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| | |
|---------------------|---|
| Started on | Friday, 9 August 2024, 2:03 PM |
| State | Finished |
| Completed on | Friday, 9 August 2024, 2:09 PM |
| Time taken | 5 mins 43 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

For example:

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

Answer: (penalty regime: 0 %)

```
1  #include<stdio.h>
2  void function(int n)
3  {
4      int c=0;
5      int i=1;
6      c++;
7      int s=1;
8      c++;
9      while(s<=n)
10 {
11     c++;
12     i++;
13     c++;
14     s+=i;
15     c++;
16 }
17 c++;
18 printf("%d",c);
19 }
20 int main()
21 {
22     int n;
23     scanf("%d",&n);
24     function(n);
25
26 }
```

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ✓ | 9 | 12 | 12 | ✓ |
| ✓ | 4 | 9 | 9 | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ [Model exam DAA \(B,D,E\)](#)

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