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ITMO Academy: pilot course » Two Pointers Method » Step 3 » Practice

D. Stylish clothes

time limit per test: 2 seconds

memory limit per test: 256 megabytes

Gleb loves shopping. Once, he got the idea to choose a cap, a shirt, pants and shoes so that they look as stylish as possible. In Gleb's understanding clothes are more stylish when the difference in color of the elements of his clothes is small.

There are n_1 caps, n_2 shirts, n_3 pants and n_4 shoes ($1 \le n_i \le 100,000$). Each clothes element has its color (an integer from 1 to $100,000$). A set of clothes is one cap, shirt, pants and one pair of boots. Each set is characterized by the maximum difference between any two of its elements. Help Gleb to choose the most stylish set, that is the set with the minimum color difference.

Input
For each clothes element i ($i = 1, 2, 3, 4$) given its count n_i, and n_i integers in next line which is their color. First clothes element in input is caps, second is shirts, third is pants and forth is shoes. All numbers in input are positive integers not bigger than $100,000$.

Output
Write 4 integers in output, color of cap, shirt, pants and shoes Gleb will choose. If there are several most stylish sets output any of them.

Examples

input
```
3
1 2 3
2
1 3
2
3 4
2
2 3
```

output
```
3 3 3 3
```

input
```
1
5
4
3 6 7 10
4
18 3 9 11
1
20
```

output
```
5 6 9 20
```

→ **Submit?**

Language: [GNU G++20 13.2 (64 bit, win ▾]

Choose file: [Choose File] No file chosen

[Submit]