S.No: 42	Exp. Name: *Write a C program to print the Fibonacci series up to the given limit using Functions*	Date:2023-01-17

Aim:

Write a program to print the `Fibonacci series` up to the given limit.

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

```
Enter the maximum limit to generate the Fibonacci series :
```

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

```
Enter the maximum limit to generate the Fibonacci series : 15
```

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

```
The Fibonacci series is : 0 1 1 2 3 5 8 13
```

Note: Write the function **fibonacci()** in `Program708a.c`.

Source Code:

Program708.c

```c
#include <stdio.h>
#include "Program708a.c"
void main() {
    int number;
    printf("Enter the maximum limit to generate the Fibonacci series : ");
    scanf("%d", &number);
    fibonacci(number);
}
```

Program708a.c

```c
int fibonacci(int num)
{
    int i,fb1=0,fb2=1,fb3;
    printf("The Fibonacci series is : ");
    printf("%i %i",fb1,fb2);
    fb3=fb1+fb2;
    while(fb3<num)
    {
        printf(" %i",fb3);
        fb1=fb2;
        fb2=fb3;
        fb3=fb1+fb2;
    }
    printf("\n");
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the maximum limit to generate the Fibonacci series : 30
The Fibonacci series is : 0 1 1 2 3 5 8 13 21