Dashb... / My cou... / CS23331-DAA-202... / Finding Time Complexity of Al... / Problem 4: Finding Complexity using Count...

Started on	Monday, 26 August 2024, 6:56 PM
State	Finished
Completed on	Monday, 26 August 2024, 7:06 PM
Time taken	9 mins 58 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:

```
 1  #include<stdio.h>
 2  void function(int n)
 3  {
 4      int count=0;
 5      int c= 0;
 6      count++;
 7      for(int i=n/2; i<n; i++){
 8          count++;
 9          for(int j=1; j<n; j = 2 * j){
10              count++;
11              for(int k=1; k<n; k = k * 2){
12                  count++;
13                  c++;
14                  count++;
15              }
16              count++;
17          }
18          count++;
19      }
20      count++;
21      printf("%d",count);
22  }
23
24  int main()
25  {
26      int n;
27      scanf("%d",&n);
28      function(n);
29  }
```

	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

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Problem 5: Finding Complexity using counter method ►