Lab: Functional Programming

Problems for exercises and homework for the "C# Advanced" course @ Software University.

You can check your solutions here: https://judge.softuni.bg/Contests/1472/Functional-Programming-Lab

1. Sort Even Numbers

Write a program that reads one line of **integers** separated by **", "**. Then prints the **even numbers** of that sequence **sorted** in **increasing** order.

Examples

Input	Output
4, 2, 1, 3, 5, 7, 1, 4, 2, 12	2, 2, 4, 4, 12

Input	Output
1, 3, 5	

Input	Output
2, 4, 6	2, 4, 6

Hint

It is up to you what type of data structures you will use to solve this problem. Use functional programming filter and sort the collection of numbers.

2. Sum Numbers

Write a program that reads a line of **integers** separated by **", "**. Print on two lines the **count** of numbers and their **sum.**

Examples

Input	Output
4, 2, 1, 3, 5, 7, 1, 4, 2, 12	10 41
2, 4, 6	3 12

3. Count Uppercase Words

Write a program that reads a line of **text** from the console. Print **all** the words that start with an **uppercase letter** in the **same order** you've received them in the text.

Examples

Input	Output
The following example shows how to use Function	The Function
Write a program that reads one line of text from console. Print count of	Write Print

words that start with Uppercase, after that print all those words in the same order like you find them in text.	Uppercase,

Hint

Use **Func<string, bool>** and use **" "** for splitting words.

4. Add VAT

Write a program that reads one line of **double** prices separated by **", "**. Print the **prices** with **added VAT** for all of them. **Format** them to **2 signs** after the decimal point. The **order** of the prices must be the **same**.
VAT is equal to 20% of the price.

Examples

Input	Output
1.38, 2.56, 4.4	1.66 3.07 5.28

Input	Output
1, 3, 5, 7	1.20 3.60 6.00 8.40

5. Filter by Age

Write a program that receives an integer **N** on first line. On the next **N** lines, read pairs of **"[name], [age]".** Then read three lines with:

- **Condition** - "**younger**" or "**older**"
- **Age** - Integer
- **Format** - "**name**", "**age**" or "**name age**"

Depending on the **condition**, print the correct **pairs** in the correct **format**. **Don't use the built-in functionality from .NET. Create your own methods.**

Examples

Input	Output
5 Pesho, 20 Gosho, 18 Mimi, 29 Ico, 31 Simo, 16 older 20 name age	Pesho - 20 Mimi - 29 Ico - 31

Input	Output
5 Pesho, 20 Gosho, 18 Mimi, 29 Ico, 31 Simo, 16 younger 20 name	Gosho Simo

Input	Output
5 Pesho, 20 Gosho, 18 Mimi, 29 Ico, 31 Simo, 16 younger 50 age	20 18 29 31 16