BSSPC ‘19 P3 - Shakespeare Insults

Problem Statement

magicalsoup just used some **nasty** Shakespeare insults today! Sadly, his was by far not the best, thus after collecting a bit of data, he asks you to help him find the top 3 best insults.

A Shakespeare insult is comprised of 3 parts, an adjective, another adjective, then a noun.

You will be given 3 integers, N, M and K, the number of adjective 1, adjective 2 and nouns.

For each adjective and noun, you will also be given a number X, the number of *points*, a word will have. The best insult is the one with the collective *points*. In other words, an insult's *points* is calculated by adding the *points* of `adjective1`, `adjective2` and `noun` respectively.

All adjectives and nouns will be one word, composed of uppercase, lowercase letters, and the character ‘-‘ to substitute a space.

Help magicalsoup with his sore loser syndrome!

Output the answers in the form `adjective 1 adjective 2 noun` with a space in between each of the words.

Note: If there is a tie, output the answer that is bigger. For example, giving the 2 strings with the same value ‘a b c‘ and ‘a b d‘, String ‘a b d‘ is the answer as it is the bigger string **lexicographically**.

Input Specification

First line, an integer N ($1 \leq N \leq 10^3$)

Next N lines: input will be given in the form *word x*, where *word* will be the **adjective 1** and x will be the points.

Next line, an integer M ($1 \leq M \leq 10^3$)

Next M lines: input will be given in the form *word x*, where *word* will be the **adjective 2** and x will be the points.

Next line: an integer K ($1 \leq K \leq 10^3$)

Next K lines: input will be given in the from *word x*, where *word* will be the **noun** and x will be the points.

You may assume all x values will be less than or equal to 10^9 and bigger than or equal to -10^9. You may also assume that each word length will be smaller than 30 characters.

Output Specification

On 3 separate lines, output the top 3 Shakespeare insults, each word being separated by a space. List them from best to worst.

All insults should be distinct, but a word may be used for multiple insults.

Sample Input

```
2
artless 3
base-court 6
3
bawdy 7
churlish 10
cockered 20
4
apple-john 200
baggage 4
clotpole 3
death-token 100
```

Sample Output

```
1. base-court cockered apple-john
2. artless cockered apple-john
3. base-court churlish apple-john
```

Explanation

The first one's score is $6 + 20 + 200 = 226$.

The second one's score is $3 + 20 + 200 = 223$.

The third one's score is $6 + 10 + 200 = 216$.