D. LCIS

time limit per test: 1 second
memory limit per test: 256 megabytes

This problem differs from one which was on the online contest.

The sequence $a_1, a_2, ..., a_n$ is called increasing, if $a_i < a_{i+1}$ for $i < n$.

The sequence $s_1, s_2, ..., s_k$ is called the subsequence of the sequence $a_1, a_2, ..., a_n$, if there exist such a set of indexes $1 \le i_1 < i_2 < ... < i_k \le n$ that $a_{i_j} = s_j$. In other words, the sequence s can be derived from the sequence a by crossing out some elements.

You are given two sequences of integer numbers. You are to find their longest common increasing subsequence, i.e. an increasing sequence of maximum length that is the subsequence of both sequences.

Input

The first line contains an integer n ($1 \le n \le 500$) — the length of the first sequence. The second line contains n space-separated integers from the range $[0, 10^9]$ — elements of the first sequence. The third line contains an integer m ($1 \le m \le 500$) — the length of the second sequence. The fourth line contains m space-separated integers from the range $[0, 10^9]$ — elements of the second sequence.

Output

In the first line output k — the length of the longest common increasing subsequence. In the second line output the subsequence itself. Separate the elements with a space. If there are several solutions, output any.

Examples

input Copy

```
7
2 3 1 6 5 4 6
4
1 3 5 6
```

output Copy

```
3
3 5 6
```

input Copy

```
5
1 2 0 2 1
3
1 0 1
```

output Copy

```
2
0 1
```

Codeforces Beta Round 10
Finished
Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++23 14.2 (64 bit, ms

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
325266094	Jun/20/2025 13:56	Accepted

→ Problem tags

dp *2800

No tag edit access

→ Contest materials

- Announcement (en)

The only programming contests Web 2.0 platform
Server time: Jun/20/2025 17:57:44^{UTC+7} (k1).
Desktop version, switch to mobile version.

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