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|---|---|
| **Started on** | Tuesday, 20 August 2024, 2:55 PM |
| **State** | Finished |
| **Completed on** | Tuesday, 3 September 2024, 1:42 PM |
| **Time taken** | 13 days 22 hours |
| **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:**

```c
#include <stdio.h>


int function(int n) {

  int tc = 0;

  int c = 0;

  tc++;

  for (int i = n / 2; i < n; i++) {

    tc++;

    for (int j = 1; j < n; j = 2 * j) {

      tc++;

      for (int k = 1; k < n; k = k * 2) {

        tc++;

        c++;

        tc++;

      }

      tc++;

    }

    tc++;

  }

  tc++;

  return tc;

}

int main() {

  int n;
```

```
49    scanf("%d", &n);
50
51    int tc = function(n);
52
```

| | 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

Jump to...

Problem 5: Finding Complexity using counter method ►