1 Palindromize

1.1 Problem

In this problem you are asked to convert a string into a palindrome with the minimum number of operations. The following operations are available:

- Add any character at any position.
- Remove any character from any position.
- Replace any character at any position with another character.

For example, to convert `abccda` to a palindrome you would need at least two operations if we only allow adding characters. But when you have the option to replace any character, you can do it with only one operation.

1.2 Input

The first line of the input contains the number of test cases T ($1 \leq T \leq 100$). Then T test cases follow, each contained in a single line. The input for each test case consists of a non-empty string containing only lower case letters. You can safely assume that this string has at most 1000 characters.

1.3 Output

For each test case first print its number. Then print the minimum number of operations needed in order to turn the given string into a palindrome, followed by a line break.

1.4 Sample Data

Input	Output
6 tanbirahmed shahriarmanzoor monirulhasan syedmonowarhossain sadrulhabibchowdhury mohammadsajjadhossain	Case 1: 5 Case 2: 7 Case 3: 6 Case 4: 8 Case 5: 8 Case 6: 8