RAJALAKSHMI ENGINEERING COLLEGE

DEVADHARSHINI G 2024-CSE

D2

Started on	Friday, 29 August 2025, 9:43 PM
State	Finished
Completed on	Friday, 29 August 2025, 9:47 PM
Time taken	4 mins 33 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 count = 0;

    count += 2;

    while (s <= n) {
        count++;
        i++;
        count++;
        s += i;
        count++;
    }
    count++;
    printf("%d\n", count);
    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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DEVADHARSHINI G 2024-CSE

D2

Started on	Friday, 29 August 2025, 9:47 PM
State	Finished
Completed on	Saturday, 30 August 2025, 6:51 PM
Time taken	21 hours 3 mins
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(void){
    int n;
    scanf("%d",&n);
    int count=0;

    count++;
    if(n==1){
        count++;
    }else{
        for(int i=1;i<=n;i++){
            count++;
            for(int j=1;j<=n;j++){
                count++;
                count+=2;
                count++;
                break;
            }
        }
        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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DEVADHARSHINI G 2024-CSE

D2

Started on	Saturday, 30 August 2025, 10:07 AM
State	Finished
Completed on	Sunday, 31 August 2025, 9:46 AM
Time taken	23 hours 38 mins
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>

int main() {
    int num;
    int i;
    int counter = 0;

    scanf("%d", &num);
    for (i = 1; i <= num; ++i) {
        counter++;

        counter++;
        if (num % i == 0) {
            counter++;
        }
    }
    counter++;

    printf("%d", counter); // Not counted
    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

DEVADHARSHINI G 2024-CSE

D2

Started on	Saturday, 30 August 2025, 6:48 PM
State	Finished
Completed on	Saturday, 30 August 2025, 6:55 PM
Time taken	7 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.

```
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:

```c
#include <stdio.h>

int main() {
    int n;
    if (scanf("%d", &n) != 1) return 0;

    long long c = 0;

    int i = n / 2;
    c++;
    while (1) {
        c++;
        if (!(i < n)) break;

        int j = 1;
        while (1) {
            c++;
            if (!(j < n)) break;

            int k = 1;
            while (1) {
                c++;
                if (!(k < n)) break;

                c++;
                k = k * 2;
            }

            j = j * 2;
        }

        i++;
    }

    printf("%lld\n", c);
    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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DEVADHARSHINI G 2024-CSE

D2

Started on	Saturday, 30 August 2025, 6:52 PM
State	Finished
Completed on	Sunday, 31 August 2025, 10:00 AM
Time taken	15 hours 7 mins
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 rev = 0, remainder;
    int count = 0;

    while (n != 0) {
        count++;
        remainder = n % 10;
        count++;

        rev = rev * 10 + remainder;
        count++;

        n /= 10;
        count++;
    }
    count++;
    count += 2;

    printf("%d\n", count);
}

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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