

Mirror Strings !!!

As we all know Utkarsh is very good at solving number based problems, this time Arpit thinks smartly and gives Utkarsh to solve a problem on Strings. Arpit gives Utkarsh a string and challenges him to find the length of largest substring that have its mirror string same as its original one and number of such substrings. Now Utkarsh is busy at preparing Avishkar papers so he asks you to help him in doing this task.

E.g. for mirror string: Consider string "lalit" then its mirror string will be "tilal".

Input

There are t numbers of test cases ($t \leq 200$) followed t lines where each line contains a character string of lower case characters (a-z) of length l ($1 \leq l \leq 3000$).

Output

There will be two integers per line separated by space indicating the length of largest substring which have its mirror string same and number of such substrings.

Example

Input:

```
3
lalit
abedcdetr
abcde
```

Output:

```
3 1
5 1
1 5
```