1 Anagram Dictionaries

Milly and Gloria are avid word game players. Some of their favorites are Ruzzle and Words with Friends. They realize that these games can be played better if one understands anagrams.

An anagram is a word that is produced by rearranging the letters in another word. For example, ACT and CAT are anagrams, as are TORSO and ROOST.

Help Milly and Gloria create an anagram dictionary. This is produced by reordering each word's letters alphabetically, to produce an "alphabetical anagram". The alphabetical anagram for TORSO and ROOST is OORST. Each word that has the same alphabetical anagram is listed alphabetically on the line after the alphabetical anagram. The line for OORST would contain "OORST ROOST TORSO". The alphabetical anagrams are listed in alphabetical order in the anagram dictionary.

For example, if the words in our dictionary were ACT, BARE, BEAR, CAT, and FREE, the anagram dictionary would have lines for ABER, ACT, and EEFR. Where ABER would list BARE and BEAR as anagrams; ACT would list ACT and CAT as anagrams; and EEFR would list FREE as the anagram.

The input to your program will be a number, N, on the first line, followed by N lines, with one word per line. The number of words will be limited by $1 \leq N \leq 11000$. Each word will contain only upper case letters, A through Z.

The output of your program must be one line per alphabetical anagram, with the alphabetical anagram first, followed by a single space, followed by each of the anagrams, sorted alphabetically, each separated by a single space. There must not be a space at the end of the line. If the alphabetical anagram is itself a word, the word is repeated. The output lines must be sorted alphabetically by alphabetical anagram.

Note: The ↵ symbol in the examples below represents a newline character.

Sample Input

```
5↵
ACT↵
BARE↵
BEAR↵
CAT↵
FREE↵
```

Sample Output

```
ABER BARE BEAR↵
ACT ACT CAT↵
EEFR FREE↵
```