AIM

To write a C program to generate the Fibonacci series without using recursion.

ALGORITHM

1. Start
2. Read the number of terms `n` to be generated.
3. Initialize first two terms:
    - `a = 0`, `b = 1`.
4. Print `a` and `b`.
5. Repeat from `i = 3` to `n`:
    - `c = a + b`
    - Print `c`
    - Update `a = b`, `b = c`.
6. End loop.
7. End

CODE:

```
#include <stdio.h>

int main() {
    int n, i;
    int a = 0, b = 1, c;

    printf("Enter the number of terms: ");
    scanf("%d", &n);

    if (n <= 0) {
        printf("Invalid input! Number of terms should be greater than 0.\n");
    } else {
        printf("Fibonacci Series: ");
```

```
        if (n == 1) {
            printf("%d", a);
        } else {
            printf("%d %d ", a, b);
            for (i = 3; i <= n; i++) {
                c = a + b;
                printf("%d ", c);
                a = b;
                b = c;
            }
        }
    }

    printf("\n\nProgram executed successfully - Fibonacci series
generated.\n");
    return 0;
}
```

INPUT AND OUTPUT

```
Enter the number of terms: 4
Fibonacci Series: 0 1 1 2

Program executed successfully - Fibonacci series generated.


=== Code Execution Successful ===
```

RESULT

The C program to generate the Fibonacci series (without using recursion) was successfully executed and the expected output was obtained