Pim C 99 CP
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP Mark C 100 CP CP 97	Art C 97 CP Krit A 97 CP
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP	Jame Dog 100 CE Mark C 100 CP

Mark C 100 CP 100	
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP Mark C 100 CP 99 Dog CP	Benz Dog 99 CP
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP Mark C 100 CP CE	Jame Dog 100 CE Oat A 98 CE
8 Krit A 97 CP Oat A 98 CE Pim C 99 CP Pun C 97 CHE Jame Dog 100 CE Art C 97 CP Benz Dog 99 CP Mark C 100 CP 99 CHE	Not Found