Problem 5: Finding Complexity using counter method

Aim:

Convert the following algorithm into a program and find its time complexity using counter method.

void reverse(int n)  
{  
   int rev = 0, remainder;  
   while (n != 0)   
    {  
        remainder = n % 10;  
        rev = rev \* 10 + remainder;  
        n/= 10;  
          
    }  
print(rev);  
}  
   
**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

algorithm:

1. Read integer n, reverse the number by extracting its digits and updating rev while counting the operations, and finally print the total count.

code:

#include <stdio.h>

int main()

{

int rev = 0, remainder,count=0,n;

count++;

scanf("%d",&n);

while (n != 0)

{

count++;

remainder = n % 10;

count++;

rev = rev \* 10 + remainder;

count++;

n/= 10;

count++;

}

count++;

//printf(rev);

count++;

printf("%d",count);

}

Output:

|  | **Input** | **Expected** | **Got** |  |
| --- | --- | --- | --- | --- |
|  | 12 | 11 | 11 |  |
|  | 1234 | 19 | 19 |  |

Passed all tests!

**Correct**

Marks for this submission: 1.00/1.00.

Result:

The expected output was obtained