

```
// Write a C program to find the whether a number is palindrome or not.

#include <stdio.h>

int main() {
    int num, reversedNum = 0, remainder, originalNum;

    // Input from the user
    printf("Enter an integer: ");
    scanf("%d", &num);

    originalNum = num; // Store the original number

    // Reverse the number
    while (num != 0) {
        remainder = num % 10; // Get the last digit
        reversedNum = reversedNum * 10 + remainder; // Build the reversed
number
        num /= 10; // Remove the last digit
    }

    // Check if the original number and reversed number are the same
    if (originalNum == reversedNum) {
        printf("%d is a palindrome.\n", originalNum);
    } else {
        printf("%d is not a palindrome.\n", originalNum);
    }

    return 0;
}
```

Output : --

```
PS D:\2MCA\DSA> ./palindrome.exe
Enter an integer: 123321
123321 is a palindrome.
PS D:\2MCA\DSA> ./palindrome.exe
Enter an integer: 123456
123456 is not a palindrome.
PS D:\2MCA\DSA> █
```

```

// Write a C program to generate a Fibonacci series.

#include <stdio.h>

int main() {
    int n, i;
    unsigned long long first = 0, second = 1, next;

    // Ask the user for the number of terms
    printf("Enter the number of terms in the Fibonacci series: ");
    scanf("%d", &n);

    // Print the Fibonacci series
    printf("Fibonacci Series: \n");

    for (i = 0; i < n; i++) {
        if (i <= 1) {
            next = i; // The first two terms are 0 and 1
        } else {
            next = first + second; // Next term is the sum of the previous two
            first = second; // Update first to the second term
            second = next; // Update second to the next term
        }
        printf("%llu ", next); // Print the current term
    }

    printf("\n"); // New line after the series
    return 0;
}

```

Output : --

```

PS D:\2MCA\DSA> ./Fibonacci.exe
Enter the number of terms in the Fibonacci series: 8
Fibonacci Series:
0 1 1 2 3 5 8 13
PS D:\2MCA\DSA> ./Fibonacci.exe
Enter the number of terms in the Fibonacci series: 10
Fibonacci Series:
0 1 1 2 3 5 8 13 21 34
PS D:\2MCA\DSA> ./Fibonacci.exe
Enter the number of terms in the Fibonacci series: 20
Fibonacci Series:
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181
PS D:\2MCA\DSA> █

```