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

Quiz navigation

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Finish review

Started on	Friday, 9 August 2024, 1:41 PM
State	Finished
Completed on	Friday, 9 August 2024, 1:51 PM
Time taken	9 mins 34 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:

```c
#include <stdio.h>
void factor(int num)
{
    int c=1;
    for (int i = 1; i <= num;++i)
    {
        c++;
        if (num % i== 0)
        {

            //printf("%d ", i);
            c++;
        }
        c++;
    }
    printf("%d",c);
}
int main(){
    int n;
    scanf("%d",&n);
    factor(n);
}
```

	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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