CS23331-Design and Analysis of Algorithms-2023 Batch-CSE

Quiz navigation

1

Finish review

Started on	Tuesday, 13 August 2024, 1:53 PM
State	Finished
Completed on	Tuesday, 13 August 2024, 1:58 PM
Time taken	5 mins 26 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

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:

```
#include<stdio.h>
int main(){
    int num,count=0;
    scanf("%d",&num);
    int Factor(int num){
        count++;
        for(int i=1;i<=num;++i){
            count++;
            if(num%i==0){
                count++;
                //printf("%d ",i);

            }count++;
        }

        return count;
    }
    printf("%d",Factor(num));

}
```

	Input	Expected	Got	
✔	12	31	31	✔
✔	25	54	54	✔
✔	4	12	12	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

← Problem 2: Finding Complexity using Counter method

Jump to...

Problem 4: Finding Complexity using Counter Method →