



THIVYASRI T 2024-CSE

T2

Started on Monday, 18 August 2025, 8:18 AM**State** Finished**Completed on** Monday, 18 August 2025, 8:21 AM**Time taken** 2 mins 56 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 int main(){
3     int num,i,counter=0;
4     scanf("%d",&num);
5     for(i=1;i<=num;i++){
6         counter++;
7         counter++;
8         if(num%i==0){
9             counter++;
10        }
11    }
12    counter++;
13    printf("%d\n",counter);
14    return 0;
15 }
```

	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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