

CS23331-Design and Analysis of Algorithms-2023 Batch-CSE

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Started on	Tuesday, 13 August 2024, 1:46 PM
State	Finished
Completed on	Tuesday, 13 August 2024, 1:52 PM
Time taken	6 mins 55 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 the counter method.

```
void func(int n)
{
    if(n==1)
    {
        printf("**");
    }
    else
    {
        for(int i=1; i<=n; i++)
        {
            for(int j=1; j<=n; j++)
            {
                printf("**");
                printf("**");
                break;
            }
        }
    }
}
```

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: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main(){
3     int n,count=0;
4     scanf("%d",&n);
5     int func(int n){
6         count++;
7         if(n==1){
8             count++;
9             //printf("**");
10            count++;
11        }
12        else{
13            count++;
14            for(int i=1;i<=n;i++){
15                count++;
16                for(int j=1;j<=n;j++){
17                    count++;
18                    //printf("**");
19                    count++;
20                    //printf("**");
21                    count++;
22                    break;
23                }
24                count++;
25            }
26        }
27    }
28    return count;
29 }
30
31
32
33 printf("%d",func(n));
34 return 0;
35 }
```

Input	Expected	Got

✓	2	12	12	✓
✓	1000	5002	5002	✓
✓	143	717	717	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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