S.No: 39	Exp. Name: *Write a C program to display the Fibonacci series up to the given number of terms using Recursion*	Date:2025-01-01

Aim:

Write a program to display the fibonacci series up to the given number of terms using recursion process.

The fibonacci series is 0 1 1 2 3 5 8 13 21 34......

Note: Write the recursive function **fib()** in fibonacci1.c.

Source Code:

fibonacci.c

```c
#include <stdio.h>
#include "fibonacci1.c"
void main() {
    int n, i;
    printf("Enter value of n : ");
    scanf("%d", &n);
    printf("The fibonacci series of %d terms are : ", n);
    for (i = 0; i < n; i++) {
        printf(" %d ", fib(i));
    }
}
```

fibonacci1.c

```c
int fib(int n)
{
    if(n<=1)
    {
        return n;
    }
    else{
        return fib(n-1)+fib(n-2);
    }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter value of n : 4
The fibonacci series of 4 terms are : 0 1 1 2

Test Case - 2
User Output
Enter value of n : 8
The fibonacci series of 8 terms are : 0 1 1 2 3 5 8 13

Test Case - 3
User Output
`Enter value of n : 14`
`The fibonacci series of 14 terms are : 0 1 1 2 3 5 8 13 21 34 55 89 144 233`

Test Case - 4
User Output
`Enter value of n : 3`
`The fibonacci series of 3 terms are : 0 1 1`