ZOHO ON-CAMPUS RECRUITMENT TCE - 2016

Note: Question pattern has visibly changed comparing previous year patterns

ROUND - 1

C, Java Snippets for which outputs should be arrived. Some questions come with answer options and some don't. Total number of questions is 30. No puzzles. No apti.

Sample questions

1.
```
#include<stdio.h>
int main(){
static char *s[] = {"black", "white", "pink", "violet"};
char **ptr[] = {s+3, s+2, s+1, s}, ***p;
p = ptr;
++p;
printf("%s", **p+1);
return 0;
}
```

2.
```
class Base{
{
System.out.println("Base");
}}
class Derived extends Base{
{
System.out.println("Derived");
}}
public class Main{
public static void main(String[] args){
Base b = new Base();
Derived d=new Derived();
Base b1 = new Derived();
  }
}
```

Pre-Round -2 [General Aptitude]

About 20 questions with 30 minutes duration. Fully quantitative from all topics(Trains, Allegations,Pipes, Age, Percentage, Ratio, etc.)

ROUND - 2

Short coding with upto 6 questions. Alloted time is 3 hours. However, no strict bound. Languages Allowed: C, C++, Java

1. Eliminate duplicate continuous chars and arrive at a final string. Print progress.

I. Ip: cabddbac
Op: cabbac -> caac -> cc ->

II. Ip: cadddbc
Op: cabc

III. Ip: caabbad
Op: caaad -> cd

2. Given a sequence, print the missing numbers within the range provided by the user.

I. Ip: 10, 2, 15, 12 low: 5 high: 13
Op: 6, 7, 8, 9, 11

II. Ip: 50, 6, 54, 25 low: 49 high: 56
Op: 51, 52, 53, 55

3. Print the number of perfectly balanced parantheses.

I. Ip: ()()(())
Op: 8

II. Ip: ((()))
Op: 4

III. Ip:))()
Op: 2

4. Given a 2d array, print the numbers present in every row.

Ip: 4 5

1, 3, 6, 7, 8
5, 8, 2, 3, 1
0, 2, 6, 8, 1
1, 4, 9, 8, 0

Op: 1 8 or 8 1

5. Say whether the string has balanced parantheses or not.

I. Ip: {{[[(())]]}}
Op: YES

II. Ip: {[)]}
Op: NO

Ip contains { , } , [,] , (,) only

6. Given a sequence, find a number such that the total sum of numbers to its left is equal to total sum of numbers to its right. Return position if such a number exists.

I. Ip: 2,3,7,4,1
Op: YES 3

II. Ip: 7,9,4,3
Op: YES 2

III. Ip: 1,4,6
Op: NO

ROUND -3

7. You are given an array of stock prices for consecutive days. Sell stocks to get the maximum profit. You cannot sell before buying. You should not buy if you find no oppurtunity to gain. Buy or sell any number

of times. Print profit.

I. Ip: 5, 4, 2
Op: 0
Explanation: Because you observe no gain in stock prices.

II. Ip: 1, 2, 98, 97
Op: 192
Explanation: Buy the first two days and sell them in next two.

III. Ip: 1,24,1,35
Op: 57
Explanation: Buy on 1, sell on 2. Buy on 3, sell on 4.

8. Two 2d grids are provided. Search for the 2nd grid inside the 1st one.

Ip: 5 10
1234521247
5555555555
5454252343
6547678863
5777536245
3 4
4252
7678
7536
Op: YES

Explanation:
1234521247
5555555555
545**4252**343
654**7678**863
577**7536**245

9. Some guy is interested in prime numbers. So he deviced some theory according to which, Every composite integer (n) is a sum of two consecutive prime numbers between the 2 and n added with 1. Find out if he is right or not.
Example: 11+13+1=25, 17+19+1=37
You are given n and k. k is the number of prime numbers from 2 to n.

I. Ip: 79 8
Op: YES
Explanation: 37+41+1=79

II. Ip: 27 12
Op: NO
Explanation: 12 prime numbers are not present in the range 2-27

10. Given n and k. n is the number of integers in the input. k is the position of element in the given sequence of numbers. For every iteration, add the kth number at the end of sequence and remove the 1st number in the sequence. So that the size of sequence remains the same. Find the minimum number of iterations required for all of the numbers in the sequence to become same. Print NO if such sequence cannot be arrived at any number of iterations.

I. Ip: 3 2
2 2 1
Op: NO
Explanation: 2 1 2, 1 2 1, 2 1 2,....

II. Ip: 3 2
2 1 1
Op: YES 1
Explanation: 1 1 1

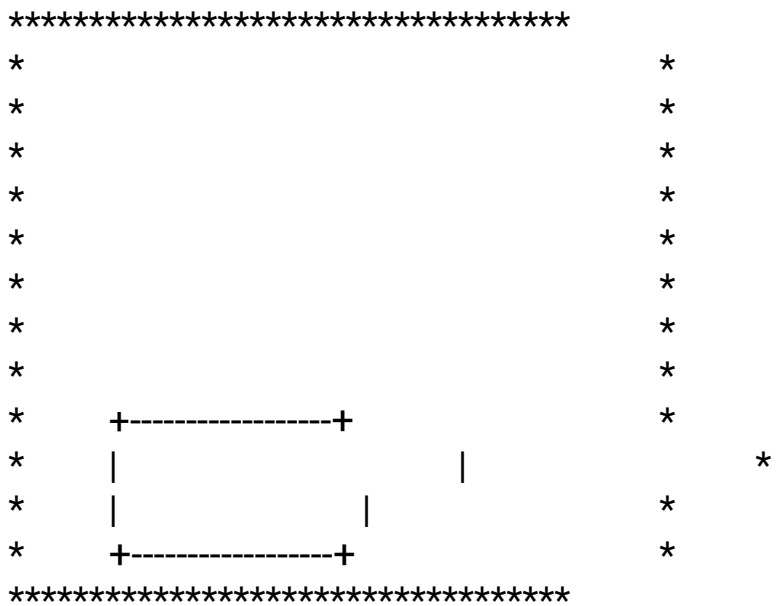
ROUND-4

Three questions on this round. Complete answer for any two is expected. Pattern printing type questions.

1. Draw Rectangle

Ip: Height of the border: 14
Width of the border: 35
Coordinate x: 10
Coordinate y: 5
Height of rectangle: 4
Width of rectangle: 20

Op:



(Approximate figure)

XY Coordinate pattern is as follows

(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)	(1,7)
(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)	(2,7)
(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)	(3,7)
(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)	(4,7)
(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)	(5,7)

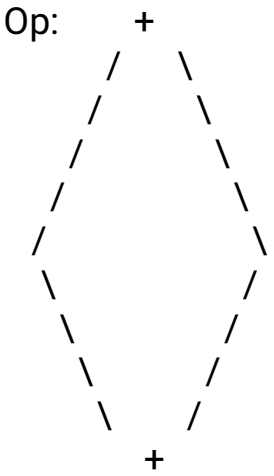
Explanation:
(1,1) is at the top left corner. With that as reference plot the inner rectangle for which the coordinates are given as input.

2. Draw Rhombus

Ip: Height: 20
Width : 20
Center x: 5

Center y: 5
Length: 5

Op:



Cheers :)