RAJALAKSHMI ENGINEERING COLLEGE

4 Vedhavyas Pavankalyan G L 2023-IT-A V2

Started on	Sunday, 19 October 2025, 10:25 AM
State	Finished
Completed on	Sunday, 19 October 2025, 10:29 AM
Time taken	3 mins 34 secs
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:

```c
#include <stdio.h>

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

	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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