The Longest Common **Subsequence**

A subsequence is a sequence that can be derived from another sequence by deleting some elements without changing the order of the remaining elements. Longest common subsequence (*LCS*) of 2 sequences is a subsequence, with maximal length, which is common to both the sequences.

Given two sequence of integers, $A = [a_1, a_2, \ldots, a_n]$ and $B = [b_1, b_2, \ldots, b_m]$, find **any one** longest common subsequence.

In case multiple solutions exist, print any of them. It is guaranteed that at least one non-empty common subsequence will exist.

Recommended References

This Youtube video tutorial explains the problem and its solution quite well.

Input Format

First line contains two space separated integers, \$n\$ and \$m\$, where \$n\$ is the size of sequence \$A\$, while \$m\$ is size of sequence \$B\$. In next line there are \$n\$ space separated integers representing sequence \$A\$, and in third line there are \$m\$ space separated integers representing sequence \$B\$.

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n m A_1 A_2 ... A_n \\ B_1 B_2 ... B_m
```

Constraints

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$1 \le n \le 100$

$1 \le m \le 100$

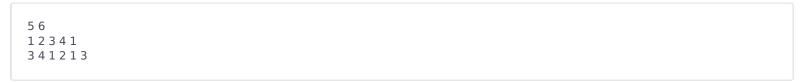
$0 \le a_i < 1000, where\ i \in [1, n]$

$ 0 \le b_j < 1000, where\ j \in [1,m]$
```

Output Format

Print the longest common subsequence and each element should be separated by at least one white-space. In case of multiple answers, print any one of them.

Sample Input



Sample Output

123

Explanation

There is no common subsequence with length larger than 3. And "1 2 3", "1 2 1", "3 4 1" are all correct answers.

Tested by Khongor