You are given words. Some words may repeat. For each word, output its number of occurrences. The output order should correspond with the input order of appearance of the word. See the sample input/output for clarification.

Note: Each input line ends with a **"\n"** character.

Constraints:

The sum of the lengths of all the words do not exceed
All the words are composed of lowercase English letters only.

Input Format

The first line contains the integer, .
The next lines each contain a word.

Output Format

Output lines.
On the first line, output the number of distinct words from the input.
On the second line, output the number of occurrences for each distinct word according to their appearance in the input.

Sample Input

```
4
bcdef
abcdefg
bcde
bcdef
```

Sample Output

```
3
2 1 1
```

Explanation

There are distinct words. Here, **"bcdef"** appears twice in the input at the first and last positions. The other words appear once each. The order of the first appearances are **"bcdef"**, **"abcdefg"** and **"bcde"** which corresponds to the output.

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```
# Read the number of words
n = int(input().strip())

# Initialize a dictionary to store word counts and order
word_counts = {}
order = []
```

Line: 15 Col: 27

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Test against custom input

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin) Download

```
4
bcdef
abcdefg
bcde
bcdef
```

Your Output (stdout)

```
3
2 1 1
```

Expected Download

You are given n words. Some words may repeat. For each word, output its number of occurrences. The output order should correspond with the input order of appearance of the word. See the sample input/output for clarification.

Note: Each input line ends with a "\n" character.

Constraints:

$1 \leq n \leq 10^5$

The sum of the lengths of all the words do not exceed 10^6

All the words are composed of lowercase English letters only.

Input Format

The first line contains the integer, n.

The next n lines each contain a word.

Output Format

Output 2 lines.

On the first line, output the number of distinct words from the input.

On the second line, output the number of occurrences for each distinct word according to their appearance in the input.

Sample Input

```
4
bcdef
abcdefg
bcde
bcdef
```

Sample Output

```
3
2 1 1
```

Explanation

There are 3 distinct words. Here, "bcdef" appears twice in the input at the first and last positions. The other words appear once each. The order of the first appearances are "bcdef", "abcdefg" and "bcde" which corresponds to the output.

Change Theme Language Pypy 3

```
# Read the number of words
n = int(input().strip())

# Initialize a dictionary to store word counts and order
word_counts = {}
order = []
```

Line: 15 Col: 27

Test against custom input

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Input (stdin)

```
4
bcdef
abcdefg
bcde
bcdef
```

Your Output (stdout)

```
3
2 1 1
```

Expected