**Lab: 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/1465/Sets-and-Dictionaries-Advanced-Lab).

* **Parking Lot**

Create a program that:

* Records a **car number** for every car that enters the **parking lot**
* Removes a **car number** when the car leaves the **parking lot**

The input will be a string in the format: **"direction, carNumber"**. You will be receiving commands until the **"END"** commandisgiven.

Print the car numbers of the cars, which are still in the parking lot:

**Examples**

|  |  |
| --- | --- |
| **Input** | **Output** |
| IN, CA2844AA  IN, CA1234TA  OUT, CA2844AA  IN, CA9999TT  IN, CA2866HI  OUT, CA1234TA  IN, CA2844AA  OUT, CA2866HI  IN, CA9876HH  IN, CA2822UU  END | CA9999TT  CA2844AA  CA9876HH  CA2822UU |
| IN, CA2844AA  IN, CA1234TA  OUT, CA2844AA  OUT, CA1234TA  END | Parking Lot is Empty |

**Hints**

* Car numbers are **unique**
* Before printing, **first,** **check** if the set has any elements

**Solution**

You can help yourself with the code below:



* **SoftUni Party**

There is a party in SoftUni. Many guests are invited and there are two types of them: VIP and Regular. When a guest comes, check if he/she exists in any of the two reservation lists.

All reservation numbers will be with the length of 8 chars.

All VIP numbers start with a digit.

First, you will be receiving the reservation numbers of the guests. You can also receive 2 possible commands:

* **"PARTY"** – After this command, you will begin receiving the reservation numbers of the people, who came to the party.
* **"END"** – The party is over and you have to stop the program and print the appropriate output.

In the end, print the count of the guests who didn't come to the party, and afterward, print their reservation numbers. the VIP guests must be first.

**Examples**

|  |  |  |  |
| --- | --- | --- | --- |
| **Input** | **Output** | **Input** | **Output** |
| 7IK9Yo0h  9NoBUajQ  Ce8vwPmE  SVQXQCbc  tSzE5t0p  PARTY  9NoBUajQ  Ce8vwPmE  SVQXQCbc  END | 2  7IK9Yo0h  tSzE5t0p | m8rfQBvl  fc1oZCE0  UgffRkOn  7ugX7bm0  9CQBGUeJ  2FQZT3uC  dziNz78I  mdSGyQCJ  LjcVpmDL  fPXNHpm1  HTTbwRmM  B5yTkMQi  8N0FThqG  xys2FYzn  MDzcM9ZK  PARTY  2FQZT3uC  dziNz78I  mdSGyQCJ  LjcVpmDL  fPXNHpm1  HTTbwRmM  B5yTkMQi  8N0FThqG  m8rfQBvl  fc1oZCE0  UgffRkOn  7ugX7bm0  9CQBGUeJ  END | 2  xys2FYzn  MDzcM9ZK |