

# Processing strings

## Compression algorithm

Upon learning that DNA is not a random string, freshmen of the Bioinformatics Institute from the informatics group suggested using a compression algorithm that compresses repeated characters in a string.

Encoding is performed as follows: The string **"aaaabbcaa"** is converted into **"a4b2c1a2"**, that is, the groups of the same characters of the input string are replaced by the symbol and the number of its repetitions in this string.

Write a program, which reads the string, encodes it by this algorithm and outputs the encoded sequence. The encoding must be case sensitive.

Note, string can contain only a single character

### Sample Input 1:

In [ ]: aaaabbcaa

### Sample Output 1:

In [ ]: a4b2c1a2

### Sample Input2

In [ ]: abc

### Sample Output 2:

In [ ]: a1b1c1

### Sample Input 3:

In [ ]: aaaaa

### Sample Output 3:

In [ ]: a5

Source: [JetBrains Academy](#)