Given two strings s_1 and s_2, we say that s_1 *dominates* s_2 if the (multi)set of characters in s_1 is a proper superset of the (multi)set of characters in s_2. For instance, "acmicpc" dominates "camp", but it does not dominate "chimp" or "macpac". For a set S of strings, we call the strings in S which are not dominated by any string in S the *dominant strings* of S (even if they do not dominate any strings in S).

Now, your task is simply to find all the dominant strings of a set of strings.

Input

The input contains a single set of strings, with one string per line. Each string consists of at least one and at most ten lower-case alphabetic characters. There will be at most 15000 strings, and no two strings will be identical. Input is terminated by end-of-file.

Output

Output consists of all dominant strings in the input set, in alphabetical order, one word per line.

Sample Input

```
acmicpc
cccp
macpac
chimp
camp
```

Sample Output

```
acmicpc
chimp
macpac
```