Dashbo... / My cour... / CS23331-DAA-2023-... / Finding Time Complexity of Algorit... / Problem 1: Finding Complexity using Counter Me...

| Started on | Tuesday, 20 August 2024, 1:53 PM |
|--------------|---|
| State | Finished |
| Completed on | Tuesday, 20 August 2024, 2:03 PM |
| Time taken | 9 mins 45 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 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</pre>
```

For example:

| Input | Result | |
|-------|--------|--|
| 9 | 12 | |

Answer: (penalty regime: 0 %)

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

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ~ | 9 | 12 | 12 | ~ |

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ~ | 4 | 9 | 9 | ~ |

Passed all tests! 🗸

Correct

Marks for this submission: 1.00/1.00.

■ BASIC C PROGRAMMING-PRACTICE

Jump to...

Problem 2: Finding Complexity using Counter method ►