**Algorithms with Java: Exam 28-06-2020**

This document defines the exam for ["Algorithms – Fundamentals (Java)" course @ Software University](https://softuni.bg/trainings/2991/algorithms-fundamentals-with-java-may-2020). Please submit your solutions (source code) of all below described problems in [Judge](https://judge.softuni.bg/Contests/2484/Algorithms-Fundamentals-with-Java-Exam-28-June-2020).

1. **Alpha Decay**

*There is something radioactive around those Greek letters Alpha, Beta and Gama, however letters are not known radioactive emitters. The real emitters are the heavy elements, approximately 99% of the helium produced on Earth is the result of the alpha decay of underground deposits of minerals containing uranium or thorium.*

You are part of the **"no-real-science-team"** and you are the computer specialist, you will be given data collected after the alpha decay of some heavy elements **N** where **each value** is the resulting nucleus after the alpha decay of some heavier nucleus **represented by a single integer.**

Your head theoretical physicist wants to see if there are any patterns in the resulting nucleus, however after doing some calculations the theorist have claimed that the **only** **number** of results worth looking at is **K** of those **N** nucleus at a time.

Here comes your task you need to take those **N** nucleus and print **all the possible** ways that they can be observed as a **sequence of K nucleus**, **without using the same nucleus twice**.

## Input

* The input will come from the console on two lines.
* First line will be the resulting nucleus after the alpha decay **N** as a sequence of integers separated by spaces.
* On the second line a single integer **K** the count of integers the physicist wants to observe at the same time.

## Output

* The output is each possible way to observe **K** nucleus out of **N** on a new line where each nucleus is separated by a single space.

## Constraints

* **N** will be in the range **[3…10]** where **K** will always be less than **N**.
* The nucleus numbers **will** be **unique**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 234 232 2302 | 234 232234 230232 234232 230230 234230 232 |
| 109 113 234 2323 | 109 113 234109 113 232109 234 113109 234 232109 232 113109 232 234113 109 234113 109 232113 234 109113 234 232113 232 109113 232 234234 109 113234 109 232234 113 109234 113 232234 232 109234 232 113232 109 113232 109 234232 113 109232 113 234232 234 109232 234 113 |

*“I... a universe of atoms, an atom in the universe.”*

*― Richard P. Feynman*