Problem NO: 5

Problem Name: Write a c program to check if the number is palindrome or not using recursion.

Input	Output
121	Palindrome
123	Not Palindrome

Source Code:

```c
#include <stdio.h>
int isPalindrome(int num, int originalNum, int reversedNum) {
    if (num == 0) {
        if (originalNum == reversedNum) {
            return 1;
        } else {
            return 0;
        }
    } else {
        int lastDigit = num % 10;
        reversedNum = reversedNum * 10 + lastDigit;
        return isPalindrome(num / 10, originalNum, reversedNum);
    }
}

int main() {
    int num1;
```

```c
    scanf("%d", &num1);


    if (isPalindrome(num1,num1,0)) {

        printf("Palindrome");

    }
else {

        printf("Not Palindrome");

    }

    return 0;

}
```

Result and Analysis:

In this code the ispalindrome function takes three parameters and calls the function recursively itself in return and reverse the digits if it matches the original number.