Problem 1: Finding Complexity using Counter Method

Started on	Thursday, 7 August 2025, 8:17 PM
State	Finished
Completed on	Sunday, 10 August 2025, 7:01 PM
Time taken	2 days 22 hours
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 %)

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```
#include <stdio.h>

void function(int n)
{
    int i = 1;
    int s = 1;
    int counter = 2;

    while (s <= n)
    {
        counter++;
        i++;
        counter++;

        s += i;
        counter++;
    }
}
```

	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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CS23331-DAA-2024-AIML / Problem 2: Finding Complexity using Counter method

Problem 2: Finding Complexity using Counter method

Started on	Sunday, 10 August 2025, 7:01 PM
State	Finished
Completed on	Sunday, 10 August 2025, 7:05 PM
Time taken	3 mins 14 secs
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 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  {
4      int c=0;
5      if(n==1)
6      {
7          printf("*");
8          c++;
9      }
10     else
11     {
12         c++;
13         for(int i=1;i<=n;i++)
14         {
15             for(int j=1;j<=n;j++)
16             {
17                 c+=4;
18                 break;
19             }
20             c++;
21         }
22     }
23     c++;
24     printf("%d",c);
25 }
26 int main()
27 {
28     int n;
29     scanf("%d",&n);
30     func(n);
31 }
```

	Input	Expected	Got	
✔	2	12	12	✔
✔	1000	5002	5002	✔
✔	143	717	717	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

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Question 1 Correct Mark 1.00 out of 1.00 ⚑ Flag question

Problem 3: Finding Complexity using Counter Method

Started on	Sunday, 10 August 2025, 7:05 PM
State	Finished
Completed on	Sunday, 10 August 2025, 7:39 PM
Time taken	34 mins 35 secs
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 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  void fact(int n)
3  {
4      int c=0;
5      for(int i=1;i<=n;i++)
6      {
7          c+=2;
8          if(n%i==0)
9          {
10             c+=1;
11         }
12     }
13     c++;
14     printf("%d",c);
15 }
16 int main()
17 {
18     int n;
19     scanf("%d",&n);
20     fact(n);
21 }
```

	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-AIML / Problem 4: Finding Complexity using Counter Method

Problem 4: Finding Complexity using Counter Method

Started on	Sunday, 10 August 2025, 7:40 PM
State	Finished
Completed on	Sunday, 10 August 2025, 8:01 PM
Time taken	21 mins 18 secs
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 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  void fun(int n)
3  {
4      int c=0;
5      for(int i=n/2;i<n;i++)
6      {
7          c++;
8          c++;
9          for(int j=1;j<n;j=2*j)
10         {
11             c++;
12             c++;
13             for(int k=1;k<n;k=k*2)
14             {
15                 c++;
16                 c++;
17             }
18         }
19     }
20     c++;
21     c++;
22     printf("%d",c);
23  }
24  int main()
25  {
26      int n;
27      scanf("%d",&n);
28      fun(n);
29  }
```

	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	Sunday, 10 August 2025, 7:57 PM
State	Finished
Completed on	Sunday, 10 August 2025, 8:24 PM
Time taken	26 mins 34 secs
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 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 rev(int n)
3   {
4       int r=0,rem,c=0;
5       while(n!=0)
6       {
7           rem=n%10;
8           r=(r*10)+rem;
9           n/=10;
10          c+=4;
11      }
12      c+=3;
13      printf("%d",c);
14  }
15  int main()
16  {
17      int n;
18      scanf("%d",&n);
19      rev(n);
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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