1. Subtraction of long integers in array.consider two array A and B subtract A from B and store the result in new array C

EG:

A=[1,2,7,0,5]

B=[ 9,1,9,9]

O/P

C=[3,5,0,6]

1. Find whether the give number is cool or not. The number is cool if sum of any digits is equal to sum of other digits.

Eg:

23650-> 2+6=3+5+0 so the number is cool.

157->not cool number.

Check whether a number is cool or not.

1. Write a program to find the occurrence of the pattern string in the given string, such as “THIS IS A GOOD COMPANY” is the given string, “IS” is the pattern string. Now the number of occurrences is 2. (6 marks)
2. Finding the maximum subsequent sum in the array containing positive and negative numbers.
3. Checking if the two strings are anagrams.

Eg: Input: cat,act

Output: yes

1. Finding if one word is a rotation of another. The time complexity should be O(1). You can use one function named indexOf(s1,s2) that returns 1 if s2 is a substring of s2 else return 0.

Eg: bose and sobe

1. We are given a set of integers with repeated occurences of elements. For Example, S={1,2,2}.   
   We need to print the power set of S ensuring that the repeated elements of the power set are printed only once.   
   For the above S, the power set will be {NULL, {1}, {2}, {2}, {1,2}, {1,2}, {2,2}, {1,2,2}}. So, as per the question requirements, we need to print {NULL, {1}, {2}, {1,2}, {2,2}, {1,2,2}}
2. Implement a BST (binary search tree) for the set of input values being given with the first input being the root element. Display the tree-like structure.

Eg. Input 5,1,3,8,7,0

5

1. 8

0 3 7

1. One day Bob is playing Zombie World video game. In Zombie World game each round will contain N zombie's and each zombie's energy is Zi (where 1<=i<=N). Bob will start the round with B energy. In order to move to the next level Bob need to kill all the N zombie's but Bob can select any one among N Zombie's. If energy of Bob (B) is less than Zombie energy (Zi) then Bob will die and lose the round else Bob will won, during the fighting with zombie, Bob will lose his energy by (Zi%2)+(Zi/2). At any point of game Bob will play optimally. Now your task is to find out whether Bob can reach to the next level or not.
2. . A k-palindrome is a string which transforms into a palindrome on removing atleast k characters. Eg. Given a string S, print the palindrome string by removing k characters, where k needs to be the minimum no. of characters that needs to be removed to get the palindrome string.   
   ie. Input - abxa Output – aba / axa , k=1  
   Input - abdxa Output – aba / ada / axa , k=2
3. Find all possible longest increasing subsequences from an given array

Array 0 2 6 4 8 7  
Ans :  
Maxium length 4  
0 2 6 8  
0 2 4 8  
0 2 4 7  
0 2 6 7

Given a string , you have to predict whether it can be changed into a palindrome or not by changing the positions of the characters  
Eg. Tests  
Yes  
Explanation:tests can be changed to tsest or stets

1. How to find the second largest number in an array???(using single for loop or through single traversal)
2. In a given string you should have the count of no of a,e,i,o,u and others(For eg: I AM SAM

A:2,E:0,I:1,O:0,U:0,others:5(including spaces)).And print them as follows

A:2,E:0,I:1,O:0,U:0,others:5

1. In the above program print only the top 3 counts.

i.e Others:5,A:2,I:1

1. Prove Zeckendorf theory.
2. Input={[surya,diya],[karthi,umayal],[sivakumar,karthi],[sivakumar,surya],[prabhu,vikram],[sivaji,prabhu]}

In this ,you should get a name as an input and the result should be nothing but printing their grandchild’s name.For eg: if input is sivakumar the output should be diya and umayal.

1. Consider an array of length n and the no’s are less than (n-1) and so one no would be repeating.For eg: length=5 .The array is {1,2,3,2,4}.here you have to find the repating no in an array using single for loop.
2. Find a no within a given range such that the number is equal to the sum of factorial of the digits.For eg: 145=1!+4!+5!.
3. Find the sum of inner elements (other than the ones present in the edges) in an nxn matrix
4. The number of elements in a string where the no. on the left is twice the number on the right
5. 2 strings will be given, find the number of anagrams such that one of the anagrams is in one string and the other anagram in the second string

39. 2 to 10 strings will be given consisting of alphabets and numbers, find the longest possible palindrome in the ascending alphabetical (numbers first and then letters) order using characters from all the given strings

40. The **digital root** (also called **repeated digital sum** ) of a number is a single digit

value obtained by an iterative process of summing digits. Digital sum of 65536 is

7, because 6+5+5+3+6=25 and 2+5 = 7. Write a program that takes an integer

as input and prints its digital root.

41. ur program must print the following output if the input was ‘D’. Analyse the

pattern and write a program to print the right output for any such char as input

A

ABA

ABCBA

ABCDCBA

ABCBA

ABA

A

42. Write a function which takes an array as input and produces another array as

output. The function should do the product of all elements in the array with the

exception of the element with the current index.

a. eg: [3, 1, 4, 2] => [8, 24, 6, 12] 47. \*question 1\*  
7 8 9  
6  1 2  
5 4 3  
  
the sum of the diagonal elements is 25.. if we have n\*n or 1001\*1001 then  
what is the sum.  
  
for the above same we have a question to print like this  
7 8 9 2 1 6  5 4 3  
  
 1 6 7 8 9 2 3 4 5  
  
  
48. \*question  2\*  
0,1,2  
  
the permunatation is 012, 021,102,201 and so on..  
like this 0123456789 what will be 100000th element....  
  
49. \*question 3\*  
        1  
     89 98  
101 103 106  
  
trace the maximum summation path.. show it.. you can move only downwards....  
  
  
50. \*question 4\*  
  
  
1 2 3 4  
5 6 7 8  
9 10 11 12  
13 14 15 18  
  
51.

trace the highest summantion path.. you can move down and right...  
  
52. \*question 5\*  
  
viswa prasath  
  
prabhu ram  
  
ram viswa  
  
o/p will be  
viswa prasath - ram viswa  
prabhu ram - ram viswa  
  
if the first name of one name is equal to second name of another name then  
print them..  
  
56.\*question 6\*  
  
this is a most beautiful flower..  
n=3  
  
then o/p will be  
a is this flower beautiful most...  
  
n=4  
most a is this flower beautiful...  
  
 \*question 7\*  
 139534795325345792  
find its largest prime factor...  
  
\*question 8\*  
 an integer array will be given.. have to find unique number of instance...  
  
\*question 9\*  
simulation election systems  
  
\*question 10\*  
check whether a string has a posibility for panlindrome or not...  
  
61.

\*From Mepco\*  
1. You are given with few anagrams. You have to split them into anagram  
sets and others.  
Eg: tar, rat, atr, banana, ananab, abcd  
Ans : Anagrams - rat,tar,atr,ananab,banana  
         Others - abcd  
  
2. Find the maximum sum of given series. Keep in mind that maximum sum  
should be series.  
Eg: -8,12,15,1,-10  
Ans : 20 (-8+12+15+1)  
  
3. You are given with a string. Find the character count. It is case  
sensitive. Atlast delete the characters with maximum count.  
Eg: abc Abc aac  
Ans :  
a 3  
b 2  
c 2  
A 1  
  
Result String : bc Abc c  
  
4. Replace the string word wise.  
Eg: first second third fourth  
Ans : fourth third second first  
eg 3:  
\ U U U /  
L \  U / R  
L L \  R R  
L  / D \  R  
 / D D D\  
eg 4:  
   \_  
  |   |  
 \_    \_  
|        |      (For n=3 print 3 steps similarly for any n value (may be  
even of odd))  
  
And also 1 or 2 simple pattern questions with the same constraints as in eg  
2.  
  
  
Stage 2:  
                       ARRAY MANIPULATION  
This stage is based on Array manipulations  
eg 1:  
Given an array shift it based on the start and the shift value.  
Shift in general is shift right  
Sample input:  
Array: 5 10 15 20 25 30  
Start :  2  
Shift  : 2  
Output:  
5  20  15  30  25  0  
  
And some more based on this type Like  
-> Making it as a circular shift  
-> In circular shift determining loop shifts and more  
Totally  5 questions in this round.  
  
Stage 3:  
                                 STRING (PALINDROME)  
1. Checking whether the given string(i.e only one word without spaces) is  
palindrome.  
2. Finding the substring given string ,start index and end index.  
3. Finding the palindromes in a given sentence.  
4. Finding the largest substring palindrome in a given word.  
5. Finding the largest substring palindrome in a given sentence (ie  
including spaces) If 2 palindrome have the same length then print both in  
the order present in the input sentence.  
6. Splitting the given word as following  
-> INPUT:  
amadamkak123  
 Output:  
a-madam-kak-123  
-> INPUT:  
palindrome  
 Output:  
p-a-l-I-n-d-r-o-m-e.

1. Provide two command line arguments i.e., two strings and check if second one is a substring of the first string and \* can used as a wildcard i.e., it can be substituted for any character. \* following any / can’t be used as a substitution.

Input : abcd,a\*c => true

spoon,sp\*n =>true

spoo,s\*n =>false

zoho, \*ogo=>false

india, \*n\*a=>true

sandy, s/\*ndy =>false

1. Given a date and also number of business days in a week. Get the number of business days to be added to the date and display the output. Number of business days in a week can be 5(i.e, Saturday and Sunday holiday) or 6(i.e, Sunday only).

Input: 24th June,2015

Number of business days: 5

Business days to be added: 10

Output: 7th July,2015

Input: 7th September,1994

Number of business days: 6

Business days to be added:4

Output: 12th September,1994

1. Create a data structure to display the median in a given set of numbers.

Sample input: 2, 3,4,5,6 Sample output: median = 4

Sample input: 2, 3, 4,6,7,8 Sample output: median = ((4+6)/2)

1. Display the first unique element in a given array that contains both unique and duplicate elements.

Sample input: ff, tt, ff, ch, tt, gh

Sample output: ch

1. Subtraction of long integers in array.consider two array A and B subtract A from B and store the result in new array C

EG:

A=[1,2,7,0,5]

B=[ 9,1,9,9]

O/P

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1. Find whether the give number is cool or not. The number is cool if sum of any digits is equal to sum of other digits.

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2. Implement a BST (binary search tree) for the set of input values being given with the first input being the root element. Display the tree-like structure.

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0 3 7

1. One day Bob is playing Zombie World video game. In Zombie World game each round will contain N zombie's and each zombie's energy is Zi (where 1<=i<=N). Bob will start the round with B energy. In order to move to the next level Bob need to kill all the N zombie's but Bob can select any one among N Zombie's. If energy of Bob (B) is less than Zombie energy (Zi) then Bob will die and lose the round else Bob will won, during the fighting with zombie, Bob will lose his energy by (Zi%2)+(Zi/2). At any point of game Bob will play optimally. Now your task is to find out whether Bob can reach to the next level or not.
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Given a string , you have to predict whether it can be changed into a palindrome or not by changing the positions of the characters  
Eg. Tests  
Yes  
Explanation:tests can be changed to tsest or stets

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A:2,E:0,I:1,O:0,U:0,others:5(including spaces)).And print them as follows

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1. In the above program print only the top 3 counts.

i.e Others:5,A:2,I:1

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2. Input={[surya,diya],[karthi,umayal],[sivakumar,karthi],[sivakumar,surya],[prabhu,vikram],[sivaji,prabhu]}

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the sum of the diagonal elements is 25.. if we have n\*n or 1001\*1001 then  
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n=3  
  
then o/p will be  
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Eg: -8,12,15,1,-10  
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Eg: abc Abc aac  
Ans :  
a 3  
b 2  
c 2  
A 1  
  
Result String : bc Abc c  
  
4. Replace the string word wise.  
Eg: first second third fourth  
Ans : fourth third second first  
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L \  U / R  
L L \  R R  
L  / D \  R  
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  |   |  
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Shift in general is shift right  
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spoon,sp\*n =>true

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zoho, \*ogo=>false

india, \*n\*a=>true

sandy, s/\*ndy =>false

1. Given a date and also number of business days in a week. Get the number of business days to be added to the date and display the output. Number of business days in a week can be 5(i.e, Saturday and Sunday holiday) or 6(i.e, Sunday only).

Input: 24th June,2015

Number of business days: 5

Business days to be added: 10

Output: 7th July,2015

Input: 7th September,1994

Number of business days: 6

Business days to be added:4

Output: 12th September,1994

1. Create a data structure to display the median in a given set of numbers.

Sample input: 2, 3,4,5,6 Sample output: median = 4

Sample input: 2, 3, 4,6,7,8 Sample output: median = ((4+6)/2)

1. Display the first unique element in a given array that contains both unique and duplicate elements.

Sample input: ff, tt, ff, ch, tt, gh

Sample output: ch