Factor Of 3 Codevita 9 Solution

Alpha August 15, 2020

Factor Of 3 Codevita 9 Solution

Problem Description
Given an array arr, of size N, find whether it is possible to rearrange the elements of array such that sum of no two adjacent elements is divisible by 3.

Constraints
1 <= T <= 10

2 <= N <= 10^5

1 <= arr[i] <= 10^5

Input
First line contains integer T denoting the number of testcases.

Each test cases consists of 2 lines as follows-

First line contains integer N denoting the size of the array.

Second line contains N space separated integers.

Output
For each test case print either ""Yes"" or ""No"" (without quotes) on new line.

Time Limit
1

Examples
Example 1

Input

1

4

1 2 3 3

Output

Yes

Explanation

Some of the rearrangements can be {2,1,3,3}, {3,3,1,2}, {2,3,3,1}, {1,3,3,2},...

We can see that there exist at least 1 combination {3,2,3,1} where sum of 2 adjacent number is not divisible by 3. Other combinations can be {1,3,2,3}, {2,3,1,3}.

Hence the output is Yes.

Example 2

Input

1

4

3 6 1 9

Output

No

Explanation

All possible combination of {3,6,1,9} are

{1,3,6,9}, {1,3,9,6}, {1,6,9,3}, {1,6,3,9}, {1,9,3,6}, {1,9,6,3},

{6,1,3,9}, {6,1, 9,3}, {6,3,1,9}, {6,3,9,1}, {6,9,1,3}, {6,9,3,1},

{3,1,6,9}, {3,1,9,6}, {3,9,1,6}, {3,9,6,1}, {3,6,1,9}, {3,6,9,1},

{9,1,3,6}, {9,1,6,3}, {9,3,1,6}, {9,3,6,1}, {9,6,1,3}, {9,6,3,1}.

Since none of these combinations satisfy the condition, the output is No."
"2020/08/15 6:18:42 AM AST","Binary of 3","Problem Description
Mr. Binary is lost and wants to be found but the problem is he understands only binary. His house is located at a maximum binary equivalence possible, from the given set of numbers. A set is a binary equivalence if the number of 0 zeros and ones from a set of number are equal.

Constraints
1 <= N <= 20

1 <= Arr[i] <= 10^5, where Arr[i] is the ith element in the set of N numbers in second line of input

Arr[i] will be unique

Input
First line contains N denoting the number of decimal numbers

Next line contains N space separated decimal numbers

Output
Single line output printing possible binary equivalence where number of digits in this number is equal to number of bits present in the largest element in second line of input. If there is no set which has binary equivalence then return 0 padded to number of bits present in the largest element in second line of input.

Time Limit
1

Examples
Example 1

Input

3

2 7 10

Output

0011

Explanation

2 -> 0010 - 1's = 1, 0's = 3

7 -> 0111 - 1's = 3, 0's = 1

10 -> 1010 - 1's = 2, 0's = 2

Here we have taken up to 4 bits because the maximum number is 10 which needs 4 bits to be represented in binary. The number of zeroes and ones across the set is, 6 each. Hence, the set of [2,7,10] has binary equivalence. Similarly, if you consider set[2,7], it also has binary equivalence, 4 each. But set [7,10] does not have binary equivalence. Likewise, set[10] has binary equivalence of 2 each.

Total number of unique sets where binary equivalence is possible from all combinations are 3 viz. Sets are [2,7,10], [2,7] and [10] which is the final answer. But as Mr. Binary only understands zeroes and ones, return the binary of 3.

Since 10 is the largest element in the input on line 2, the number of bits required to represent 10 in binary is 4. Hence output needs to be padded upto 4 digits. Since binary of 3 represented as a 4-digit number is 0011, the answer is 0011

Note

Do not consider empty subset

Example 2

Input

1

7

> Whatsapp Status

TAGS

> Technology 5

> Whatsapp Status 1

TAGS

Android Bollywood Books cast Codevita 8 codvita 9 Education Events Hackerrank Solutions how to Independence Day Marathi Mathematics NEWS programming language SPPU NEWS Technology Whatsapp Status

Output

000

Explanation

7 -> 111 - 1's = 3, 0's = 1

Since there is only one element in the set and it also does not have binary equivalence, the answer is 0. However, keeping output specifications in mind, the answer should be printed as 000 since the highest element in second line of input viz. 7 has 3 bits when represented in binary format."
"2020/08/15 6:20:06 AM AST","3 Palindrome","Problem Description
Given an input string word, split the string into exactly 3 palindromic substrings.

Working from left to right, choose the smallest split for the first substring that still allows the remaining word to be split into 2 palindromes.

Similarly, choose the smallest second palindromic substring that leaves a third palindromic substring.

If there is no way to split the word into exactly three palindromic substrings, print ""Impossible"" (without quotes). Every character of the string needs to be consumed.

Cases not allowed -

After finding 3 palindromes using above instructions, if any character of the original string remains unconsumed.

No character may be shared in forming 3 palindromes.

Constraints
1 <= the length of input sting <= 1000

Input
First line contains the input string consisting of characters between [a-z].

Output
Print 3 substrings one on each line.

Time Limit
1

Examples
Example 1

Input

nayannamantenet

Output

nayan

naman

tenet

Explanation

The original string can be split into 3 palindromes as mentioned in the output.

However, if the input was nayanamantenet, then the answer would be ""Impossible"".

Example 2

Input

aaaaa

Output

a

a

aaa

Explanation

The other ways to split the given string into 3 palindromes are as follows -

[a, aaa, a], [aaa, a, a], [aa, aa, a], etc.

Since we want to minimize the length of the first palindromic substring using left to right

processing, the correct way to split is [a, a, aaa].

Example 3

Input

aaaabaaaa

Output

a

aaabaaa

a

Explanation

The other ways to split the given string into 3 palindromes are as follows -

[aaaa, b, aaaa], [aa, aabaa, aa], etc.

Since we want to minimize the length of the first palindromic substring using left to right processing, the correct way to split is [a, aaabaaa, a]."

Solution in python

```
for i in range (int(input("Enter Test Case"))):
                                                    N = int(input())

                                                    list1 = list(map(int,input().split()))
                                                    array = []
                                                    for i in range(N):
                                                        array.append(list1[i]%3)
                                                    x = array.count(0)
                                                    y = array.count(1)
                                                    z = array.count(2)
                                                    if x == 0 and y != 0 and z !=0:
                                                        print("NO")
                                                    elif x == 0 and y == 0 and z !=0:
                                                        print("YES")

                                                    elif x == 0 and y != 0 and z ==0:
                                                        print("YES")
                                                    elif x<=(z+y):
                                                        print("YES")
                                                    else:
                                                        print("No")
```

Tags codvita 9

REACTIONS funny (0) interesting (0) cool (0)

Facebook Twitter

OLDER
Equalize Weights Codevita 9 Solution

NEWER
Single Lane Highway Codevita 9 Solution

YOU MAY LIKE THESE POSTS

Pallidrome Codevita 9 Solution
August 15, 2020

Path through graph Codevita 9 Solution
August 15, 2020

Single Lane Highway Codevita 9 Solution
August 15, 2020

POST A COMMENT

20 Comments

SAMIR GAYATRI
August 15, 2020 at 4:10 PM

where is the solution

Reply Delete

Replies

SUJITH REX

Technology 5
Whatsapp Status 1

TAGS

Android Bollywood Books cast

August 16, 2020 at 12:32 AM

https://github.com/rexb0tnet/TCS-CodeVita-9-Factor-of-3

Delete

Replies

Reply

Reply

UNKNOWN

August 15, 2020 at 4:16 PM

solution???

Reply Delete

Replies

Reply

ANONYMOUS

August 15, 2020 at 4:19 PM

Solution??

Reply Delete

Replies

Reply

INNOVACE 2019

August 15, 2020 at 4:21 PM

solution?

Reply Delete

Replies

Reply

UNKNOWN

August 15, 2020 at 4:33 PM

solution?

Reply Delete

Replies

UNKNOWN

August 15, 2020 at 4:59 PM

Reply

Delete

Replies

Reply

Reply

LUND PRASAD

August 15, 2020 at 4:35 PM

```
#include
int main() {
// printf() displays the string inside quotation
printf("Hello, World!");
return 0;
}
```

Reply Delete

Replies

Reply

UNKNOWN

August 15, 2020 at 5:10 PM

Solutions for this??

Reply Delete

Replies

Reply

ANONYMOUS

August 15, 2020 at 5:17 PM

binod

Reply Delete

Replies

Reply

UNKNOWN

August 15, 2020 at 5:26 PM

```
def distantAdjacentElement(a, n):

# dict used to count the frequency
# of each element occurring in the
# array
m = dict()

# In this loop we count the frequency
# of element through map m
for i in range(n):
if a[i] in m:
```


Events Hackerrank Solutions how to
Independence Day Marathi
Mathematics NEWS
programming language SPPU NEWS
Technology Whatsapp Status

› Technology 5
› Whatsapp Status 1

TAGS

Android Bollywood Books cast
Codevita 8 codvita 9 Education
Events Hackerrank Solutions how to
Independence Day Marathi
Mathematics NEWS

```
m[a[i]] += 1
else:
m[a[i]] = 1

# mx store the frequency of element which
# occurs most in array .
mx = 0

# In this loop we calculate the maximum
# frequency and store it in variable mx.
for i in range(n):
if mx < m[a[i]]:
mx = m[a[i]]

# By swapping we can adjust array only
# when the frequency of the element
# which occurs most is less than or
# equal to (n + 1)/3.
if mx > (n+1) // 3:
print("Yes")
else:
print("No")


# Driver Code
if name == "main":
a = [1,2,3,3]
n = len(a)
distantAdjacentElement(a, n)
```

Reply Delete

▾ Replies

LUND PRASAD
August 15, 2020 at 5:58 PM

runtime error bhai

Delete

▾ Replies
Reply

UNKNOWN
August 15, 2020 at 6:42 PM

wrong approach only applies on first 2 test cases

Delete

▾ Replies
Reply

Reply

UNKNOWN
August 15, 2020 at 6:14 PM

solution send karo yr koi correct

Reply Delete

▾ Replies
Reply

UNKNOWN
August 15, 2020 at 6:14 PM

java code plz

Reply Delete

▾ Replies
Reply

ANONYMOUS
August 15, 2020 at 10:04 PM

someone please the correct code.

Reply Delete

▾ Replies

SUJITH REX
August 16, 2020 at 12:32 AM

https://github.com/rexb0tnet/TCS-CodeVita-9-Factor-of-3

Delete

▾ Replies
Reply

Reply

PRATYUSH KESARWANI
August 15, 2020 at 11:13 PM

This comment has been removed by the author.

Reply Delete

▾ Replies
Reply

PRATYUSH KESARWANI
August 15, 2020 at 11:14 PM

This comment has been removed by the author.

Reply Delete

Replies

Reply

SUJITH REX

August 16, 2020 at 12:31 AM

Solution in python 3

https://github.com/rexb0tnet/TCS-CodeVita-9-Factor-of-3

Reply Delete

Replies

Reply

Add comment

Enter your comment...

Comment as: Anonymous (G

Sign out

Publish Preview Notify me

Independence Day Marathi Mathematics NEWS programming language SPPU NEWS Technology Whatsapp Status

RECENT POSTS

hack the interview 7 hackerrank solutions

August 30, 2020

Palindrome Queries hackrank Solution

August 30, 2020

City Walk Hackerank Solution 2020

August 30, 2020

RECENT IN TECH

Follow-Unfollow Instagram Trick To Increase Followers

August 20, 2020

[BEGINNER GUIDE] A-Z KALI LINUX COMMANDS LIST PDF FOR BEGINNER FREE DOWNLOAD

January 30, 2020

How to convert bootable pendrive to normal

January 12, 2020