| | |
|---|---|
| **Started on** | Tuesday, 20 August 2024, 1:50 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 20 August 2024, 1:56 PM |
| **Time taken** | 6 mins 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 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>
int main(){
    int n;
    int count=0;
    scanf("%d",&n);
    int i=1;
    count++;
    int s=1;
    count++;
    while(s<=n)
    {
        count++;
        i++;
        count++;
        s+=i;
        count++;
    }
    count++;
    printf("%d",count);
    return 0;
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 9 | 12 | 12 | ✔ |
| ✔ | 4 | 9 | 9 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

| | |
|---|---|
| **Started on** | Tuesday, 20 August 2024, 1:58 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 20 August 2024, 2:28 PM |
| **Time taken** | 29 mins 59 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 %)

```
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    int count=0;
    if(n==1)
    {
      count++;
      count++;
    }
    else
    {
        count++;

     for(int i=1; i<=n; i++)
     {
         count++;
         {
        for(int j=1; j<=n; j++)
       {
          count++;
          count++;
          break;
          count++;
       }
       count++;
     }
     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.

◄ Problem 1: Finding Complexity using Counter Method

Jump to...

Problem 3: Finding Complexity using Counter Method ►

| | |
|---|---|
| **Started on** | Tuesday, 20 August 2024, 2:32 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 20 August 2024, 2:35 PM |
| **Time taken** | 3 mins 30 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>
int main() {
    int num;
    int count = 0;
    scanf("%d", &num);

    for (int i = 1; i <= num; ++i) {
        count++;
        if (num % i == 0) {
            count++;
            //printf("%d ", i);
        }
        count++;
    }
    count++;
    printf("%d", count);
    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.

◄ Problem 2: Finding Complexity using Counter method

Jump to...

| | |
|---|---|
| **Started on** | Tuesday, 20 August 2024, 2:39 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 20 August 2024, 2:48 PM |
| **Time taken** | 9 mins 47 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;
    int count=0;
    scanf("%d",&n);
    int c=0;
    count++;
    for(int i=n/2; i<n; i++){
        count++;
        for(int j=1; j<n; j = 2 * j)
        {
            count++;
            for(int k=1; k<n; k = k * 2)
            {
                count++;
                c++;
                count++;
            }
            count++;
        }
        count++;
    }
    count++;
    printf("%d",count);
    return 0;
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 4 | 30 | 30 | ✔ |
| ✔ | 10 | 212 | 212 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ Problem 3: Finding Complexity using Counter Method

Jump to...

Problem 5: Finding Complexity using counter method ►

| | |
|---|---|
| **Started on** | Tuesday, 20 August 2024, 2:49 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 20 August 2024, 2:54 PM |
| **Time taken** | 5 mins 5 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>
int main()
{
   int n;
   scanf("%d",&n);
   int count=0;
   int rev = 0;
   count++;
   int remainder;
   count++;
   while (n != 0)
    {
        count++;
        remainder = n % 10;
        count++;
        rev = rev * 10 + remainder;
        count++;
        n/= 10;
        count++;
    }
    count++;
    printf("%d",count);
    return 0;
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 12 | 11 | 11 | ✔ |
| ✔ | 1234 | 19 | 19 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ Problem 4: Finding Complexity using Counter Method

Jump to...

1-Number of Zeros in a Given Array ►