Plagiarism check

Cost: 20 | Solved: 62

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

Vera Pavlovna is checking the final essays of the 10th «Ъ» grade. She suspects that some of the students have written off their works. Help her find as much as possible pairs of students whose essays are similar.

To simplify things, let's say that an essay is a string that contains any ASCII symbols, except for the line feed character. We'll also consider different essays to be similar if they express the same idea or even are completely identical.

The grandson of Vera Pavlovna Petya knows web design well, so he proposed the following algorithm to solve the problem:

1. *Normalize two compared string (as described in the task «String normalization. Part 2»).*

2. *Split the strings into words.*

3. *For each two words count the Petya index according to the formula:* $c / (|S_1| + |S_2| - c)$, *where* c *is the number of matching substrings of two symbols in the strings* S_1 *and* S_2 *and* $|S_n|$ *is the length of the* n*-th string.*

4. *If the Petya index is > 0.45 for two words, consider the words to be identical.*

5. *Apply the Petya index for the whole string (but now take* c *as the number of identical words from p.3).*

6. *Consider the strings to be identical if the index is > 0.25.*

However, Petya is really busy doing web design and he hasn't got any time to implement his algorithm. Implement the algorithm proposed by Petya.

Input:

You are given a set of strings – the essays of Vera Pavlovna's students.

Output:

For every pair of similar strings output two numbers – the indexes of the strings in the order they were given to you.

Example:

Input	Output
Segodnya 4etverg Zavtra sreda c*h*e*t*v*e*r*g s*e*g*o*d*n*y*a	1 3