

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

Dashboard / My courses / CS23331-DAA-2023-CSE / Finding Time Complexity of Algorithms / Problem 1: Finding Complexity using Counter Method

Quiz navigation

1
✓

[Finish review](#)

Started on	Friday, 9 August 2024, 1:31 PM
State	Finished
Completed on	Friday, 9 August 2024, 1:36 PM
Time taken	5 mins
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 function (int n)
{
    int i= 1;
    int s =1;

    while(s <= n)
    {
        i++;
        s += i;
    }
}
```

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

For example:

Input	Result
9	12

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2
3 void function (int n)
4 {
5     int c=0;
6     int i= 1;
7     c++;
8     int s =1;
9     c++;
10    while(s <= n)
11    {
12        c++;
13        i++;
14        c++;
15        s += i;
16        c++;
17    }
18    printf("%d",++c);
19 }
20 int main(){
21     int n;
22     scanf("%d",&n);
23     function(n);
24 }
```

	Input	Expected	Got	
✓	9	12	12	✓
✓	4	9	9	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Finish review](#)

Jump to...

[Problem 2: Finding Complexity using Counter method](#)