# Algorithms Fundamentals with Java: Exam

Please submit your solutions (source code) to all the below-described problems in [Judge](https://judge.softuni.org/Contests/4004/Algorithms-Fundamentals-with-Java-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 transaction ID sequence that appears 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] |