Problem 01

You are given a string S of small letters, now sort the string on the basis of their count in descending order , It is guaranteed that all the characters count are distinct.

Sample Input 1: **Sample Output 1:**

bbbbaccddd bbbbdddcca

Sample Input 2: **Sample Output 2:**

aabccc cccaab

Explanation of sample input 1 –

Total count of b = 4 , Total count of d=3, Total count of c=2 , Total count of a=1.

We can see that count of b is greatest among all the characters that's why firstly b will come then 2nd greatest count is d , 3rd greatest count c and lastly a will come.

Hints – Nested loop and check the 31st October conceptual session

Problem 02

You are given a string S of small letters, now check whether the given string is palindrome or not. If the string is palindrome print YES otherwise print NO.

Note - A palindrome is a string that reads the same backward as forward

Sample Input 1:

aabbaa

Sample Output 1:

YES

Sample Input 2:

abcd

Sample Output 2:

NO

Hints – Reverse the string and compare.

Problem 03

You are given a string S of small letters , Now count the number of vowels and consonant from the given string.

Sample Input 1:

aeibcou

Sample Output 1:

Vowel – 5

Consonant -2

Sample Input 2:

trpplqw

Sample Output 2:

Vowel – 0

Consonant - 7

Problem 04

You are given two matrix of size NxM where N is the row number and M is the column number. Now first line of the input will contain the value of N and M , and the next two line will contain the two matrix, Now perform matrix addition operation.

Sample Input:

2 3

1 2 3

4 5 6

7 8 9

10 11 12

Sample Output:

8 10 12

14 16 18

Problem 05

There's a chessboard of size 3×3 (It is a special chessboard for Phitron's student) . R rooks are placed on it and all others cells are empty. Now you need to tell the total empty cells and their position (row,column) .

The first line of the input will contain a single positive integer R, The next line will contain the position of the R rooks in this (x,y) format where x is the row number of the rook and y is the column number of the rook.

Note – Here row and column starts from 1.

Sample Input 1:

```
3
2 1
3 3
1 3
```

Sample Output 1:

```
Total empty cells - 6
1 1
1 2
2 2
2 3
3 1
3 2
```

Problem 06

You are given a matrix of size NxM where N is the row number and M is the column number. Now first line of the input will contain the value of N and M , and the next line will contain the matrix, Now print the transpose version of this matrix.

Note - The transpose of a matrix is simply a flipped version of the original matrix. We can transpose a matrix by switching its rows with its columns.

Sample Input:

3 3

1 2 3

4 5 6

7 8 9

Sample Output:

1 4 7

2 5 8

3 6 9

Codeforces Problem Link –

1) https://codeforces.com/edu/course/2/lesson/9/1/practice/contest/307092/problem/B

2) https://codeforces.com/contest/1511/problem/A

3) https://codeforces.com/problemset/problem/1433/C