7. Most and Least

Program Name: MostLeast.java Input File: mostleast.dat

Ms. Appleworth is a teacher and needs you to write a program that will find the word or words that are repeated the most number of times in a paragraph and the word or words that are used the least in the paragraph.

Input

The first line of input will contain a single integer n that indicates the number of paragraphs to follow. Each of the following n lines will contain a single paragraph.

- All of the words in the paragraph will be separated by a space, a period, a comma, or a question mark.
- Any other characters in the word, such as an apostrophe or hyphen are considered to be part of the word.
- Each paragraph will be less than 100 words long and word(s) that repeat the most will not be the word(s) that appear the least number of times.

Output

For each paragraph, you will have two lines of output.

- The first line will contain the number of times the word or words that are most repeated appear in the paragraph followed by an alphabetical list of those words, each followed by a space.
- The second line will contain the number of times the word or words that are used least in the paragraph were used followed by an alphabetical list of those words, each followed by a space.

Example Input File

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MARY HAD A LITTLE LAMB, LITTLE LAMB, LITTLE LAMB, MARY HAD A LITTLE LAMB, ITS FLEECE WAS WHITE AS SNOW. AND EVERYWHERE THAT MARY WENT, MARY WENT, MARY WENT, AND EVERYWHERE THAT MARY WENT, THE LAMB WAS SURE TO GO. BAA, BAA, BLACK SHEEP, HAVE YOU ANY WOOL? YES SIR, YES SIR, THREE BAGS FULL. ONE FOR THE MASTER, AND ONE FOR THE DAME, AND ONE FOR THE LITTLE BOY WHO LIVES DOWN THE LANE. ONE FOR THE MASTER, AND ONE FOR THE DAME, AND ONE FOR THE LITTLE BOY WHO LIVES DOWN THE LANE.

Note: Although the paragraphs in example input above appear on the printed page to consist of more than one line, each one is actually a single line in the input file.

Example Output to Screen

- 6 MARY
- 1 AS FLEECE GO ITS SNOW SURE THE TO WHITE
- 8 THE
- 1 ANY BAGS BLACK FULL HAVE SHEEP THREE WOOL YOU

Note: An extraneous space at the end of the list of words is ok.