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| | |
|---------------------|---|
| Started on | Friday, 9 August 2024, 2:12 PM |
| State | Finished |
| Completed on | Friday, 9 August 2024, 2:19 PM |
| Time taken | 6 mins 17 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:

```
1 #include<stdio.h>
2 void fact(int num)
3 {
4     int c=0;
5     for (int i = 1; i <= num;++i)
6     {
7         c++;
8         if (num % i== 0)
9         {
10             //printf("%d ", i);
11             c++;
12         }
13         c++;
14     }
15     c++;
16     printf("%d",c);
17 }
18 int main()
19 {
20     int n;
21     scanf("%d",&n);
22     fact(n);
23 }
```

| | 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](#)

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