REC-CIS

GE23131-Programming Using C-2024

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Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Tuesday, 26 November 2024, 9:06 AM
Duration	27 days 8 hours

Question **1**

Correct

Marked out of 3.00

Flag question

Alice and Bob are playing a game called "Stone Game". Stone game is a two-player game. Le
player can remove either one stone or four stones. The player who picks the last stone, wins.
is always the one to make the first move. Your task is to find out whether Alice can win, if bot

Input Format

First line starts with T, which is the number of test cases. Each test case will contain N numbe

Output Format

Print "Yes" in the case Alice wins, else print "No".

Constraints

1<=T<=1000

1<=N<=10000

Sample Input and Output

Input

3
1
6
7

Output

Yes
Yes
No

Answer: (penalty regime: 0 %)

```
#include<stdio.h>


int main()
{
int t,n;
scanf("%d",&t);

while(t>0)
{
```

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```
    k=n/4;
    n=n%4;
    if(((k%2==0)&&(n%2==1) ) || ((k%2==1)&&(n%2==0)))
    {
        printf("Yes\n");
    }
    else{
        printf("No\n");
    }
    t--;
}

}
```

	Input	Expected	Got	
	3 1 6 7	Yes Yes No	Yes Yes No	

Passed all tests!

Question **2**

Correct

Marked out of 5.00

Flag question

You are designing a poster which prints out numbers with a unique style applied to each of th closed paths or holes present in a given number.

The number of holes that each of the digits from 0 to 9 have are equal to the number of clos

1, 2, 3, 5, and 7 = 0 holes.

0, 4, 6, and 9 = 1 hole.

8 = 2 holes.

Given a number, you must determine the sum of the number of holes for all of its digits. For

Complete the program, it must must return an integer denoting the total number of holes in

Constraints

1 ≤ num ≤ 109

Input Format For Custom Testing

There is one line of text containing a single integer num, the value to process.

Sample Input

630

Sample Output

2

Explanation

Add the holes count for each digit, 6, 3 and 0. Return 1 + 0 + 1 = 2.

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Sample Input

1288

Sample Output

4

Explanation

Add the holes count for each digit, 1, 2, 8, 8. Return 0 + 0 + 2 + 2 = 4.

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>

int main()
{
    int n, h=0;
    scanf("%d", &n);
    while(n>0)
    {
        int d;
        d=n%10;
        if(d==0 || d==4 || d==6 || d==9)
            h=h+1;
        else if(d==8)
            h=h+2;
        else if(d==1 || d==2 || d==3 || d==5 || d==7)
            h=h+0;

        n=n/10;
    }
    printf("%d",h);


}
```

	Input	Expected	Got	
	630	2	2	
	1288	4	4	

Passed all tests!

Question **3**

Correct

Marked out of 7.00

Flag question

The problem solvers have found a new Island for coding and named it as Philaland. These sm
of items at the Island easier by distributing various coins with different values. Manish has co
category starting from $1 till the maximum price of the item present on Island, then we can p
example to prove his point.

Let's suppose the maximum price of an item is 5$ then we can make coins of {$1, $2, $3, $4, $

Now Manisha, being a keen observer suggested that we could actually minimize the number
distribution {$1, $2, $3}. According to him any item can be purchased one time ranging from
them. Your task is to help Manisha come up with a minimum number of denominations for a

Input Format

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Output Format

Print a single line denoting the minimum number of denominations of coins required.

Constraints

1<=T<=100

1<=N<=5000

Refer the sample output for formatting

Sample Input 1:

10

Sample Output 1:

4

Sample Input 2:

5

Sample Output 2:

3

Explanation:

For test case 1, N=10.

According to Manish {$1, $2, $3,... $10} must be distributed.

But as per Manisha only {$1, $2, $3, $4} coins are enough to purchase any item ranging from
denominations could also be {$1, $2, $3, $5}. Hence answer is still 4.

For test case 2, N=5.

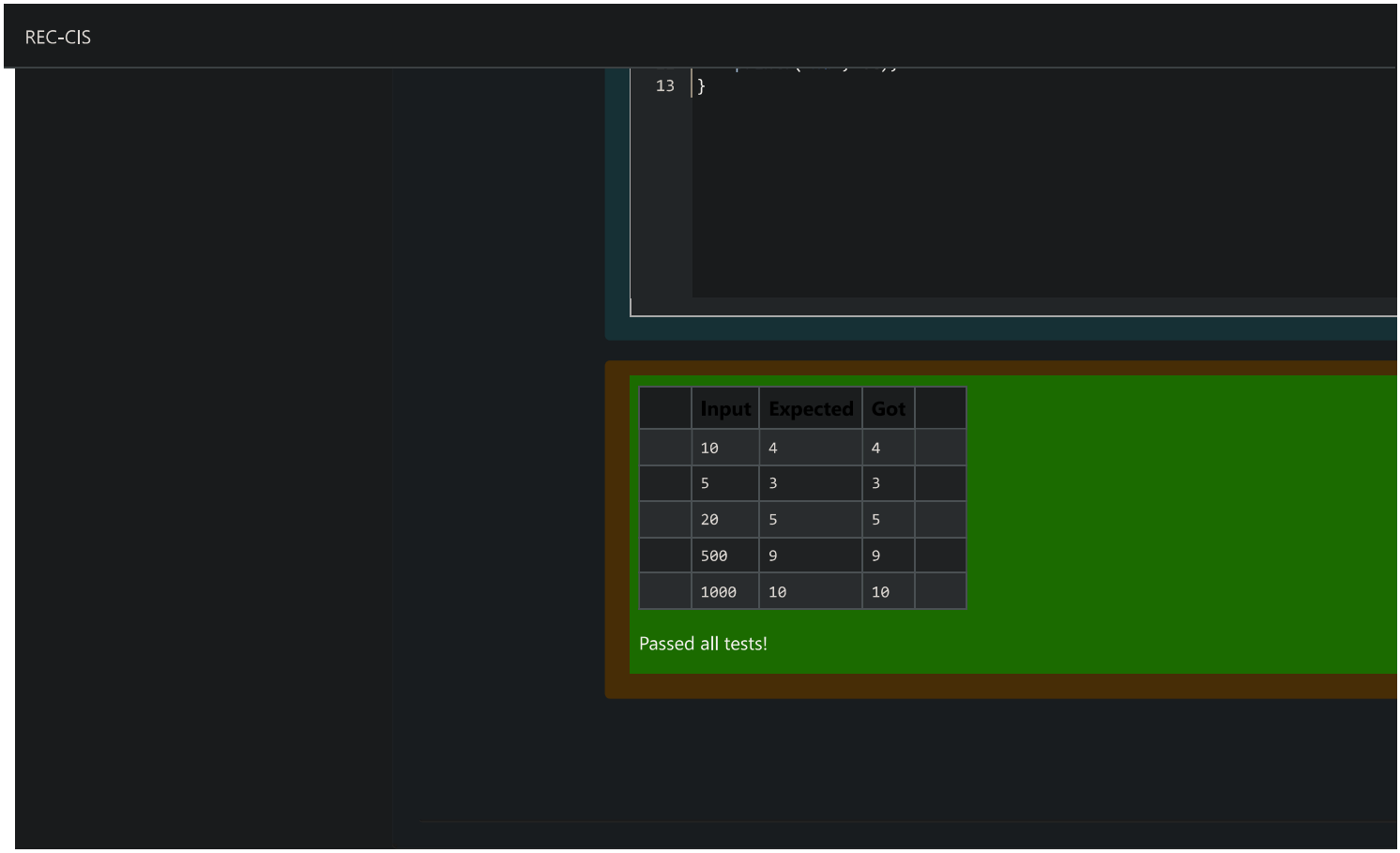
According to Manish {$1, $2, $3, $4, $5} must be distributed.

But as per Manisha only {$1, $2, $3} coins are enough to purchase any item ranging from $1
denominations could also be {$1, $2, $4}. Hence answer is still 3.

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>

int main()
{
    int n, ct=0, den=1;
    scanf("%d", &n);
    while(den<=n)
    {
        ct++;
```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13 }
Input
Expected
Got
10
4
4
5
3
3
20
5
5
500
9
9
1000
10
10
Passed all tests!