

Assignment 2018.1.3 – Electronic Components

You are a project manager at a company and you asked Gigel to order several batches of electronic components in order to build a set of electronic circuit boards. The problem is that he doesn't know a lot of electronics, so among the batches he ordered are some that don't have enough transistors or resistors or capacitors. The batches are only useful if they have a number of capacitors greater than or equal to the number of transistors, resistors number greater than or equal to the number of capacitors, and at least one capacitor, a transistor and a resistor. In addition, you are interested in the batch with the most components, because you can use those to replace others.

Requirement

Write a program that receives as input a number of component batches and displays how many of those are useful, and the size of the largest batch. A batch is considered useful if it meets the requirements above. The conditions must be met simultaneously.

Input data

On the first input line from the keyboard (stdin stream) there is an integer **n** representing the number of batches. Then, it will read the **n** batches as follows: on one line there is the number of components in the batch, **k**, and on the following line, **k** letters representing the types of components in the batch, separated by spaces (R represents a resistor, C a capacitor and T represents a transistor).

Output data

The program will display on the screen (standard output stream) two integers: the number of useful batches and the number of components in the largest batch, separated by a space.

Please read the requirement carefully! Displaying the results must be done exactly as it was requested! In other words, on the standard output stream you must not print anything in addition to the requirement of the problem; because of the automatic evaluation, any additional displayed characters other than those indicated, will leads to an incorrect result and therefore to a "fail" grade.

Limitations and restrictions

1. $0 \leq \mathbf{n} < 100$
2. $0 \leq \mathbf{k} < 100$
3. **Careful:** Depending on the programming language chosen, the file containing the code must have one of the extension .c, .cpp, .java, or .m. The web editor will not automatically add these extensions and their absence would prevent the compilation of the program!
4. **Careful:** The source file must be named <name>.<extension> where name is the surname of the candidate and the extension is chosen according to the previous point. Attention to restrictions imposed by Java for class and file names!

Example

Input	Output	Explanation
3 5 R C R T C 5 C R T R T 6 C C T C C T	1 6	There are 3 batches. The first batch contains five components: two resistors, two capacitors and a transistor. This batch is useful. The next batch contains five components: a capacitor, two resistors and the two transistors. This is not useful as the number of capacitors is not greater than or equal to the number of transistors. The next one contains 6 parts (and is therefore the largest): four capacitors and two transistors. This is not useful either, because it does not contain resistors. Of the three batches, only one is useful, therefore displaying 1 and maximum size, which is 6.

Assignment time: 120 minutes