Problem 1)

Given N integers, find the number with maximum value.

Input:

First line: An integer N (1<N<100)

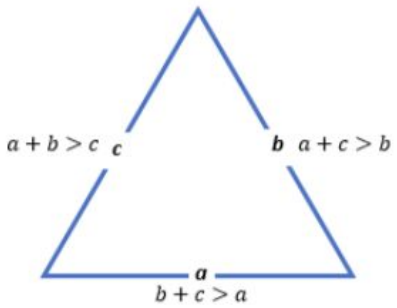
Second line: N integers.

Output:

One line representing the maximum of these N numbers followed by a new line. Check sample output.

Sample Input	Sample Output
5 1 2 3 4 5	5
5 4 5 9 2 1	9

Problem 2)



Write a C program to input three sides of a triangle and check whether triangle is valid or not using if else.

Input

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Input first side: 7
Input second side: 10
Input third side: 5
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Output

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Triangle is valid
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Problem 3)

Given a string C, which consists of only alphanumeric characters (a-z, A-Z, 0-9), find whether the given string is a palindrome or not. Note that lowercase and uppercase alphabets considered same, for example, ‘A’ and ‘a’ are the same.

Input:

A string C. The characters can be only alphanumeric characters. String C will contain at most 1000 characters.

Output

The output will say whether the string C was a palindrome or not. Check the sample output.

Sample Input	**Sample Output**
MadaM	Palindrome
aibohphobia	Palindrome
an12na	No, just a muggle string

Problem 4)

Given an integer N, print the Factorial Table for N.

Input:

An integer, N ($1 \leq N \leq 10$)

Output:

N lines containing factorial calculations from 1 to N. Check sample output.

Sample Input	Sample Output
3	$1! = 1 = 1$ $2! = 1 \times 2 = 2$ $3! = 1 \times 2 \times 3 = 6$
5	$1! = 1 = 1$ $2! = 1 \times 2 = 2$ $3! = 1 \times 2 \times 3 = 6$ $4! = 1 \times 2 \times 3 \times 4 = 24$ $5! = 1 \times 2 \times 3 \times 4 \times 5 = 120$

Problem 5)

Given two lists of integers A and B; find the union and intersection of those. You can safely assume that no integer will occur twice in a list.

Input:
First line: an integer N ($1 \leq N \leq 100$), number integers in the list A.
Second line: N integer numbers (list A). Each of them will be between 0 and 100.
Third line: an integer M ($1 \leq M \leq 100$), number integers in the list B.
Forth line: M integer numbers (list B). Each of them will be between 0 and 100.

Output:
Two lines containing the union and intersection of the given lists. Check sample output.

Sample Input	Sample Output
5 1 2 3 4 5 5 5 4 3 2 1	Union: 1 2 3 4 5 Intersection: 1 2 3 4 5
6 6 7 8 9 10 11 5 11 12 13 14 15	Union: 6 7 8 9 10 11 12 13 14 15 Intersection: 11

Problem 6)

Given a string C, which can consist of any printable characters (including spaces). You have to count and print the frequencies of A - Z (ignoring case) sequentially.

Input

A string C. The characters can be any printable characters. String C will contain at most 1000 characters.

Output

Print the frequency of letters between A - Z sequentially. You don't need to print letters of zero frequency. Check sample output.

Sample Input	Sample Output
Memory: 512 MB	B: 1 E: 1 M: 3 O: 1 R: 1 Y: 1
#LoveCSEUAP#	A: 1 C: 1 E: 2 L: 1 O: 1 P: 1 S: 1 U: 1 V: 1