RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 20 August 2025, 10:22 AM
State	Finished
Completed on	Wednesday, 20 August 2025, 10:30 AM
Time taken	8 mins 46 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 %)

```
#include<stdio.h>


void function(int n)
{
    int counter=0;
    int i=1;
    counter++;
    int s=1;
    counter++;
    while(s <=n)
    {
        counter++;
        i++;
        counter++;
        s+=i;
        counter++;
    }
    counter++;
    printf("%d",counter);

}
int main(){


    int n;
    scanf("%d",&n);
    function(n);
    return 0;
}
```

	Input	Expected	Got	
✔	9	12	12	✔

	Input	Expected	Got	
✔	4	9	9	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 20 August 2025, 10:50 AM
State	Finished
Completed on	Thursday, 21 August 2025, 9:49 PM
Time taken	1 day 10 hours
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 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 %)

```c
#include <stdio.h>

int main() {
    int n;
    int count = 0;

    scanf("%d", &n);
    count++;
    if (n == 1) {
        count++;
    } else {
        for (int i = 1; i <= n; i++) {
            count++;
            for (int j = 1; j <= n; j++) {
                count++;
                count++;
                count++;
                break;
            }
            count++;
        }
        count++;
    }

    printf("%d", count);

    return 0;
}
```

	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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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Wednesday, 20 August 2025, 10:54 AM
State	Finished
Completed on	Thursday, 21 August 2025, 11:29 PM
Time taken	1 day 12 hours
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 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:

```c
#include<stdio.h>
void Factor(int num){
int counter=0;
    for(int i=1; i<=num;i++){
         counter++;
         counter++;
        if(num % i==0){
            counter++;
        }

    }
    counter++;
    printf("%d",counter);
}
int main(){
    int num;
    scanf("%d",&num);
    Factor(num);
    return 0;
}
```

	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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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Thursday, 21 August 2025, 11:08 PM
State	Finished
Completed on	Thursday, 21 August 2025, 11:29 PM
Time taken	20 mins 36 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 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:

```
#include<stdio.h>
void function(int n)
{
    int counter=0;
    int c= 0;
    counter++;

    for(int i=n/2; i<n; i++){
        counter++;

        for(int j=1; j<n; j = 2 * j){
            counter++;

            for(int k=1; k<n; k = k * 2){
                counter++;

                c++;
                counter++;
            }
            counter++;
        }
        counter++;
    }
    counter++;
    printf("%d",counter);
}
int main(){
    int n;
    scanf("%d",&n);
    function(n);
    return 0;

}
```

	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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RAJALAKSHMI ENGINEERING COLLEGE

Started on	Thursday, 21 August 2025, 11:16 PM
State	Finished
Completed on	Thursday, 21 August 2025, 11:28 PM
Time taken	12 mins 26 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 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:

```
#include<stdio.h>
void reverse(int n)
{
    int counter=0;
   int rev = 0, remainder;
   counter++;
   counter++;
   while (n != 0)
    {
        counter++;
        remainder = n % 10;
        counter++;
        rev = rev * 10 + remainder;
        counter++;
        n/= 10;
        counter++;

    }
    counter++;
    printf("%d",counter);
}
int main(){
    int n;
    scanf("%d",&n);
    reverse(n);
    return 0;
}
```

	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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