Questions of Advanced-Programing course at Shahid-Beheshti-University

Introduction to java

Part 2

by

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Maximum subsequence

Write a program that takes the number n, and then n numbers from the user. Then identify a subsequence of these numbers whose sum is the maximum!

If there were several subsequences with this specification, print the longest subsequence.

Note that subsequence means consecutive numbers!

Entrance

The number of entries (n), and then n numbers in the next line.

Output

Print the desired sequence.

Turn right again

Suppose we have a sequence that contains some numbers. On these numbers, the "turn right" operation is defined as follows:

If we want to rotate these numbers to the right once, we actually have to take the last number of the sequence, and put it at the beginning of the sequence. If we want to turn these numbers twice to the right, we have to do the previous operations twice, and...

Now we have an array sorted in ascending order. The problem is that an unknown person took this array and rotated it to an unknown number! You should get the array and tell the user how many times the given array has been rotated.

It is guaranteed that the unknown person performed the rotation operation for a number less than n.

Entrance

n number, and then n number

Output

Number of right turns

censor

As a successful person, you receive many emails every day that contain inappropriate words. Tired of this procedure, you also want to write a program that receives the text of the email (which strangely does not have enter or space or any other separator character) and the possible inappropriate word in the email, and then after deleting it The word from email will show you the new email.

Pay attention that there should not be any censored string in the output text, so you may have to perform the censorship operation step because, for example, the first time you censor, the string will still contain the forbidden phrase.

Entrance

In the first line, an integer (n) indicating the number of received emails is given.

In the next n lines, there are two threads in each line. The first string is the text of the email and the second string is the possible inappropriate word. These two strings are separated by space.

Output

The output consists of n lines. Display the modified text of the email on each line.

duel

Two clans of open parenthesis and closed parenthesis are fighting each other. Now there is going to be a duel between them. We know that if each member of two tribes faces each other, i.e. as (); They kill each other. Your task is to determine how many people are left alive after the duel is over.

Entrance

On the first line, you are given a string S that only contains '(' and ')'.

Output

An integer representing the number of people alive.

Epidrome

Write a program to determine whether this string is an epidrome or not by taking a string without spaces between its letters.

It is an epidrome string that:

Must start with one of the vowels.

1. There should be exactly 2 digits in it. (digit character means '0' to '9')
2. to "com." or "net." to end
3. There should be at least one '@' between the 2 digits in it.
4. The rest of its characters should be only alphabets.
5. The rest of the characters means all the characters except:
   - 2 figures mentioned
   - '@' (s) between 2 digits
   - The words "com." and "net."

It should be noted that vowels include A, a, E, e, U, u, O, o, I, i.

Entrance

Enter the desired field in the only line of the program.

Output

The answer should be printed as "YES" or "NO" in the output.

Real number

Using the features of regex, write a program that reads a line of input and checks whether the input is a properly written real number.

The conditions for writing a real number correctly are as follows:

- Real numbers may have exponents, exponents (starting with e or E), or both.
- If there is a comma in the number, the number must be written on both sides of it.
- A + or - sign may appear before the number or exponent.
- Power cannot include auditor.
- There can be a space before or after the number, but there should not be a space between the number.

Note that if you don't use regex, you won't get a grade!

Entrance

There is a line in the input where you have to check if the real number is written correctly or not.

Output

If the number written in the input is a correct real number, write LEGAL in the output, otherwise print ILLEGAL.