**Exercises: Sets and Dictionaries Advanced**

Problems for exercises and homework for the ["C# Advanced" course @ HYPERLINK "https://softuni.bg/trainings/3584/csharp-advanced-january-2022"SoftUni HYPERLINK "https://softuni.bg/trainings/3584/csharp-advanced-january-2022".](https://softuni.bg/trainings/3584/csharp-advanced-january-2022)

You can check your solutions in [Judge](https://judge.softuni.org/Contests/1466/Sets-and-Dictionaries-Advanced-Exercise)

* **Unique Usernames**

Create a program that reads from the console a sequence of **N usernames** and keeps a collection only of the **unique** ones. On the **first** line, you will be given an integer **N**. On the next **N** lines, you will receive **one** username **per** **line**. Print the collection on the console in **order** of **insertion**:

**Examples**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 6  John  John  John  Peter  John  Boy1234 | John  Peter  Boy1234 |
| 10  Peter  Maria  Peter  George  Sam  Maria  Sara  Peter  Sam  George | Peter  Maria  George  Sam  Sara |

* **Sets of Elements**

Create a program that prints a **set of elements**. On the first line, you will receive two numbers - **n** and **m**, which represent the lengths of two separate sets. On the next **n** + **m** lines, you will receive **n** numbers, which are the numbers in the **first** set, and **m** numbers, which are in the **second** set. Find all the **unique** **elements** that appear in **both of them** and **print** them in the order in which they appear in the **first** set - **n**.

**For example:**

Set with length n = 4: {1, **3**, **5**, 7}

Set with length m = 3: {**3**, 4, **5**}

Set that contains all the **elements** that repeat in **both** **sets** -> {**3**, **5**}

**Examples**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4 3  1  3  5  7  3  4  5 | 3 5 |
| 2 2  1  3  1  5 | 1 |

* **Periodic Table**

Create a program that keeps all the **unique** chemical **elements**. On the first line, you will be given a number **n** - the **count** of input **lines** that you are going to receive. On the next **n** lines, you will be receiving **chemical** **compounds**, separated by a **single** **space**. Your task is to print all the **unique ones** in **ascending** **order**:

**Examples**

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4  Ce O  Mo O Ce  Ee  Mo | Ce Ee Mo O |
| 3  Ge Ch O Ne  Nb Mo Tc  O Ne | Ch Ge Mo Nb Ne O Tc |