



Great typist

- Time limit: 0.5 seconds
- Memory limit: 256 MB

Mustafa, who is a business person, is responsible for the company's typing. Because Mustafa is very busy, he has typed so much that the company's servers are all full. Now he plans to compress these texts so that he can type again. For this, he must perform the following operations for each word:

If there were an equal number of consecutive letters in the word, it prints that letter once instead of them and then prints their number in front of it. For example, instead of the word `wwwsoo`, Mustafa prints `w3so2`.

Pay attention that the small and large letters are important. Also, if the number of repetitions is one, the number one is not printed.

In the same way, if Mustafa wants to use typed files, he expands them first and then uses them.

Now you will be given a number of words and for each one you have to compress or expand that word.

Input

In the first line of the input n . It represents the number of words.

At $2 \times n$ Next lines There is a number and a word. If the number is one, that word should be compressed, and if it is two, it should be expanded. The characters used in these words are lowercase and uppercase English letters. The total length of all words does not exceed 1000 characters.

$$1 \leq n \leq 100$$

Output

Output included n The line is that in the line i The word must be compressed or expanded i The input should be printed. The total length of the outputs is less than 1000.

Example

Sample input

```
2
1
hhpwwwBbTTTTnnP
2
h2pw3BbT4n2P
```

Sample output



Questions

100	Level of addiction
100	Difficult cooperation
125	gathering of elders
150	Security issue
250	Great typist
500	Text machine

All submissions

Final submissions

Scoreboard

h2pw3BbT4n2P
hhpwwwBbTTTTnnP

POST AN ANSWER TO THIS QUESTION

.The training period is over

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