

In general, please follow the guidelines and submission procedure from the previous homework, replacing the appropriate tags with `hw05`, but see also the submission instructions below. In addition to the usual README file and sample inputs outputs as outlined earlier, the package for this assignment should also include also a Makefile as outlined below and in class. The rules for using outside resources are also similar to those used earlier, as are other guidelines on code and input-output. As before, use of the class discussion forum for elucidating the details is expected and strongly encouraged.

The main task for this homework is **implementing a simple standalone program in Standard ML of New Jersey**. The goals are learning some pragmatic aspects of programming in SML, gaining some experience in SML programming, learning a bit about the language of Makefiles, and related tasks.

The program should read a collection of strings on standard input, one string per line. The strings should be partitioned into maximal nonempty groups of anagrams. The program should write the groups of anagrams to standard output, separated by a single blank line between successive groups. Two strings are anagram of each other if their multiset (bag) of letters (characters) are equal (by multiset equality). In the output, the strings within each group of anagrams should be in *lexicographically sorted order*. Further, the order of the groups in the output should be the lexicographic order of their first strings. There is exactly one correct output for each input. You should ensure that your program's output matches this correct output byte-for-byte.

**Packaging and Submission:** *Reminder:* Use the class discussion forum for further instructions and clarifications. In addition to the packaging and submission instructions from earlier assignments, the submitted package should include a (GNU) Makefile such that running the command `make` in the subdirectory created by unpacking the package results in the creation of an executable file called `hw05` (in that directory) which is the program described in this assignment.

**Sample Input 1 :**

```
cat
dog
act
actor
odg
taco
god
```

**Sample Output 1:**

```
act
cat

actor

dog
god
odg

taco
```

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<sup>1</sup>This version fixes an error in the sample output but is otherwise identical to the earlier one.