



**VEL TECH HIGH TECH
Dr.RANGARAJAN Dr.SAKUNTHALA ENGINEERING COLLEGE**

An Autonomous Institution

**Approved by AICTE - New Delhi, Affiliated to Anna University - Chennai
Accredited by NBA, New Delhi & Accredited by NAAC with "A" grade & CGPA of 3.27**

DEPARTMENT OF TRAINING & PLACEMENT

Operators:

Learn the use of division / and mod % operations to solve problems

1. IS EVEN? : <https://tests.mettl.com/authenticateKey/2bd025dc>
2. IS ODD? : <https://tests.mettl.com/authenticateKey/dbdac2a9>
3. Return last digit of the given number :
<https://tests.mettl.com/authenticateKey/454f012b>
4. Return second last digit of given number :
<https://tests.mettl.com/authenticateKey/9f87004e>
5. Sum of last digit of two given numbers :
<https://tests.mettl.com/authenticateKey/783a1fcf>
6. Is N an exact multiple of M?:
<https://tests.mettl.com/authenticateKey/36c4ef58>
7. Of given 5 numbers, how many are even?:
<https://tests.mettl.com/authenticateKey/8edbe922>
8. Of given 5 numbers, how many are odd?:
<https://tests.mettl.com/authenticateKey/67147bd5>
9. Of given 5 numbers, how many are even or odd?:
<https://tests.mettl.com/authenticatekey/607636d7>

Loops:

Learn to solve math based number problems (will require loops and maths)

10. Is Prime?: <https://tests.mettl.com/authenticateKey/b1efaa3d>
11. Factorial of a number: <https://tests.mettl.com/authenticateKey/8c1f2ae>
12. Nth Fibonacci: <https://tests.mettl.com/authenticateKey/f390cadf>
13. Nth Prime: <https://tests.mettl.com/authenticateKey/34fdaa41>



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14. Number of Primes in a specified range:

<https://tests.mettl.com/authenticateKey/87c41143>

15. All Digits Count:

<https://tests.mettl.com/authenticateKey/ed6b4da>

16. Unique Digits Count:

<https://tests.mettl.com/authenticateKey/b7aac4a5>

17. Non-Repeated Digits' Count:

<https://tests.mettl.com/authenticateKey/e46500f5>

Number Based:

18. digitSum: sum of all digits in N

<https://tests.mettl.com/authenticateKey/ab1d60cc>

19. digitSum even: sum of even digits in N

<https://tests.mettl.com/authenticateKey/b55d1714>

20. digitSum odd: sum of odd digits in N

<https://tests.mettl.com/authenticateKey/738fdee0>

21. digitSum opt: sum of even or odd digits

<https://tests.mettl.com/authenticateKey/a05abbcf>

22. Is Palindrome Number?

<https://tests.mettl.com/authenticateKey/28c41d9d>

23. Is Palindrome Possible?

<https://tests.mettl.com/authenticateKey/f4fdb02>

24. A number is said to be a magic number, if the sum of its digits are calculated till a single digit recursively by adding the sum of the digits after every addition. If the single digit comes out to be 1, then the number is a magic number.

for example-

Number= 50113

=> $5+0+1+1+3=10$

=> $1+0=1$

This is a Magic Number



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For example-

Number= 1234

=> 1+2+3+4=10

=> 1+0=1

This is a Magic Number

25. 2 digit reduced subtracted form

Ex. 6928

6-9= 3

9-2=7

2- 8=6

O/p: 376

Not 2 digit num

Again perform RS

3-7=4

7-6=1

O/P:41

26. Program to print the sum of odd numbers and arrangement of odd sequence

I/P: 361589

Op:315968

27. Arrangement of odd sequence followed by even sequence

i/P:361589

o/p: 315968

28. Arrangement of odd sequence with count followed by even sequence with count



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i/p:361589

o/p: 31594682

29. Program to reverse the number using a loop

Ex: 143

Output: 341

30. Problem to count the total number of odd and even in the given any digit number

Input = 53467

Ans:

Odd=3

Even=2

31. Problem to check whether all the numbers are arranged in ascending order

Input-1 = 4567

Output: Yes

Input-2 = 4576

Output: No

32. Stepping Number or Not

Neighbor number difference can be either -1 or 1

Input-1 = 12345

Output: Yes

Input-2 = 1245



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Output: No

33. Sum of Sums of Digits in Cyclic order:

<https://tests.mettl.com/authenticateKey/1ddbe65e>

34. Generate series and find Nth element:

<https://tests.mettl.com/authenticateKey/d2272e10>

35. Find result after alternate add_sub on N:

<https://tests.mettl.com/authenticateKey/814effc3>

36. Find Password (stable unstable):

<https://tests.mettl.com/authenticateKey/5106dfd>

37. Calculate sum of non-prime index values:

<https://tests.mettl.com/authenticateKey/596e522f>

38. Find the one digit to be removed to form palindrome:

<https://tests.mettl.com/authenticateKey/6d825776>

39. Create PIN using alpha, beta, gamma:

<https://tests.mettl.com/authenticateKey/be582d9f>

40. Weight of a hill pattern:

<https://tests.mettl.com/authenticateKey/d612c0e6>

Pattern Programs

41. No=5

1 1 1 1 1

2 5

3 5

4 5

1 1 1 1 1



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42.

1
0 0
1 1 1
0 0 0 0
1 1 1 1 1

43.

no=5
1
12
123
1234
12345

44.

no=5
1
12
123
1234
12345



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45.

no=5

12345

1234

123

12

1

46.

no=5

12345

2345

345

45

5

47.

no=5

12345

2345

345

45

5

48.



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no=5

5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

49.

no=5

1

10

101

1010

10101

50.

No-5

E D C B A

D C B A

C B A

B A

A



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51 .

No-5

E D C B A

A B C D

D C B

B A

A

52.

Print braces pattern program

int n=2

Output:

{ }

{ } { { } }

53.

Hour glass pattern

n=8

* * * * *

* * * * *

* * * * *

* * * * *

* * * *

* * *

* *

*

* *

* * *

* * * *

* * * * *

* * * * *

* * * * *



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* * * * *

54.

Pyramid pattern

```
  *
 * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * * *
```

55.

Diamond pattern

```
Input : 5
Output :
  *
 * *
* * *
* * * *
* * * * *
* * * * *
* * * * *
* * * *
 * *
  *
```

Arrays

56. Missing number in an array of shuffled order

Input:[3, 7, 1, 2, 8, 4, 5]

Output:6

57. Second largest number in an array

Input:[12, 35, 1, 10, 34, 1]

Output:34

58. Re-arranged array by small – largest combination

Input: [1, 3, 5, 2, 8, 7, 4]

Output:[1, 8, 2, 7, 3, 5, 4]

59. Remove all duplicates in an array sample input and output

Input:[1, 2, 2, 3, 4, 4, 5]

Output:[1, 2, 3, 4, 5]



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60. Frequency count with descending order printing

int a[] = { 50, 20, 150, 20, 50, 10, 30, 10, 10 };

61. Group Reverse

int a[] = { 10, 20, 30, 40, 50, 25, 35, 45 }; d=2

Expected OP: 30 20 10 45 35 25 50 40

62. Program to find the frequency count of every number in an array

Input={40,20,10,50,20,10,30,40}

Output:

40 -> 2

20 -> 2

10 -> 2

50 -> 1

30 -> 1

63. Program to find the frequency count of every number in an array in ascending order

Input={40,20,10,50,20,10,30,40}

50->1

30->1

40->2

20->2

10->2



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64. Program to find the frequency count of every number in an array in descending order

Input={40,20,10,50,20,10,30,40}

40->2

20->2

10->2

50->1

30->1

65. Max contiguous Subarray

Input: [-2, 1, -3, 4, -1, 2, 1, -5, 4]

Output: 6

Explanation: -2

-2, 1

-2, 3, -1 so on

66. Rotate an array by 'N' positions

Input: [1, 2, 3, 4, 5]

N = 2

Output: [3, 4, 5, 1, 2]

67. Given an array of integers, return a new array such that each element at index i of the new array is the product of all the numbers in the original array except the one at i.

For example, if our input was [1, 2, 3, 4, 5], the expected output would be

[120, 60, 40, 30, 24]. If our input was [3, 2, 1], the expected output would be [2, 3, 6]

68. Given an integer array find the duplicate element which has the longest distance

note: Assumed -1 as output if no duplicates are found

int arr[]={1,2,3,1,3,4,2,5,6,1};

O/p: 1



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69. Given an integer array using searching element place the incremented number next to searching number

Input = {10,20,10,30,14,40,60,10}

Search=10

Output={10,1,20,10,2,30,14,40,60,10,3}

70. Maximum subarray sum

Input: *arr[]* = {2, 3, -8, 7, -1, 2, 3}

Output: 11

Explanation: The subarray {7, -1, 2, 3} has the largest sum 11.

71. Minimum subarray sum

Input: *A* = [3, 1, 2, 4]

Output: 17

Explanation:

Subarrays are [3], [1], [2], [4], [3, 1], [1, 2], [2, 4], [3, 1, 2], [1, 2, 4], [3, 1, 2, 4].

Minimums are 3, 1, 2, 4, 1, 1, 2, 1, 1, 1. Sum is 17.

72. Reverse an Array

Input: *arr* = [4, 5, 2]

Output: [2, 5, 4]

Explanation: The elements of the array are 4 5 2. The reversed array will be 2 5 4.

73. Finding Frequency of Duplicate elements in an array

Input : *arr[]* = {10, 20, 20, 10, 10, 20, 5, 20}

Output : 10 3

20 4

74. Finding frequency of Unique elements in an array

Input : *arr[]* = {10, 20, 20, 10, 10, 20, 5, 20}

Output : 5 1

75. Find distinct elements in an array

Input: *arr[]* = {12, 10, 9, 45, 2, 10, 10, 45}

Output: {12, 10, 9, 45, 2}



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Explanation:

Given an integer array `arr[]`, print all distinct elements from this array. The given array may contain duplicates and the output should contain every element only once.

76. Insert an element in an array

Input: `arr[] = [10, 20, 30, 40]`, `pos = 3`, `ele = 50`

Output: `[10, 20, 50, 30, 40]`

77. Delete an element from an array

Input: `arr[] = [10, 20, 30, 40]`, `pos = 2`

Output: `[10, 30, 40]`

78. Check if 2 Arrays are equal or not.

Input: `a[] = [1, 2, 5, 4, 0]`, `b[] = [2, 4, 5, 0, 1]`

Output: `true`

79. Middle Element in an array.

Input: `arr = {1, 2, 3, 4, 5}`

Output: `3`

Input: `arr = {7, 8, 9, 10, 11, 12}`

Output: `9 10`

80. Leaders in an Array.

Input: `arr[] = [16, 17, 4, 3, 5, 2]`

Output: `[17 5 2]`

Explanation:

17 is greater than all the elements to its right i.e., `[4, 3, 5, 2]`, therefore 17 is a leader. 5 is greater than all the elements to its right i.e., `[2]`, therefore 5 is a leader. 2 has no element to its right, therefore 2 is a leader.

81. Find common elements between 2 arrays.

Input : `a[] = {1, 2, 1, 3, 1}`, `b[] = {3, 1, 3, 4, 1}`

Output : `{1, 3, 1}`

82. Given an array of integers `nums` and an integer `target`, return indices of the two numbers such that they add up to `target`.

Input: `arr[] = [0, -1, 2, -3, 1]`, `target = -2`

Output: `3 4`

Explanation: There is a pair `(1, -3)` with the sum equal to given target, $1 + (-3) = -2$

83. Given an array `nums` of distinct integers, return all the possible permutations. You can return the answer in any order.



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Input: nums = [1,2,3]


Output: [[1,2,3],[1,3,2],[2,1,3],[2,3,1],[3,1,2],[3,2,1]]

84. Given a 2D integer array matrix, return *the transpose of the matrix*.

Explanation:

The transpose of a matrix is the matrix flipped over its main diagonal, switching the matrix's row and column indices.

2	4	-1
-10	5	11
18	-7	6



2	-10	18
4	5	-7
-1	11	6

Input: matrix = [[1,2,3],[4,5,6],[7,8,9]]

Output: [[1,4,7],[2,5,8],[3,6,9]]

85. Given an m x n matrix, return *all elements of the matrix in spiral order*.

1	→	2	→	3
4	→	5		↓
↑				↓
7	←	8	←	9

Input: matrix = [[1,2,3],[4,5,6],[7,8,9]]

Output: [1,2,3,6,9,8,7,4,5]

86. Given three arrays A1, A2, A3. Find the count of the distinct values: A1 values should not present in both A2 and A3. Similarly for A2 and A3

Input:[1, 2, 3, 4]

[3, 4, 5, 6]

[6, 7, 8]

Output:

87. Given an array of integers greater than zero, find if it is possible to split it in two subarrays (without reordering the elements), such that the sum of the two subarrays is the same. Print the two subarrays.



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Input: Arr[] = { 1 , 2 , 3 , 4 , 5 , 5 }

Output: { 1 2 3 4 }

{ 5 , 5 }

88. Given an array of size N where the array elements contain values from 1 to N with duplicates, the task is to find the total number of subarrays that start and end with the same element.

Input: A[] = {1, 2, 1, 5, 2}

Output: 7

89. You are given an array arr, and your task is to find the majority element an element that occurs more than half the length of the array (i.e., arr.size() / 2). If such an element exists return it, otherwise return -1, indicating that no majority element is present.

Input : arr[] = [1, 1, 2, 1, 3, 5, 1]

Output : 1

90. Given an array arr[] of size n and an integer k, the task is to insert a duplicate of k adjacent to its every occurrence. Keep array's original length same by removing the elements from the back.

Input: arr[] = [1, 0, 2, 3, 0, 4, 5, 0], K = 0

Output: [1, 0, 0, 2, 3, 0, 0, 4]

91. Given an array arr[], the task is to find the subarray that has the maximum sum and return its sum.

Input: arr[] = {2, 3, -8, 7, -1, 2, 3}

Output: 11

92. Simple Encoded Array: <https://tests.mettl.com/authenticateKey/1557c062>

93. Decreasing sequence <https://tests.mettl.com/authenticateKey/8e68e9a4>

94. Most Frequently Occurring Digit:

<https://tests.mettl.com/authenticateKey/cbe4c4da>

- 95.



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This problem was asked by Google.

Given an array of integers and a number k, where $1 \leq k \leq \text{length of the array}$, compute the maximum values of each subarray of length k.

For example, given array = [10, 5, 2, 7, 8, 7] and k = 3, we should get: [10, 7, 8, 8], since:

```
10 = max(10, 5, 2)
7  = max(5, 2, 7)
8  = max(2, 7, 8)
8  = max(7, 8, 7)
```

96. FIND KEY:

You are provided with 3 numbers input1,input2,input3.

Each of these are four digit numbers within the range ≥ 1000 and ≤ 9999

i.e

$1000 \leq \text{input1} \leq 9999$

$1000 \leq \text{input2} \leq 9999$

$1000 \leq \text{input3} \leq 9999$

you are expected to find the key using the below formula

Key=[smallest digit in the thousands place of all three numbers][LARGEST digit in the hundreds place of all the three numbers]

[smallest digit in the tens place of all three numbers][LARGEST digit in the units place of all three numbers]

for e.g if input1=3521,input2=2452,input3=1352,then Key=[1][5][2][2]=1522

Assuming that the 3 numbers are passed to the given function.Complete the function to find and return the key.



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Strings

- 97. Validation of an Identifier**
- 98. Total Number of Words in a given string**
- 99. Adding the number from the String input**

Input: 5ingt44t3

Output: 52

- 100. String Encoding**

Input: aaaabbccccc

Output:a4b2c4

- 101. Highest frequency character in aString**

Input: engineering

Output: e 3

- 102. Program to print the frequency count from highest to lowest**

I/p: "repeatable"

O/p: e:3

a:2

r:1

p:1

t:1

b:1

l:1



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103. Program to remove the palindromic string from the given input string

"In India Malayalam is best with dad and mom"

Output: "In India is best with and"

104. Program to count the characters which has lower followed by higher

Input="accept Van"

Output=2

105. Program to find the matching string and print it in Capitalcase

inp1="fi_er";

inp2="Fever:Filer:Filter:Flxer:Fiber:Fibre:Taylor:Offer";

106. Program to reverse either odd or even position based on the input

inp1="chennaicity"

inp2="odd"

Output:ctecnainihy

107. Program to process the string with unique characters count within the distance

Input1=="my name is granar";

Input2='a';

Output=7

108. Program to encrypt the given string

input="aaabccccddaaaaab"



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output=a3bc4d2a5b

- 109. Program to check the strings are anagram**

"dogo"

"godo"

Output: true
- 110. Half of the string to lower case and remaining half to uppercase**
I/P:"helloworld"
O/P:"helloWORLD"
- 111. Number of words present in the given sentences**
Input:"The quick brown fox jumps over the lazy dog"
Output:9
- 112. Find the matching string and print it in Capitalcase**
Input:"apple banana mango apple grape"
Matching word: "apple"
Output:"Apple banana mango Apple grape"
- 113. Reverse odd position based on the input**
Input:"I love programming in python language"
Position to reverse: "odd"
Output: "I evol programming ni python egaugnal"
- 114. Split a string on hyphens**
Input: Emma-is-a-data-scientist
Output:
Emma
Is
A
Data
Scientist
- 115. Longest palindrome substring**
Input: = "babad"
Output: "bab"or "aba"



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116. Longest substring without repeating characters

Input: s = "abcdefabcbb"

Output: 6

Explanation: The longest substring without repeating characters is "abcdef".

117. First Non-Repeated character in a String

Input: s = "racecar"

Output: 'e'

Explanation: 'e' is the only character in the string which does not repeat.

118. First Repeated character in a string

Input : ababa

Output : a //in the 2nd index

119. Reverse sentence

Input: "Programming is fun"

Output: "fun is Programming"

120. Given a string s of lowercase English letters, the task is to find the first non-repeating character. If there is no such character, return '\$'.

Input:"aabcdd"

Output:'b'

121. Check Whether Two Strings Are Anagram

Input1:listen

Input2:silent

Output:is anagram

122. Given a String, the task is to insert another string in between the given String at a particular specified index in Java.



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Input:originalString = "WelcomeJava",

stringToBeInserted = "to",

index = 4

Output:"WelcometoJava"

123. Delete all the common elements of two string and concatenate both

a="aaaa"

b="aabbbb"

output:"bbbb"

124. Given a string of digits, remove leading zeros from it.

Input : 00000123569

Output: 123569

Input: 000012356090

Output: 12356090

125. print the highest frequency followed by lowest

Input:programming

Output:Highest frequency characters: r g m

Lowest frequency characters: p o a i n

126. decrypt the given string

Input:Encrypted string: koor

Output:Decrypted string: hello

127. Identify possible words:

<https://tests.mettl.com/authenticateKey/13486c16>

128. Encoding Three Strings <https://tests.mettl.com/authenticateKey/f05028d5>



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129. **The “Nambiar Number” Generator**
<https://tests.mettl.com/authenticateKey/7db6c8a4>
130. **User ID Generation:** <https://tests.mettl.com/authenticateKey/592740f3>
131. **Message controlled Robot movement**
<https://tests.mettl.com/authenticateKey/aedcc3a6>
132. **Sum of Power of Digits:**
<https://tests.mettl.com/authenticateKey/92437794>
133. **User ID Generation: Joseph's team has been assigned the task of creating user-ids for all participants of an online gaming competition Joseph has designed a process for generating the user-id using the participant's First_Name ,Last_Name, PIN code and a number N The process defined by Joseph is as below –**
Step1- Compare the lengths of First_Name and Last_Name of the participant. The one that is shorter will be called “Smaller Name” and the one that is longer will be called the “longer Name” if both First_Name and Last_Name are of equal Length ,then the name that appears earlier in alphabetical order will be called “Smaller Name” and the name that appears later in alphabetical order will be called the “Longer Name”
Step2 - The user-should be generated as below –
Last Letter of the smaller name + Entre word of the longer name + Digit at position N in the PIN when traversing PIN from left to right +Digit at position N in the PIN when traversing the PIN from right to left
Step3 - Toggle the alphabets of the user-id generated in step -2 i.e. upper-case alphabets should become lower-case and lower-case alphabets should become upper-case.
Let us see a few examples
Example-1 - If the participant's details are as below
First Name = Ray
Last Name =Roy
PIN = 560037
N= 6



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Step1 - Length of Last_Name is less than the Length of First_Name, so the Smaler Name is “Roy” and the Longer Name is “Rajiv”

Step2 - The user id will be = Last Letter of the smaller name +Entre word in the longer name + Digit at position N in the PIN when traversing the PIN from left to right +Digit at position N in the PIN when traversing the PIN from right to left

=Last Letter of “Roy”+ Entre word in Rajiv+ 6th Digit of Pin from left + 6th Digit of PIN from right

=y+ Rajiv+7+5

Therefore, user-id=yRajiv75

Step3 -Toggle the alphabet in the user-id. So,user-id = YrAJIV75

134. SIMPLE ENCODED ARRAY

Maya has stored few confidential numbers in an array (array of int). To ensure that others do not find the numbers easily, she has applied a simple encoding.

Encoding used: Each array element has been substituted with a value that is the difference of its original value and its succeeding element's value.

i.e. $arr[i] = arr[i+1] - arr[i]$

e.g. value in $arr[0]$ = original value of $arr[1]$ - original value of $arr[0]$

Also note that value of last element i.e. $arr[\text{last index}]$ remains unchanged.

Example:If the original array is $\{-2, 5, 1, 7, 9, 3\}$

The encoded array would be $\{-3, -4, 6, 2, -6, 3\}$

Provided the encoded array, you are expected to find the –

a) First number (value in index 0) in the original array

b) Sum of all numbers in the original array The prototype of the function is:public static void findOriginalFirstAndSum(int[] input1,input 2);

where input1 is the encoded array.The method is expected to –

- find the value of the first number of the original array and store it in the member output1 and
- find the sum of all numbers in the original array and store it in the member output2.

Assumption(s):

- The array elements can be positive and/or negative numbers

Example 1:Original array = $\{2, 5, 1, 7, 9, 3\}$ Encoded array = $\{3, -4, 6, 2, -6, 3\}$ First number in

original array = 2 Sum of all numbers in original array = 27

135. You're given the size of the array and an array of integers; print the number of times each integer has occurred in the array.



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Sample Input 1: 10

1 2 3 3 4 1 4 5 1 2

Sample Output 1:

1 occurs 3 times

2 occurs 2 times

3 occurs 2 times

4 occurs 2 times

5 occurs 1 times

136. Write a method to find the number of longest increasing subsequences(LIS) found in the given array and return the same.

- Longest Increasing Subsequence (LIS) finds the longest subsequence where elements strictly increase in order.
- The LIS problem involves finding the longest subsequence of a sequence where each element is greater than the previous one, preserving order.

int countOfLIS (int data []) {

//write code

}

Sample Input 1: 1 1 2 3 3 4 1 4 5 1 2

Sample Output 1: Number of longest increasing subsequences = 3

(Sub sequence 1: 1 1 2 3 3 4, sub sequence 2: 1 4 5, Sub sequence 3: 1 2)

137. Twin Prime. Difference between 2 numbers should be one

138. Find the Key:

input1=3521, input2=2452, input3=1352

Key= (Thousands of input1*Hundreds of input2) + smallest of input3

Key= (3*4) +1=13

139. Find the Key:

input1=3521, input2=2452, input3=1352

Key= (Smallest digit in thousands Place) (Smallest digit in hundreds Place)
(Smallest digit in tens Place) (Smallest digit in units Place)

Key=1321



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140. Find the Key:

You are provided with 3 numbers: input1, input2 and input3. Each of these are 4 digits' numbers within ≥ 1000 and ≤ 9999 i.e., $1000 \leq \text{input1} \leq 9999$ $1000 \leq \text{input2} \leq 9999$ $1000 \leq \text{input3} \leq 9999$ You are expected to find the key using below formula:

Key = Sum of Largest digits of each number + Sum of Second Largest digits of each number for Example, input1=3521, input2=2452 input3=1352

$$\text{Key} = (5+5+5) + (3+4+3) = 25$$

141. Sum of the numbers upto a single digit

Input1 = 45678

Output = 30 (double digit)

$$= 3 \text{ (i.e } 3+0)$$

142. Ranking

Given the array of elements where you have to print the rank of every elements in the array without changing the position

Input:

{10,5,20,30,1,4,25}

Output:

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

143. Find Password

Detective Buckshee junior has been approached by the shantiniketan kids society for help in finding the password to the games complex.After hearing the



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scenario,detective Buckshee junior realises that he will need a programmer's support.He contacts you requests your help.

Please help the detective by writing a function to generate the password.

The scenario is as below-

Five numbers are available with the kids.

These numbers are either stable or unstable

A number is stable if each of its digit occur the same number of times, i.e the frequency of each digit in the number is the same.

For e.g:2277,4004,11,23,583835,1010 are examples of stable numbers.

Similarly,A number is unstable if the frequency of each digit in the number is NOT the same.For eg:221,4314,101,233,58135,101 are examples of unstable numbers.

The password can be found as below-

i.e password=(Number of unstable numbers*10)+Number of stable numbers

For example:

If input1=12, input2=1313, input3=122, input4=678 and input5=898 , we see that there are THREE stable numbers i.e 12,1313 and 678 and

TWO unstable numbers i.e 122 and 898

so,the password should be=(Number of Unstable numbers*10)+Number of stable numbers=(2*10)+3=23

144. Find the Key:

input1=3521, input2=2452, input3=1352

Key= Smallest number from input1+ Smallest number from input2+ Smallest number from input3+ largest number from input1+ largest number from input2+ largest number from input3

Key=1+2+1+5+5+5=19



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145. Remove duplicate elements from an array

Given an array of integers, we have to remove duplicate elements using a java program.

Input array elements:

1, 2, 3, 1, 2, 3, 4

Output:

Elements after removing duplicates

1, 2, 3, 4

146. Find second largest element in an array

Given an array of N integers and we have to find its second largest element using Java program.

Input:

Enter number of elements: 4

Input elements: 45, 25, 69, 40

Output:

Second largest element in: 45

147. Find second smallest element in an array

Given an array of N integers and we have to find its second minimum/smallest element using Java program.

Input:

Enter number of elements: 4

Input elements: 45, 25, 69, 40

Output:



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Second smallest element in: 40

148. Count total positives, negatives and zeros from an array

Given an array of integers and we have to count total negatives, positives and zeros using java program.

Input:

Array elements: 20, -10, 15, 00, -85

Output:

Positive Numbers are: 2

Negative Numbers are: 2

Zeros are: 1

149. Given an integer array of size N. Write Program to find sum of positive square elements in the array.

Sample input 1:

4

1 2 3 4

Sample output 1:

30

Explanation :

$(1 + 4 + 9 + 16) = 30$

Sample input 2:

4

-1 -2 -3 -4

Sample output 2:



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30

Explanation:

$$(1 + 4 + 9 + 16) = 30$$

150. Given an integer array of size N, write a program to sort the array;

Sample input 1:

4

2 4 1 3

Sample output 1:

1 2 3 4

Sample input 2:

5

1 5 7 5 3

Sample output 2:

1 3 5 5 7