# Algorithms Fundamentals with C#: Exam

Please submit your solutions (source code) to all the below-described problems in [Judge](https://judge.softuni.org/Contests/4003/Algorithms-Fundamentals-with-CSharp-Exam-01-July-2023).

## 3. Bitcoin Transactions

You are given two arrays of Bitcoin transactions, represented as arrays of transaction IDs.

Your task is to find the longest **sequence of transaction IDs that appear in both arrays**, in the same order but not necessarily contiguous.

For example, consider the following two arrays:

**Array 1: ["tx1", "tx2", "tx3", "tx4", "tx5", "tx6", "tx7"]**

**Array 2: ["tx1", "tx3", "tx5", "tx7", "tx9"]**

The longest sequence of transaction IDs that appears in both arrays, in the same order, is ["tx1", "tx3", "tx5", "tx7"], which has a length of 4.

### Input

* + The input consists of 2 lines - arrays of Bitcoin transactions.
  + Both arrays will be in the following format: **"{tx1} {tx2} … {txN}"**.

### Output

* + Print the best sequence as described in the problem description in the following format: **"[{tx1} {tx2} … {txN}]"**.

### Constraints

* + The input will always be valid.
  + The array lengths will be in the range **[1… 1000]**.
  + There might be more than one sequence matching condition described above.
    - In such a case, you should pick the sequence that starts before others.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| tx1 tx2 tx3 tx4 tx5 tx6 tx7  tx1 tx3 tx5 tx7 tx9 | [tx1 tx3 tx5 tx7] |
| tx1 tx2 tx3 tx4 tx5  tx1 tx2 tx3 tx4 tx5 | [tx1 tx2 tx3 tx4 tx5] |