Programming Refresher Workshop

Session 3 Exercises

Exercise 9 (ex9): Set Operations

A **set** is defined to be a collection of unique values. That is, there are no duplicate values in a set.

Write a program to accept two sets of integer values and a character which represents the set operation required and output the result.

The three set operations are

Character	+	*	-
Set operation	Union	Intersection	Difference

Union: Integers which appear in either the first set or second set or both.

Intersection: Integers which appear in both sets.

Difference: Integers which appear in the first set but not in the second set.

Input

The first line consists of a list of non-negative integers terminated by -1. This list represents the first set of values (except the value -1).

The second line consists also of a list of non-negative integers terminated by -1. This list represents the second set of values (except the value -1).

The third line contains a single character which indicates the set operation needed.

You may assume that there are at most 100 values in each list.

Output

Output the list of integers in the resultant set. The integers must be sorted in ascending order and separated by a single space.

Sample input 1

```
13 25 66 21 89 -1
12 78 26 44 19 93 72 -1
+
```

Sample output 1

```
12 13 19 21 25 26 44 66 72 78 89 93
```

Sample input 2

```
64 2 1 10 -1
2 12 10 -1
*
```

Sample output 2

```
2 10
```

Sample input 3

```
77 89 91 92 -1
89 -1
-
```

Sample output 3

```
77 91 92
```

Algorithm template

Input

How to accept all the input

Processing

How to store the values into the array?

How to answer the queries?

Output

How to output the result?