CS23331-DAA-2024-CSE / Problem 4: Finding Complexity using Counter Method

☑ Problem 4: Finding Complexity using Counter Method

Started on	Tuesday, 30 September 2025, 12:37 PM
State	Finished
Completed on	Tuesday, 30 September 2025, 12:41 PM
Time taken	4 mins 49 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1 | Correct Mark 1.00 out of 1.00 ⚑ Flag question

```
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:

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

	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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Data retention summary