

GE23131-Programming Using C-2024

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Started	Monday, 23 December 2024, 5:33 PM
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Duration	20 days 3 hours

Question 1

Correct

Marked out of 3.00

☐ Flag question

A set of N numbers (separated by one space) is passed as input to the progra

Input Format:

The first line will contain the N numbers separated by one space.

Boundary Conditions:

$3 \leq N \leq 50$

The value of the numbers can be from -99999999 to 99999999

Output Format:

The count of numbers where the numbers are odd numbers.

Example Input / Output 1:

Input:

5 10 15 20 25 30 35 40 45 50

Output:

5

Explanation:

The numbers meeting the criteria are 5, 15, 25, 35, 45.

Answer : (penalty regime: 0 %)

REC-CIS

```
#include<stdio.h>
int main(){
    int n,x=0;
    while(scanf("%d",&n)==1){
        if(n%2!=0){
            x++;
        }
        printf("%d",x);
        return 0;
    }
}
```

	Input	Expected	Got	
	5 10 15 20 25 30 35 40 45 50	5	5	

Passed all tests!

Question 2

Correct
Marked out of 5.00
☐ Flag question

Given a number N, return true if and only if it is a *confusing number*, which sa

We can rotate digits by 180 degrees to form new digits. When 0, 1, 6, 8, 9 are
A *confusing number* is a number that when rotated 180 degrees becomes a d

Example 1:

6 -> 9
Input: 6
Output: true
Explanation:
We get 9 after rotating 6, 9 is a valid number and 9!=6.

Example 2:

89 -> 68
Input: 89
Output: true
Explanation:
We get 68 after rotating 89, 86 is a valid number and 86!=89.

Example 3:

11 -> 11
Input: 11
Output: false
Explanation:
We get 11 after rotating 11, 11 is a valid number but the value remains the sa

Note:

- 1. 0 <= N <= 10^9
- 2. After the rotation we can ignore leading zeros, for example if after rotat

Answer : (penalty regime: 0 %)

REC-CIS

```
#include<stdio.h>
int main(){
    int x,n,y=1;
    scanf("%d",&n);
    while(n!=0&&y==1){
        x=n%10,n=n/10;
        if(x==2||x==3||x==4||x==7 ){
            y++;
        }
        if(y==1){
            printf("true");
        }
        else{
            printf("false");
        }
    }
    return 0;
}
```

	Input	Expected	Got	
	6 89	true true	true	
	25	false	true	
			false	

Passed all tests!

Question 3

Correct

Marked out of 7.00

☐ Flag question

A nutritionist is labeling all the best power foods in the market. Every food item associated with them. An item's value is the same as the number of macronutrient incrementing in this fashion.

The nutritionist has to recommend the best combination to patients, i.e. maximum 'unhealthy' number), and this sum is known. The nutritionist chooses food items without the sum matching the given 'unhealthy' number.

Here's an illustration:

Given 4 food items (hence value: 1,2,3 and 4), and the unhealthy sum being 6 to be skipped. Thus, the best combination is from among:

- $2 + 3 + 4 = 9$
- $1 + 3 + 4 = 8$
- $1 + 2 + 4 = 7$

Since $2 + 3 + 4 = 9$, allows for maximum number of macronutrients, 9 is the result.

Complete the code in the editor below. It must return an integer that represents the maximum number of macronutrients that can be obtained without the sum matching the given 'unhealthy' number.

It has the following:

n : an integer that denotes the number of food items

k : an integer that denotes the unhealthy number

Constraints

- $1 \leq n \leq 2 \times 10^9$
- $1 \leq k \leq 4 \times 10^{15}$

Input Format For Custom Testing

The first line contains an integer, n , that denotes the number of food items.

The second line contains an integer, k , that denotes the unhealthy number.

REC-CIS

Sample Input 0

2

2

Sample Output 0

3

Explanation 0

The following sequence of $n = 2$ food items:

- 1. Item 1 has 1 macronutrients.
- 2. $1 + 2 = 3$; observe that this is the max total, and having avoided having

Sample Input 1

2

1

Sample Output 1

2

Explanation 1

- 1. Cannot use item 1 because $k = 1$ and $sum \equiv k$ has to be avoided at any
- 2. Hence, max total is achieved by $sum = 0 + 2 = 2$.

Sample Case 2

Sample Input For Custom Testing

Sample Input 2

3

3

Sample Output 2

5

Explanation 2

$2 + 3 = 5$, is the best case for maximum nutrients.

Answer : (penalty regime: 0 %)

REC-CIS

```
#include<stdio.h>
int main(){
    long a,b,count=0;
    scanf("%ld%ld",&a,&b);
    for(int i=0;i<=a;i++){
        count+=i;
        if(count==b){
            count-=1;
        }
    }
    printf("%ld",count%1000000007);
    return 0;
}
```

	Input	Expected	Got	
	2 2	3	3	
	2 1			
	3 3	2	2	
		5	5	

Passed all tests!

Save the state of the flags