Aim

To write a C program to generate the Fibonacci series using recursion.

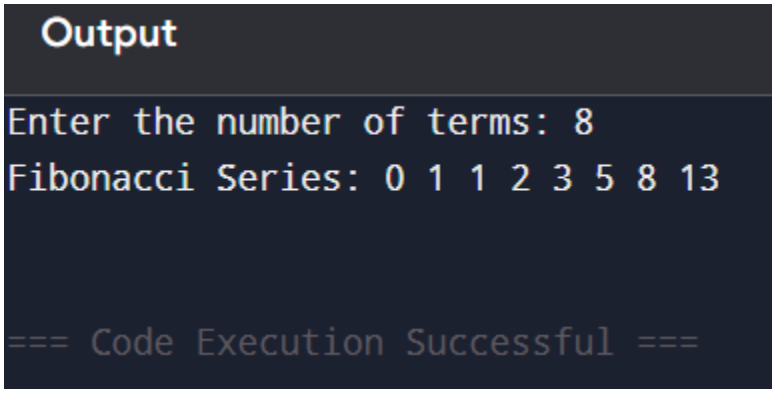
Algorithm

1. Start the program.
2. Define a recursive function `fibonacci(n)` that:
    - Returns `0` if `n == 0`.
    - Returns `1` if `n == 1`.
    - Otherwise, returns `fibonacci(n-1) + fibonacci(n-2)`.
3. In `main()`, read how many terms to display.
4. Call `fibonacci(i)` for each term from `0` to `n-1`.
5. Print the series.
6. End the program.

CODE:

```
#include <stdio.h>

// Recursive function to calculate Fibonacci number
int fibonacci(int n) {
    if (n == 0)
        return 0;
    else if (n == 1)
        return 1;
    else
        return fibonacci(n - 1) + fibonacci(n - 2);
}

int main() {
    int n, i;

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

    printf("Fibonacci Series: ");
    for (i = 0; i < n; i++) {
        printf("%d ", fibonacci(i));
    }
    printf("\n");

    return 0;
}
```

OUTPUT:



RESULT:

The program successfully executed and displayed the fibonacci series using recursion.