ZOHO(2016-17)

short coding questions:

1. To delete the duplicate character present in the string and delete only if they are present consecutively and print the result of each iterations.

INPUT OUTPUT

abcccba -> abba-> aa -> “ “

aaaabbbcccdefg -> defg

abcd -> abcd

1. To balance the given input paranthesis and print the result of balanced paranthesis

INPUT OUPUT

((()((( 2

()()(((( 4

)))(((( 0

Explanation: In first case only two paranthesis so result is 2, In Second case only 4 paranthesis are balanced. In last case no balanced paranthesis is found

1. Given an array with several elements and high ,low value print the missing numbers in the given sequence excluding the low and high values

INPUT OUTPUT

1 5 8 10 15 18 20

LOW- 10 11 12 13 14 16 17 19

HIGH-20

33 45 43 22 15 34

LOW-14 16 17 18 19 20 21 23 24

HIGH-25

32 30 3 2 5 64 21 LOW -25 26 27 28 29 HIGH-30

1. Find the common element present in all the rows of the matrix in O(mn) period of time. Size of matrix is also given as input

INPUT OUTPUT

4 5

1 2 3 4 5

6 4 1 3 54 1 3

12 2 1 3 4

1 7 8 3 5

3 3

1 2 3

4 1 2 1 2

1 5 2

1. Balance the given paranthesis in appropriate if there is proper opening and closing then print “YES” other wise Print “NO”

INPUT OUTPUT

{[()]} YES

{{(]} NO

{({)}} NO

{()[]} YES

Explanation:

In first the brackets are properly closed by their respective closing brackets. In second Case there is no proper brackets ‘(‘ left open and not closed. In third case opening brackets and closing are same but they are not place appropriately ”{)}”.

LEVEL-2

1. To find a sub matrix in a given matrix if the sub matrix present in same order then print “YES” unless print “NO”.

First line contains the size of the matrix row and column then the matrix

Then the size of the sub matrix and sub matrix is given

INPUT OUTPUT

3 3

1 2 3

4 5 6 YES

7 8 9

2 2

5 6

8 9

3 3 1 4 5 2 3 4 5 3 2 NO 2 2 5 5 3 4

1. Your algorithms have become so good at predicting the market that you now know what the share price of Wooden Orange Toothpicks Inc. (WOT) will be for the next N days.

Each day, you can either buy one share of WOT, sell any number of shares of WOT that you own, or not make any transaction at all. What is the maximum profit you can obtain with an optimum trading strategy?

**Input**

The first line contains the number of test cases T. T test cases follow:

The first line of each test case contains a number N. The next line contains N integers, denoting the predicted price of WOT shares for the next N days.

**Output**

Output T lines, containing the maximum profit which can be obtained for the corresponding test case.

**Constraints**

1 <= T <= 10   
1 <= N <= 50000

All share prices are between 1 and 100000

**Sample Input**

3

3

5 3 2

3

1 2 100

4

1 3 1 2

**Sample Output**

0

197

3

Explanation:

For the first case, you cannot obtain any profit because the share price never rises.   
For the second case, you can buy one share on the first two days, and sell both of them on the third day.   
For the third case, you can buy one share on day 1, sell one on day 2, buy one share on day 3, and sell one share on day 4.

1. Aslan plays a game of adding two neighbouring prime numbers and add 1 if the resultant is prime number then he increments K value. For example,

5+7+1=13, 7+11+1=19. Upto 20 K value is 2. Now your in position to help him whether the K values is correct or not for given range of numbers.

INPUT OUTPUT

20 2 YES

45 7 NO

Explanation:

For range upto 20 there exist only 2 numbers 13,19. So the ouput is YES. In second case there exist only 5 numbers So output is NO.

LEVEL-3

1. Given a positive integer N as the input, find the no. of characters that will be printed on the screen if we print from 1 to N.

Example :

1. Input -13

Output – 17

Explanation :

1,2,3,4,5,6,7,8,9,10,11,12,13

1 to 9 – 9 (each 1 character)

10 to 13 – 8 (each 2 characters)

Total = 9 + 8 = 17

1. Given a two dimensional array of string like

<”luke”, “shaw”>

<”wayne”, “rooney”>

<”rooney”, “ronaldo”>

<”shaw”, “rooney”>

Where the first string is “child”, second string is “Father”. And given “ronaldo” we have to find his no of grandchildren.

Example :

Input : Ronaldo

Output : 2

Explanation :

“ronaldo” has 2 grandchildren. So our output should be 2.

1. Save the string “WELCOMETOZOHOCORPORATION” in a two dimensional array and search for substring like “too” in the two dimensional string both from left to right, top to bottom, right to left, bottom to top.

W e L C O

M E T O Z

O H O C O

R P O R A

T I O n

And print the index as

<1,2>,<2,2>,<3, 2>

1. Given a particular date,, for ex, 14 JUL 1996 12 00 00 000 WED which is in the form of dd/mmm/yyyy/hh/mm/ss/milliseconds/day, add the given milliseconds ex, 8913700000 to the above date and print the resultant date.

Input : 14 JUL 1996 12 00 00 000 WED

8913700000

Output : 24 JUL 1996 05 30 45 050 SAT

1. Given a number say N, we have express the number using minimum sum of binary numbers (ex : 0,1,00, 100, 101,..... etc)
2. Input : 32

Output : 11,11,10

Explanation : 32 = 11+11+10 (Used 3 nos) - Correct ans (since 3 is the minimum possible)

32 = 10+10+10+1+1 (Used 5 nos) – Wrong ans

1. Input : 197

Output : 111,11,11,11,11,11,11,10,10