CCO '99 P2 - Common Words

Time limit: 1.0s **Memory limit:** 16M

Canadian Computing Competition: 1999 Stage 2, Day 1, Problem 2

Given a sequence of m words from a newspaper article and an integer k, find the k^{th} most common word(s).

Input Specification

Input will consist of an integer n followed by n data sets. Each data set begins with a line containing m and k, followed by m lines, each containing a word of up to 20 lowercase letters. There will be no more than $1\,000$ words per data set.

Output Specification

For each input data set, determine the k^{th} most common word(s). To be precise, a word w is the k^{th} most common if exactly $k-1$ distinct words occur more frequently than w in the data set. Note that w might be multiply defined (i.e. there is a tie for the k^{th} most common word) or w might not exist (i.e. there is no k^{th} most common word). For each data set, print a title line indicating k using normal ordinal notation (1st, 2nd, 3rd, 4th, 5th, ...) followed by a number of lines giving all the possible values for the k^{th} most common word. A blank line should follow the last word for each data set.

Sample Input

```
3
7 2
the
brown
the
fox
red
the
red
1 3
the
2 1
the
wash
```

Sample Output

```
2nd most common word(s):
red

3rd most common word(s):

1st most common word(s):
the
wash
```