

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

Dashboard / My courses / CS23331-DAA-2023-CSE / Finding Time Complexity of Algorithms / Problem 5: Finding Complexity using counter method

Quiz navigation

1  
✓

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<b>Started on</b>	Friday, 9 August 2024, 1:54 PM
<b>State</b>	Finished
<b>Completed on</b>	Friday, 9 August 2024, 2:00 PM
<b>Time taken</b>	6 mins 3 secs
<b>Marks</b>	1.00/1.00
<b>Grade</b>	10.00 out of 10.00 (100%)

Question 1  
Correct  
Mark 1.00 out of 1.00  
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Convert the following algorithm into a program and find its time complexity using counter method.

```
void reverse(int n)
{
    int rev = 0, remainder;
    while (n != 0)
    {
        remainder = n % 10;
        rev = rev * 10 + remainder;
        n /= 10;
    }
    print(rev);
}
```

**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:**

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

	Input	Expected	Got	
✓	12	11	11	✓
✓	1234	19	19	✓

Passed all tests! ✓

**Correct!**

Marks for this submission: 1.00/1.00.

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→ Problem 4: Finding Complexity using Counter Method

Jump to...

1-G-Coin Problem →