

**Q08. Word Counting (15 marks)**

Given a paragraph of text, we are concerned about the repeating words that appear at least  $N$  times, where  $N \geq 2$ . You are required to write a programme to count the total number of distinct words, and the number of words that appear at least  $N$  times in the text, regardless of letter cases.

For example, consider  $N=2$  and the text is

“Baa, baa, black sheep. Have you any wool?”.

There are 7 distinct words, out of which there is 1 repeating word.

**Note:** a word with hyphen(s) is considered as one word, for example, "up-to-date" is a single word.

**Write a programme to****Input, in sequence,**

- (1) A paragraph of text with not more than 50 words.
- (2) An integer,  $N$ , to specify the minimum number of repeating times that we are concerned about.

**Output, in sequence,**

- (1) The total number of distinct words in the paragraph.
- (2) The total number of distinct repeating words meeting the minimum requirement.

### 试题 8. 单词计数（15 分）：

给定一个英文文本段落，我们关心出现至少  $N$  次的重复单词，其中  $N \geq 2$ 。您需要编写一个程式来计算文本中不同单词的总数，以及至少出现  $N$  次的单词数量，不考虑字母大小写。

例如，考虑  $N=2$  且文本为：

“Baa, baa, black sheep. Have you any wool?”

这里有 7 个不同的单词，其中有 1 个是重复的单词。

请注意，带有连字符（-）的单词被视为一个单词，例如，“up-to-date” 是一个单词。

### 试写一程式以

依序输入：

- （1） 一段不超过 50 字的英文段落。
- （2） 一个整数， $N$ ，用于指定我们关心的最小重复次数。

依序输出：

- （1） 段落中不同单词的总数。
- （2） 满足最小要求的不同重复单词的总数。

## Test Cases

Input (輸入)	Output (輸出)
I remember one Saturday night. We had fried fish and Johnny-cakes. I remember one Saturday night. We had fried fish and Johnny-cakes. 5	11 0
Baa, baa, black sheep. Have you any wool? 2	7 1
So high you cannot get over it, so low you cannot get under it, So wide you cannot get around it. You gotta go in at the door. 3	17 5
Rock-a my soul in the bosom of Abraham, Rock-a my soul in the bosom of Abraham, Rock-a my soul in the bosom of Abraham, Oh, rock-a my soul! 5	9 0
Head, shoulders, knees and toes. Knees and toes. Head, shoulders, knees and toes. Knees and toes. And eyes, and ears, and mouth, and nose. 3	9 3
Five little monkeys jumping on the bed. One fell off and bumped his head. Mama called the doctor and the doctor said "No more monkeys jumping on the bed!" 5	21 0
Brown girl in the ring, Tra la la la la. There is a brown girl in the ring, Tra la la la la la. Brown girl in the ring, Tra la la la la. She looks like a sugar in a plum, Plum plum. 3	15 9
I remember one Saturday night. We had fried fish and Johnny-cakes. I remember one Saturday night. We had fried fish and Johnny-cakes. 2	11 11