

Lab07 Ananagrams - set and map

The Problem

Most crossword puzzle fans are used to *anagrams*--groups of words with the same letters in different orders--for example OPTS, SPOT, STOP, POTS and POST. Some words however do not have this attribute, no matter how you rearrange their letters, you cannot form another word. Such words are called *ananagrams*, an example is QUIZ. In other words, the set of all anagrams of an ananagram has only one word in it.

Obviously such definitions depend on the domain within which we are working; one could *restrict the domain* to, say, Music, in which case SCALE becomes a *relative ananagram* (LACES is not in the same domain) but NOTE is not an ananagram since it can produce TONE.

Program Development

Write a program that will read in the dictionary of a restricted domain and determine the relative ananagrams. The dictionary will contain no more than 1000 words.

Note that single letter words are relative ananagrams since they cannot be "rearranged" to get a different word.

Input

The dictionary file is the input. Input will consist of a series of lines. No line will be more than 80 characters long, but may contain any number of words. Words consist of up to 20 upper and/or lower case letters, delimited by spaces, and will not be broken across lines. Note that words that contain the same letters but of differing case are considered to be anagrams of each other, thus tleD and EdiT are anagrams. The file will be terminated by a line consisting of a single #. The file will have at least one word.

Output

Output will consist of a series of lines. Each line will consist of a single word that is a relative ananagram in the input dictionary. Words must be output in lexicographic (case-sensitive) order.

Sample input

```
ladder came tape soon leader acme RIDE lone Dreis peat ScAlE orb eye  
Rides dealer NotE derail LaCeS drIed noel dire Disk mace Rob dries  
#
```

Sample output

```
Disk  
NotE  
derail  
drIed  
eye  
ladder  
soon
```

Submission

Zip the complete package that includes the solution folder of all the source files and the testHarness.txt file, the in folder of all test data, and the out folder the set of the output data, name it **Lab07g<YourLabGroupNo> <YourMatricNo>.zip**. Submit the zip file into the correct folder in your group's workbin.