FINAL YEAR

Zoho Programming Test – Level II

Duration : 3 Hrs

43

1. You may choose any programming language.
2. Create a folder in your name and department and save the source files there.
3. You may hard code the inputs inside the program but make sure that changing the values are easier.
4. Do not use built-in classes / functions

Question 1 : From a given array of integers print the next bigger number for each number in the array.

Example:
Array Size : 6
Enter the Numbers : 8, 4, 1, 9, 6, 2
Output : 8->9, 4->6, 1->2, 9->, 6->8, 2->4

Array Size : 9
Enter the Numbers : 12, 9, 3, 7, 4, 9, 10, 2, 1
Output : 12->, 9->10, 3->4, 7->9, 4->7, 9->10, 10->12, 2->3, 1->2

Question 2 : Using **RECURSION,** write a program to find the decimal equivalent of a given binary number

Input : 110010
Output : 50

Input : 100100
Output : 36

Input : 100
Output : 4

Question 3 : Given an input string, reverse the characters in the string, maintaining the space and other punctuation (other than alpha numeric) in the same location.

Important Note: Solve the problem by **navigating the array only once without using additional arrays**

Input : house ! no: 12
Output : 21one ! su: oh

Input : I brought 3 items : a pen, a notebook, and a scale.
Output : e lacsadn a koobe : t ona, n epasmeti, 3th g uorbI.

Question 4 : You are given an array of integer (both positive and negative numbers) and you need to find the maximum sum found in any contiguous subarray (Continuous elements) containing only positive numbers. Print the sum and the array elements of this sub array. Solve it using single navigation

Input : [-8, 12, 15, -10, 13,1,18]
Output : Max Sum = 32 Array Elements = {13,1,18}

Note : Out of the two contiguous subarrays containing positive numbers {12,15} , {13,1,18} only 13,1,18 will return highest sum which is 32

Input : [-11, 11, 15, -1, 30,-2]
Output : Max Sum = 30 Array Elements = {30}

Note : Out of the two contiguous subarrays containing positive numbers {11,15} , {30} only {30} will return highest sum which is 30

Question 5 : Write a program to form lines using the given set of words. The line formation should follow the below rules.

i) Total characters in a single line excluding the space between the words and the favorite character should not exceed the given maximum number
ii) Favorite character is case insensitive. i.e, if the favorite is specified as 'd' then both 'd' and 'D' should be left out while counting.
iii) Words should not be broken up. Complete words alone should be used in a line. A word should be used in one line only.

Input :
Max char per line : 10
Favorite character : o
Words : Zoho,Eating,Watching,Pogo,Loving,Mango
Output :
Watching Zoho (10)
Eating Mango (10)
Loving Pogo (7)

Input:
Max char per line : 15
Favorite character : w
Words : Twinkle,Twinkle,little,star,how,I,wonder,what,you,are
Output :
Twinkle Twinkle what (15)
little wonder star (15)
you are how I (9)