**Algorithms with Java: Exam 01-08-2020**

This document defines the exam for ["Algorithms – Advanced (Java)" course @ Software University](https://softuni.bg/trainings/2992/algorithms-advanced-with-java-june-2020). Please submit your solutions (source code) of all below described problems in [Judge](https://judge.softuni.bg/Contests/2524/Algorithms-Advanced-with-Java-Exam-01-August-2020).

1. **Time**

This time you are master of the time itself.

Do you know what a persistent timeline is? Well even if you don't you are about to understand. You need to rebuild the timeline of the universe. Which universe? This one, maybe if you are lucky enough.

You will be given **two** **sequences** of integers representing **two** **timeline** versions. You need to **extract** from both sequences the **single** correct **timeline** that can be retrieved by **finding** the **longest** **sub** **sequence** of equal integers from both timelines and also find its length.

## Input

* The **first line** integers representing the first timeline separated by spaces.
* The **second line** integers representing the second timeline separated by spaces

## Output

* On the **first** line print the **correct timeline,** if there are more than one optimal timeline print the rightmost
* On the **second** line print the **length** of that **timeline**

## Constraints

* All numbers will be valid integers
* The length of the timelines will be between [**1…5000**]

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 13 42 69 73 42 84 26  13 54 73 42 8 15 29 | 13 73 42  3 |
| 5 69 78 5 3 5 5 5  1 2 3 5 5 5 5 5 | 5 5 5 5 5  5 |

*“Time is a created thing. To say 'I don't have time,' is like saying, 'I don't want to.”*

*― Lao Tzu*