RAJALAKSHMI ENGINEERING COLLEGE

RAKSHITA N 2024-IT R2

Started on	Tuesday, 18 November 2025, 10:58 AM
State	Finished
Completed on	Tuesday, 18 November 2025, 3:57 PM
Time taken	4 hours 58 mins
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00

Convert the following algorithm into a program and find its time

complexity using counter method.

```
void function(int n)
{
    int c= 0;
    for(int i=n/2; i<n; i++)
        for(int j=1; j<n; j = 2 * j)
            for(int k=1; k<n; k = k * 2)
                c++;
}
```

Note: No need of counter increment for declarations and scanf() and count variable printf() statements.

Input:

A positive Integer n

Output:

Print the value of the counter variable

Answer:

```
#include<stdio.h>
int main(){
    int n,counter=0,c=0;
    scanf("%d",&n);
    counter++;
    for (int i=n/2;i<n;i++){
        counter++;
        for (int j=1;j<n;j=2*j){
            counter++;
            for (int k=1;k<n;k=k*2){
                counter+=2;
                c++;
            }
            counter++;
        }
        counter++;
    }
    counter++;
    printf("%d",counter);
}
```

	Input	Expected	Got	
✔	4	30	30	✔
✔	10	212	212	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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