

Problem D

Hardware Sales

Bree Kim Orter owns three hardware stores in different parts of the state. She's interested in knowing what items are popular across the state, specifically those items that have sold 20 or more units in each of her stores. For each store she has a chronological list of purchases made during the past week. Each purchase record consists of two integers: the ID number of the item and the number of units purchased. An example of such a list is shown below:

```
178293 3 457839 10 322228 1 ...
```

This list indicates that the first purchase that week was three units of the item with ID #178293. The next purchase involved 10 units of item #457839, and so on. Given three of these lists (one from each store) Bree would like to determine the number of items which sold 20 or more units in each store during the week.

Input

Input starts with a line containing three integers n_1 n_2 n_3 , where $1 \leq n_1, n_2, n_3 \leq 100$ are the number of purchases in each of the three lists. Following this is the purchase list from the first store which contains n_1 pairs of positive integers, where the first number in each pair is a 6-digit ID number (possibly with leading zeros) and the second is the number of units sold. These n_1 pairs may span multiple lines. After this, starting on a new line, is the purchase list of the second store and following this, again starting on a new line, is the purchase list of the third store. All purchase amounts are ≤ 100 . An ID number may show up multiple times on a list.

Output

Output the number of items that have sold at least 20 units in each of three stores. After this list the ID numbers of the items. Print the ID numbers in the order that they first appear in the input file.

Sample Input 1

```
5 2 4
123682 20 239481 23 001238 5 738299 4 001238 17
001238 31 123682 25
239481 25 123682 22 909090 18 001238 27
```

Sample Output 1

```
2 123682 001238
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