

COT 3100 Program #4 Spring 2014

Assigned: 3/24/2014

Check WebCourses for due date

Note: This program (and all programs for the course) are ONLY for students who signed up for the programming option. If you signed up for this option, you MUST DO ALL FIVE programs assigned.

General Program Directions (to be followed for all five programs)

Turn in a single source file, either C or Java, with the name designated in the note at the bottom that solves the problem described below. Please read all of your input from standard in and output to standard out. To test your program with input files, please pipe the input file into your program and pipe the output to another file. If you don't know how to do this, please see a TA to describe this process to you.

The Problem: Taco Bell Combinations!

Taco Bell offers many delicious items! You've been elected to buy Taco Bell for your group of friends. To maximize everyone's satisfaction, you've decided to get all unique items. Given the number of items you want to buy and a list of all the items currently available at Taco Bell, make a list of each combination of items of the proper size that you can buy.

Input Format

The first line of the input file will contain a single positive integer, T ($T < 100$), representing the number of Taco Bell runs to evaluate. The first line of each test case will have to space-separated positive integers, N ($N \leq 10$), and K ($K \leq N$), representing the number of distinct items on Taco Bell's menu currently and the number of items you are supposed to buy, respectively. The following N lines will each contain one string representing an item for that Taco Bell run. Each string will consist only of lowercase letters and be in between 1 and 20 characters long.

Output Format

For each input case, output a single line for each possible combination of items. Each combination should be listed in alphabetical order. The order of the combinations should be in lexicographical order. When comparing two different combinations, find the first corresponding pair of items that don't match. Whichever item comes first between the two corresponds to the combination that should be listed first. In printing each line, print a space after each item in the combination, including the last one. Follow the output of each Taco Bell run with a blank line.

Sample Input

```
2
3 2
taco
burrito
nachos
4 4
chalupa
softshelltaco
gordita
pizza
```

Sample Output

```
burrito nachos
burrito taco
nachos taco

chalupa gordita pizza softshelltaco
```

Deliverables

A single source file, named either *tacobell.c* or *tacobell.java* that solves the program stated above, using the input and output formats stated above, using **standard input and standard output**. The file should be submitted via WebCourses by the due date and time stated in WebCourses.