S.No: 43	Exp. Name: *Write a C program to display the Fibonacci series up to the given number of terms using Recursion*	Date:2023-01-18

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...... .

At the time of execution, the program should print the message on the console as:

Enter value of n :

For example, if the user gives the **input** as:

Enter value of n : 6

then the program should **print** the result as:

The fibonacci series of 6 terms are : 0 1 1 2 3 5

Note: Write the recursive function **fib()** in Program908a.c .

Source Code:

Program908.c

```c
#include <stdio.h>
#include "Program908a.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));
    }
}
```

Program908a.c

```c
int fib(int n);
int fib(int n)
{
    if(   n==0)
    return 0;
    else if(n==1)
    return 1;
    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