Lab: Dictionaries, Lambda and LINQ

Test your tasks in the Judge system: https://judge.softuni.org/Contests/4472

1. Count Real Numbers

Write a program that:

- Read a **list of integers**
- **Print them in ascending order,** along with their **number of occurrences** in the format:
  `{number} -> {occurances}`

Examples

Input	Output
8 2 2 8 2	2 -> 3 8 -> 2

Input	Output
1 5 1 3	1 -> 2 3 -> 1 5 -> 1

Input	Output
-2 0 0 2	-2 -> 1 0 -> 2 2 -> 1

2. Odd Occurrences

Write a program that extracts all elements from a given sequence of words that are present in it an **odd number of times** (case-insensitive):

- Words are given on a single line, space-separated.
- Print the result elements in lowercase, in their order of appearance.

Examples

Input	Output
Java C# PHP PHP JAVA C java	java c# c
3 5 5 hi pi HO Hi 5 ho 3 hi pi	5 hi
a a A SQL xx a xx a A a XX c	a sql xx c

3. Word Synonyms

Create a program, which keeps a dictionary with synonyms. The **key** of the dictionary will be the **word**. The **value** will be a **list of all the synonyms of that word**. You will be given a number **n – the count of the words**. After each word, you will be given a synonym, so the count of lines you have to read from the console is **2 * n.** You will be receiving a **word** and a **synonym** each on a separate line like this:

- {**word**}
- {**synonym**}

If you get the same word twice, just add the new synonym to the list.

Print the words in the following format:

`"{word} - {synonym1, synonym2, …, synonymN}"`

Examples

Input	Output

Follow us:

3 cute adorable cute charming smart clever	cute - adorable, charming smart - clever
2 task problem task assignment	task – problem, assignment

4. Word Filter

Write a program that:

- Read an **array of strings**
- Take only words, whose **length is an even number**
- Print **each word on a new line**

Examples

Input	Output
kiwi orange banana apple	kiwi orange banana
pizza cake pasta chips	cake