RAJALAKSHMI ENGINEERING COLLEGE

RANJANI S 2024-AIDS

R2

Started on	Thursday, 21 August 2025, 10:33 PM
State	Finished
Completed on	Thursday, 21 August 2025, 10:37 PM
Time taken	3 mins 21 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 %)

```c
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);

    int i = 1, s = 1;
    int counter = 0;

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

    printf("%d\n", counter);
    return 0;
}
```

	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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RANJANI S 2024-AIDS

R2

Started on	Thursday, 21 August 2025, 10:37 PM
State	Finished
Completed on	Thursday, 21 August 2025, 10:48 PM
Time taken	11 mins 27 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 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>
void func(int n) {
    int counter = 0;
    counter++;
    if (n == 1) {
        printf("*");
    } else {
        for (int i = 1; i <= n; i++) {
            counter++;
            for (int j = 1; j <= n; j++) {
                counter++;
                counter++;
                counter++;
                counter++;
                break;
            }
        }
        counter++;
    }
    printf("%d\n", counter);
}
int main() {
    int n;
    scanf("%d", &n);
    func(n);
    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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R2

Started on	Thursday, 21 August 2025, 10:52 PM
State	Finished
Completed on	Thursday, 21 August 2025, 10:55 PM
Time taken	3 mins 21 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.

```
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\n", counter);
}
int main() {
    int n;
    scanf("%d", &n);
    Factor(n);
    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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RANJANI S 2024-AIDS

R2

Started on	Thursday, 21 August 2025, 10:56 PM
State	Finished
Completed on	Thursday, 21 August 2025, 10:58 PM
Time taken	2 mins 10 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>

int main() {
    int n;
    scanf("%d", &n);

    int counter = 0;

    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++;
                counter++;
            }
            counter++;
        }
        counter++;
    }
    counter++;
    counter++;

    printf("%d\n", counter);
    return 0;
}
```

	Input	Expected	Got	
✔	4	30	30	✔

	Input	Expected	Got	
✔	10	212	212	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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RANJANI S 2024-AIDS

R2

Started on	Thursday, 21 August 2025, 10:55 PM
State	Finished
Completed on	Thursday, 21 August 2025, 10:56 PM
Time taken	29 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:

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

    }
  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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