1.**Array sum after dividing numbers from previous**
Find the sum of number of series after dividing the element of array from previous element.
Note: We take elements in an array and divide the element from previous element. We do this process for all the elements of an array except very first element. Add the result after division and very first element.
Note: If any element is zero in an array then it fails to do the task and return minus one.
Input : 3 7 9 10 12 18
Explanation: 3 + 7/3 + 9/7 + 10/9 +
12/10 + 18/12 = 9 (taking only integer
part)
Output : 9
Input : 1 12 24 30 60
Output : 18

2.**Given a string as Input, our task is to capitalise the first and last character of each word in a string.**

Examples:

Input: punjab delhi bihaar
Output: PunjaB DelhI BihaR

3.**Given a String, the task is to insert another string in between the given String at a particular specified index in Java without using any predefine substring() method.**

Examples:

Input: originalString = "helloworld",
stringToBeInserted = "java",
index = 4
Output: "hellojavaworld"

4.

Find an array element such that all elements are divisible by it.
Given an array of numbers, find the number among them such that all numbers are divisible by it. If not possible print -1.

Examples: -
Input: arr = {25, 20, 5, 10, 100}
Output: 5
Explanation: 5 is an array element which divides all numbers.
Input: arr = {9, 3, 6, 2, 15}
Output: -1
Explanation: No numbers are divisible by any array element

5. Given an array of integers, calculate the fractions of its elements that are positive , negative , and are zeros. Print the decimal value of each fraction on a new line.

For example, given the array arr[]={1,1,0,-1,-1} there are 5 elements, two positive, two negative and one zero. Their ratios would be 2/5=0.400000, 2/5=0.400000 and 1/5=0.200000.
For Example:
Sample Input
6
4 3 -9 0 4 1
Sample Output
0.500000
0.333333
0.166667

6. Given a string s, the task is to count number of subsequences of the form $a^ib^jc^k$, where i >= 1, j >=1 and k >= 1.
Note: Two subsequences are considered different if the set of array indexes picked for the 2 subsequences are different.
Examples:
Input : abbc
Output : 3

Subsequences are abc, abc and abbc

Input : abcabc
Output : 7
Subsequences are abc, abc, abbc, aabc
abcc, abc and abc

7. **Given a non-negative palindromic number num containing n number of digits. The problem is to apply at most two swap operations on the number num so that the resultant is the largest possible palindromic number.**
Examples:
Input : 4697557964
Output : 9647557469
In, **4**6**9**7557**9**6**4** the highlighted digits were
swapped to get the largest palindromic number
9647557469.

Input : 54345
Output : 54345
No swapping of digits required.

8. Given an array arr[] of N integers, the task is to sort the array without changing the position of negative numbers (if any) i.e. the negative numbers need not be sorted.
Examples:
Input: arr[] = {2, -6, -3, 8, 4, 1}
Output: 1 -6 -3 2 4 8
Input: arr[] = {-2, -6, -3, -8, 4, 1}
Output: -2 -6 -3 -8 1 4

9. Given an array of integers 'arr', the task is to sort all the prime numbers from the array in descending order in their relative positions i.e. other positions of the other elements must not be affected.
Examples:
Input: arr[] = {2, 5, 8, 4, 3}
Output: 5 3 8 4 2

Input: arr[] = {10, 12, 2, 6, 5}

Output: 10 12 5 6 2

10. Given an integer N and the sum of its divisors. The task is to find the sum of the inverse of the divisors of N.
Examples:
Input: *N = 6, Sum = 12*
Output: *2.00*
Divisors of N are {1, 2, 3, 6}
Sum of inverse of divisors is equal to (1/1 + 1/2 + 1/3 + 1/6) = 2.0
Input: *N = 9, Sum = 13*
Output: *1.44*