Editorial of DCCIDPC Mock Contest 2019

1. Divisible Number Sum:

This problem is pretty straightforward. For each query you have to create a segment tree and store the sum in that tree. The elements of the given array will be added to construct the sum only if its divisible by V, adjust your segment tree implementation according to it. Query will be same as any segment tree query.

1. Find out defect Ball:

This problem has a pattern that you have to find out. Since we have to divide the balls in three parts we modulo it by three. There can be three cases,

1. **N mod 3 == 0**
2. **N mod 3 == 1**
3. **N mod 3 == 2**

If the number is completely divisible by 3, we can assume that all the parts are same (**X,X,X**) and continue to divide the parts till we reach **base case\***. Since all the parts are same in this case, if we calculate for any single part we can conclude it for the other parts too. So total steps required in this case is 1+(steps for **X**); here **X=n/3**

If the reminder is 1 or 2, the divisions will have the following format: **X,X,1** or **X,X,2**. Total steps for both these two cases will be 1+(steps for **X**). Now how do we calculate **X**? Simulate the values yourself and find it out ;)

(\*) The base case is when we want to find steps for 0 or 1, in such case we don’t need any comparison, so steps required is 0.

D. Print:

The first and last line appears once for all cases. Rest of the lines have an incrementing pattern. Find out the pattern and print it with looooots of for loops ;)

## E. Add 53:

## Just add the variables and store the sum. Use long long int to avoid overflow. Compare each digit of the sum with the given sum in input and print only the digits that are in the same position as ‘?’ in the given sum.

## F. Deadly Duo:

## Just add the numbers. Watch out for overflow ;)

## G. Hardest problem ever?

## Find if the given number is even or odd and print output accordingly.

## Thanks for reading it. If you find any mistakes or need further explanation let me know.