INFYTQ PREVIOUS SLOT QUESTIONS BY INTELLECTIVE TECH

QUESTION 1:

Input : Given a List of numbers separated with comma.

The numbers 5 and 8 are present in the list.

Assume that 8 always comes after 5.

Case 1: num1 -> Add all numbers which do not lie between 5 and 8 in the Input List.

Case 2: num2 -> Numbers formed by concatenating all numbers from 5 to 8 in the list.

Output: Sum of num1 and num2

Example: 3,2,6,5,1,4,8,9

Num1: 3+2+6+9 =20

Num2: 5148

O/p=5248+20 = 5268

QUESTION 2:

A string which is a mixture of letters ,numbers and special characters from which produce the largest even number from the available digit after removing the duplicates digits.

If an even number did not produce then return -1.

Ex : infosys@337

O/p : -1

Hello#81@21349

O/p :983412

QUESTION 3:

Read ‘m’ and ‘n’.

Take m*n matrix.

If any number is consecutive 3 times either in row ,column ,diagonals print that number , if there are multiple numbers then print min of those numbers.

Ex: m=6 ,n=7,take 6*7 matrix

2 3 4 5 6 2 4 3

2 3 4 7 6 7 6 2

2 3 5 5 5 5 2 5

2 3 1 1 2 1 3 6

1 1 1 1 9 0 3 5

2 3 1 1 5 1 2 7

O/p :1

QUESTION 4:

Take input a number 'N' and an array as given below.

Input:- N=2

Array =1,2,3,3,4,4

O/p : 2

Find the least number of unique elements after deleting N numbers of elements from the array.

In the above example , after deleting N=2 elements from the array.

In above 1,2 will be deleted.

So 3,3,4,4 will be remaining so,

2 unique elements are in the array i.e 3 and 4.

So ,output will be 2.

QUESTION 5:

String Rotation

Input :- **rhdt:246,ghftd:1246**

Output:- trdt,ftdgh

Explanation :here every string is associated with the number separated with ':' if sum of squares of digits is even then rotate the string left by 1 position or if sum of squares of digits is odd then rotate the string right by 2 position.

2*2+4*4+6*6=56 which is even so rotate left by 1 position **rhdt --->trhd.**

1*1+2*2+4*4+6*6=57 which is odd then rotate right by 2 position ghftd---> ftdgh

QUESTION 6:

Given an array of n elements. Create a square matrix and Print all sub matrix whose sum is highest.

Input :

6,3,6,20,3,6,-15,3,3

Output:

6 3 6

20 3 6

-15 3 3

Sum : 35

6 3

6 20

Sum= 35

6 20

3 6

Sum=35

QUESTION 7:

Given input of array of string in format <emp name>: <emp number> separated by comas.

You have to generate password for

Input:- **Robert:36787,Tina:68721,Jo:56389**

Output :**tiX**

Find max digit in the emp number which is less or equal to the length of string.And add that place char into the final string .If there is no any digit which satisfy the condition then add 'X' into the final string.

Explanation:

So first there is Robert:3**6**787

Now in the emp number there is **6** which is less than or equal to len of **'Robert'.** So we will take 6th character from **'Robert'**. So here at 6th position there is 't' so we will add 't' into the final output string.

Same we will do with other empname and empnumber.

If you observe **Jo:56389**

So in the emp number there is no any digit which is less than or equal to len of **'Jo'** so in this case we will add 'X' into the final String Output.

QUESTION 8:

A non empty string containing only brackets (,),{.},[,] it return integer output based on following.

- If Input string is properly nested (means balanced) then return 0.

- If Input string not properly nested ,return position of bracket from input string from where it is not balanced -position start from 1.

Input : {([])}[] output : 0 (Because every opening has a corresponding closing.)

Input : ([]()] output :3

Input :[[()] output:n+1 for last element i.e 5+1 =6 (There is no closing of first bracket at the last, so we will print last position. That is 5+1=6).

QUESTION 9:

A non empty string containing only alphabets . print the longest prefix from input string which is same as suffix.

Prefix and suffix should not be overlapped.

Print -1 if no prefix exits which is also the suffix without overlap.

Do case sensitive comparison.

Position start from 1.

Input :"xxAbcxxAbcxx" o/p : xx ('xx' in the prefix and 'xx' in the suffix and this is longest one in the input string so output will be 'xx').

Input :"Racecar" o/p:-1 (There is no prefix which is in suffix so output will be -1).

QUESTION 10:

Number of odd sub arrays.

Find the number of distinct subarrays in an array of integers such that the sum of the subarray is an odd integer , two subarrays are considered different if they either start or end at different index.

Input:

1

3

1 2 3

Output:

4

Explanation : Total subarrays are [1], [1, 2], [1, 2, 3], [2], [2, 3], [3]

In this there is four subarrays which sum is odd i.e: [1],[1,2] ,[2,3],[3].

QUESTION 11:

Find the all possible 2*2 matrix , and

Follow rule that each element of 2*2 matrix should be divisible by sum of its digits.

Input:-

N=4

42 54 2

30 24 27

180 190 40

11 121 13

O/p:

42 54

30 24

30 24

180 190

24 27

190 40

QUESTION 12:

Max Subarray

An array is given suppose a =[3,5,8,2,19,12,7,11]

One have to find the largest subarray that the element satisfy the following condition x[i]=x[i-1]+x[i-2]

If more than one subarray found then largest one has to be print.And if two subarrays has same number of elements then we will print that subarray which will start from minimum number.

Here the subarrays [2,3,5,8] ,[3,8,11],[5,7,12,19] which are satisfying the above condition.

Expected output is [2,3,5,8].

QUESTION 13:

A string is given we have to find the longest substring which is unique (that has no repetition) and min size should be 3.

If more than one sub string is found with max length then we have to print one which appeared first in the string.

If no substring is present which matches the condition then we have to print -1;

Ex :input : “A@bcd1abx”

Output : “A@bcd1”

QUESTION 14:

Write a function called nearest_palindrome ()

Which can accepts a number and return the nearest greater palindrome number .

Input : 12300 --> Output :- 12321

Input : 12331 --> Output :- 12421

QUESTION 15:

Special String Reverse

Input Format:

b@rd

output Format:

d@rb

Explanation:

We have to reverse the alphabets of the string by keeping the special characters in the same position.

QUESTION 16:

OTP Generation

Input Format: 134567

Output Format:1925

Explanation:

Take the string of numbers and generate a four

digit OTP such that.

1.If the number is odd square it.

2.If the number is even ignore it.

So in the input number 1,3,5,7 are odd.

Square each digits we will get.192549 now print first four digits as output.i.e 1925.

If in case it is not possible then print -1.

QUESTION 17:

Input 1:- Asp5w8w@k7!l23mn69

Output:- 8527639

If number of special characters in the given string is **even** so we will print first even digit and next odd digit in the same series as they are present in the string as shown above (input 1).

If number of special characters in the given string is **odd** so we will print first odd digit and next even digit in the same series as they are present in the string as shown below(input 2).

Input 2:- #bn7856!@kh48522

Output:-785654822 (At the last there is no more odd digits so we will print remaining even digits as they are present in the input string).

QUESTION 18:

Input:- 93012630

Output:- 2,6,12,30,930

We should take every possible substrings and we will verify each substring is a pronic number or not if pronic we will print that number.(Output Numbers should be unique).

Pronic Number: A number which is multiple of two consecutive integers is called Pronic Number.

6->2*3 it's a pronic

12->3*4 it's a pronic

Input: 12665042

Output:- 2,6,12,42,650

QUESTION 19:

An array of integers will be given and a sum is given.

Input:- **-1 , 1, 0,0,2,-2**

Sum=0

Output:- 3

Output should be number of combination in given array which sum is equal to given sum.so in our case these are three possible combination which sum is equal to given sum.

(-1,1,2,-2)(0,0,1,-1)(0,0,-2,2)

So Output will be 3.

QUESTION 20:

Find the longest palindrome substring from a string

Input : moomso

Possible cases

Moom , mom , oso , ooo , omo

Longest palindrome substring in the above string is **moom** so output will be **moom.**

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THANK YOU