598 Bundling Newspapers

A statistical research company needs a program to produce instructions for an existing application that creates questionnaires about newspapers. The application requires instructions that are comma- delimited lists of newspapers, each list consisting of a subset of the set of newspapers in some metropolitan area. Your program will read a list of newspapers and produce this output in a particular order, and for subsets of some range of sizes.

Input

The input consists of a first line describing the sizes of subsets to be output, followed by the names of the newspapers, one per line. Each line is terminated by an end-of-line marker, and the input file is terminated by an end-of-file marker. The newspaper names will contain at most 30 characters each, and there will be a maximum of 12 newspaper names.

The first line will contain either a single asterisk in column one, one positive integer, or two positive integers, the first less than the second. Any integers in this line will be no greater than the number of newspapers to follow. The meaning of these is as follows:

*	means show all subset sizes from 1 to the number of newspapers in the list
a b	means show all subset sizes from a to b, inclusive
n	means show only subsets of size n

Output

The output should consist of the comma-delimited subsets of papers, one subset per line, grouped by subset size, and with a header line above each subset size group indicating the size. Within a subset size group, the order of the lines of output should be listed in such a way that were the names of the first, second and third newspapers listed in the input file were A, B, C, etc., respectively, the output lines would be in lexicographic order (in the example above, A, B; A, C; A, D; B, C; ...).

Sample Input

```
2 3
Times
Herald-Tribune
Post
New Advocate
```

Sample Output

```
Size 2
Times, Herald-Tribune
Times, Post
Times, New Advocate
Herald-Tribune, Post
Herald-Tribune, New Advocate
Post, New Advocate

Size 3
Times, Herald-Tribune, Post
Times, Herald-Tribune, New Advocate
Herald-Tribune, Post, New Advocate
```