Find Them All

Find out all vowels and consonants from a string.
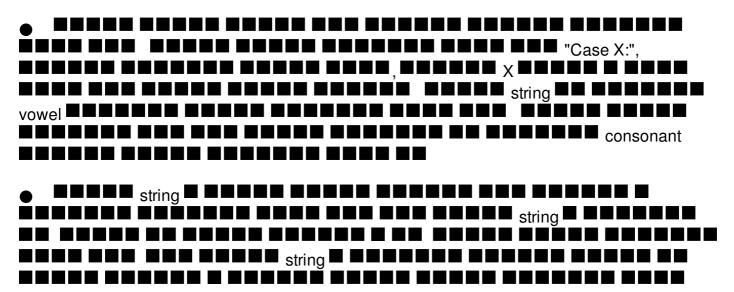
■■■■ string ■■■■ ■■■ vowel ■■■ consonant ■■■■■ ■■■ ■■■■

Input

The first line of input file contains the number of test cases T(T ≤ 25). Each test case contains a single string. Each string is composed of both uppercase and lowercase english letters and spaces. Each string will contain not more than 100 characters.

■■■■■ ■■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■■ ■ ■■■■■ T(T <= ■■) ■■■■■■ ■■■■ ■■■■ ■■■■ ■■■■ string ■■■■■ string ■ ■■■■ ■■■■ ■■(A to Z), ■■■■■(a to z) ■■■■ ■■■■ ■■■ space ■■■■■ string ■ ■■■ ■■■ ■■■■ ■■■■ ■■■■ ■■

Output

● For each case, print three lines of output. Print the case number in first line like "Case X:" without the quotes, where X is the number of test case starting from 1. Print all vowels of the input string in second line. Print all consonants of the input string in third line. Don't print any space.

● Print all the characters as it is in the input string. If the character is in uppercase format in input string, print it as uppercase. If the character is in lowercase format, print it as lowercase.

● Print the output vowels and consonants, maintaining their original order in input string.

● If there is no vowels in input string, print an empty string in second line. Print an empty string in third line if there is no consonants in input string

● Print an empty line after each case. Check the sample input and output for more details.

● ■■■■ ■■■■ ■■■■ ■■■ ■■■■ ■■■■ ■■■■ ■■■ ■■■■ ■■■■ ■■■ ■■■■ ■■■ "Case X:", ■■■■ ■■■■ ■■■■ ■■■ ,■■■■ X ■■■■ ■ ■■■ ■■■ ■■■ ■■■■ ■■■■ ■■■ ■■■■ string ■■ ■■■■ vowel ■■■■ ■■■■ ■■■■ ■■■ ■■■ ■■■ ■■■■ consonant ■■■■ ■■■■ ■■■■ ■■■■ ■■ ■■

● ■■■■ string ■ ■■■■ ■■■■ ■■■■ ■■■ ■■■■ ■ ■■■■ ■■■■ ■■■ ■■■ ■■■ ■■■■ string ■ ■■■■ ■■ ■■■■ ■■ ■■■■ ■■■■ ■ ■■ ■■■■ ■■■■ ■■■■ ■■■ ■■■ ■■■■ string ■ ■■■■ ■■■■ ■■■■ ■■ ■■■■ ■■■■ ■ ■■■■ ■■■■ ■■■■ ■■■■ ■■■ ■■■

- ███████ string █ ██████ █████ ██ █████ ███, ██████ █ vowel ███ █ consonant █████ ██ █████ ███████ ████ ███

- ███ █████ string █ ██████ vowel ██ ████ ███, ██████ █████ ████ █████ ██ ████ string ██████ ████ ███ █████ string █ ██████ consonant ██ ████ ███, █████ █████ ████ █████ ██ ████ string ██████ ████

- ██████ █████ ████ ████ ███ █████ ██ ████ ██████ ██████ ████ █████ ██████ ████ ████████ █████ █████

Example

Input:

```
3
This is input number ONE
Do or Do not there is no TRY
We are WHO we choose to be
```

Output:

```
Case 1:
iiiuueOE
ThssnptnmbrN

Case 2:
ooooeeio
DrDntthrsnTRY

Case 3:
eaeOeooeoe
WrWHwchstb
```