S.No: 42	Exp. Name: ***Write a C program to print the Fibonacci series up to the given limit using Functions***	Date:2023-01-19

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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

```
#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

```
void (fibonacci(int num))
{
   int i,fib1=0,fib2=1,fib3;
   printf("The Fibonacci series is : ");
   printf("%i %i",fib1,fib2);
   fib3=fib1+fib2;
   while(fib3<num)
   {
      printf(" %i",fib3);
      fib1=fib2;
      fib2=fib3;
      fib3=fib1+fib2;
   }
   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