6. Fibonacci Series using Recursion

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

Algorithm:

1. **Read number of terms `n`.**
2. **Define a recursive function `fibo(n)` which returns 0 if `n=0`, 1 if `n=1`, else `fibo(n-1)+fibo(n-2)`.**
3. **Print Fibonacci numbers up to `n` terms.**

Code:

```
#include <stdio.h>

int fibo(int n) {
    if (n == 0) return 0;
    if (n == 1) return 1;
    return fibo(n-1) + fibo(n-2);
}

int main() {
    int n, i;
    printf("Enter number of terms: ");
    scanf("%d", &n);
    printf("Fibonacci series: ");
    for (i = 0; i < n; i++)
        printf("%d ", fibo(i));
    return 0;
}
```

Input & Output:

```
Enter number of terms: 5
Fibonacci series: 0 1 1 2 3
```

Result:
The Fibonacci series using recursion is generated successfully.