I - Removable Word

Run-time Limit: 2 seconds

Memory Limit: 32 MB

DESCRIPTION

Mr. Blangkon is given a list of words. He needs to check whether each word is removable or not. The checking processes of a certain word are follows:

- You start out with a word.
- If there is a run of length 2 or more of some letter, you can remove the whole run from the word all together (e.g. In the word HAPPY', you can remove the two P's).
- You keep removing runs of the same letters as above until you cannot find any such runs.
- If the word is now empty, then you call the word you started with removable, otherwise unremovable.

Please create a program to help Mr. Blangkon in determining whether certain given words are removable or not.

INPUT FORMAT

The first line of input contains an integer T ($1 \leq T \leq 100$) denoting the number of cases. Each test case is a single line with a single word which consists of up to 150 uppercase characters.

OUTPUT FORMAT

For each case, output “Case #X: Y” where X is the case number starts from 1, and Y is a letter 'R' if the word in the input was removable, or a 'U' if the word in the input was unremovable.

INPUT EXAMPLE

```
5
HAPPY
ABBA
ROAAAOR
VOCOMFEST
ABBACCAACC
```

OUTPUT EXAMPLE

```
Case #1: U
Case #2: R
Case #3: R
Case #4: U
Case #5: R
```

EXPLANATION

The word 'HAPPY' is clearly unremovable, since after removing the 'P's you are left with the string 'HAY'. As for 'ABBA', removing the 'B's yields 'AA'. You can then remove the 'A's to get rid of the whole word (making it removable). 'ROAAAOR' is removable, as you can remove the 'A's to get 'ROOR', and then you can remove the 'O's to get 'RR', and finally you remove the 'R's to get rid of the whole word.