



 Dashboard My courses 

CS23331-DAA-2024-CSE / Problem 1: Finding Complexity using Counter Method

## Problem 1: Finding Complexity using Counter Method

Started on	Thursday, 21 August 2025, 8:17 PM
State	Finished
Completed on	Thursday, 21 August 2025, 9:45 PM
Time taken	1 hour 28 mins
Marks	1.00/1.00
Grade	<b>10.00</b> 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     int i = 1, s = 1, counter = 0;
4     counter++;
5     counter++;
6     while (1) {
7         counter++;
8         if(!(s <= n))
9             break;
10        i++;
11        counter++;
12        s += i;
13        counter++;
14    }
15    printf("%d\n", counter);
16 }
17 int main() {
18     int n;
19     scanf("%d", &n);
20     function(n);
21     return 0;
22 }
```

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

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

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## Problem 2: Finding Complexity using Counter method

Started on	Sunday, 17 August 2025, 9:59 PM
State	Finished
Completed on	Thursday, 21 August 2025, 9:50 PM
Time taken	3 days 23 hours
Marks	1.00/1.00
Grade	<b>10.00</b> 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 void func(int n) {
3     int count = 0;
4     count++;
5     if(n == 1) {
6         count++;
7     }
8     else {
9         for(int i = 1; i <= n; i++) {
10             count++;
11             count++;
12             count++;
13             count++;
14             count++;
15         }
16         count++;
17     }
18     printf("%d\n", count);
19 }
20 int main() {
21     int n;
22     scanf("%d", &n);
23     func(n);
24     return 0;
25 }


```

	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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CS23331-DAA-2024-CSE / Problem 3: Finding Complexity using Counter Method

## Problem 3: Finding Complexity using Counter Method

Started on	Thursday, 21 August 2025, 9:52 PM
State	Finished
Completed on	Thursday, 21 August 2025, 9:56 PM
Time taken	4 mins 4 secs
Marks	1.00/1.00
Grade	<b>10.00</b> 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 counter method.

```
Factor(num) {  
    for (i = 1; i <= num; ++i)  
    {  
        if (num % i == 0)  
        {  
            printf("%d ", i);  
        }  
    }  
}
```

**Note:** No need of counter increment for declarations and scanf() and counter variable printf() statement.

**Input:**

A positive Integer n

**Output:**

Print the value of the counter variable

**Answer:**

```
1 #include<stdio.h>
2 int main() {
3     int num, i;
4     int counter = 0;
5     scanf("%d", &num);
6     counter++;
7     for(i = 1; i <= num; i++) {
8         counter++;
9         if(num % i == 0) {
10             counter++;
11         }
12         counter++;
13     }
14     printf("%d\n", counter);
15     return 0;
16 }
```

	Input	Expected	Got	
✓	12	31	31	✓
✓	25	54	54	✓
✓	4	12	12	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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CS23331-DAA-2024-CSE / Problem 4: Finding Complexity using Counter Method

## Problem 4: Finding Complexity using Counter Method

Started on	Friday, 22 August 2025, 1:42 PM
State	Finished
Completed on	Saturday, 23 August 2025, 6:35 AM
Time taken	16 hours 52 mins
Marks	1.00/1.00
Grade	<b>10.00</b> 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 counter method.

```
void function(int n)
{
    int c = 0;
    for(int i=n/2; i<n; i++)
        for(int j=1; j<n; j = 2 * j)
            for(int k=1; k<n; k = k * 2)
                c++;
}
```

**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 int main() {
3     long long n;
4     if(scanf("%lld", &n) != 1)
5         return 0;
6     long long counter = 0;
7     long long i = n / 2;
8     counter++;
9     while(1) {
10         counter++;
11         if(!(i < n))
12             break;
13         long long j = 1;
14         while(1) {
15             counter++;
16             if(!(j < n))
17                 break;
18             long long k = 1;
19             while(1) {
20                 counter++;
21                 if(!(k < n))
22                     break;
23                 counter++;
24                 k = k * 2;
25             }
26             j = 2 * j;
27         }
28         i = i + 1;
29     }
30     printf("%lld\n", counter);
31     return 0;
32 }
```

	Input	Expected	Got	
✓	4	30	30	✓
✓	10	212	212	✓

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

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## Problem 5: Finding Complexity using counter method

Started on	Saturday, 23 August 2025, 6:36 AM
State	Finished
Completed on	Saturday, 23 August 2025, 6:40 AM
Time taken	4 mins 46 secs
Marks	1.00/1.00
Grade	<b>10.00</b> 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 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 v int main() {
3     int n;
4     scanf("%d", &n);
5     int rev = 0, remainder;
6     int counter = 0;
7 v     while(n != 0) {
8         counter++;
9         remainder = n % 10;
10        counter++;
11        rev = rev * 10 + remainder;
12        counter++;
13        n /= 10;
14        counter++;
15    }
16    counter++;
17    counter += 2;
18    printf("%d\n", counter);
19    return 0;
20 }
```

	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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