

Powerful Swap

Lili is playing with her set of capital letters in an array. She has N characters inside the array. She is bored so she wants to do some swapping.

First Lili will swap every two characters in the array.

Example: ABCDEF -> BADCFE

Next Lili will swap half left of the array with the half right of the array.

Example: BADCFE -> CFEBAD

Finally Lili will reverse the array.

Example: CFEBAD -> DABEFC

Can you guess what the array will be after Lili's powerful swap?

Format Input

The input will consists of multiple test cases.

The first line of the input contains an integer T the number of test cases.

Each test case consists a string S containing uppercase alphabet.

Format Output

For every test cases output "Case #X" where X is the number of the test case.

The next line outputs the characters after Lili powerful swap.

Constraints

$1 \leq T \leq 100$

$2 \leq |S| \leq 100$

|S| will be even

| Sample Input 1 | Sample Output 1 |
|----------------|-------------------|
| 1 ABCDEF | Case #1 DABEFC |

| Sample Input 2 | Sample Output 2 |
|-------------------|------------------------------------|
| 2 HALO LILI | Case #1 HALO Case #2 LILI |

| Sample Input 3 | Sample Output 3 |
|---------------------------|---|
| 3 EM LOVE ODGCIN | Case #1 ME Case #2 LOVE Case #3 CODING |