Task No 01: Write a code which prints the following series:

2 4 8 1 6 - - - - - - - - - n

Task No 02: Write a program to calculate factorial of any given number using recursion.

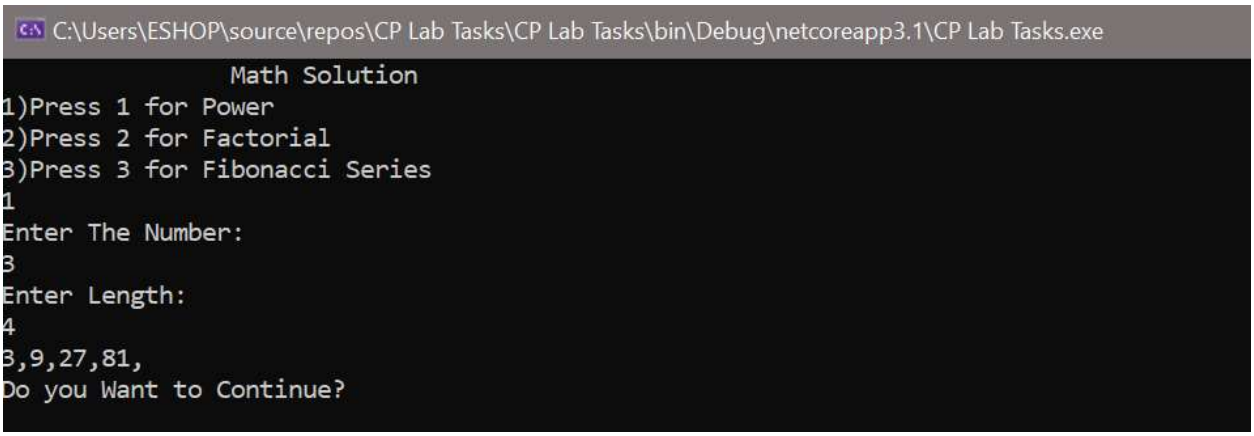
Task No 03: Write a program to print Fibonacci series using recursion.

Input:

```
using System;
namespace CP_Lab_Tasks
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("\t\tMath Solution");
            Console.WriteLine("1)Press 1 for Power\n2)Press 2 for Factorial\n3)Press 3
for Fibonacci Series");
            int op = Convert.ToInt32(Console.ReadLine());
            if (op == 1)
            {
                Console.WriteLine("Enter The Number:");
                int num = Convert.ToInt32(Console.ReadLine());
                Console.WriteLine("Enter Length:");
                int num1 = Convert.ToInt32(Console.ReadLine());
                for (int i = 1; i <= num1; i++)
                {
                    Console.Write("{0},", Pow(num, i));
                }
                Console.WriteLine("\nDo you Want to Continue?");
                string rep = Console.ReadLine();
                if (rep == "y" || rep == "Yes" || rep == "yes" || rep == "Y")
                {
                    Main(args);
                }
            }
            if (op == 2)
            {
                Console.WriteLine("Enter Number u want Factorial:");
                int fac = Convert.ToInt32(Console.ReadLine());
                Console.WriteLine("{0}!={1}", fac, Factorial(fac));
                Console.WriteLine("Do you Want to Continue?");
                string rep = Console.ReadLine();
                if (rep == "y" || rep == "Yes" || rep == "yes" || rep == "Y")
                {
                    Main(args);
                }
            }
            if (op == 3)
            {
                Console.WriteLine("Enter the number for fibnonacci Series:");
                int number = Convert.ToInt32(Console.ReadLine());
```

```
                for (int i = 1; i <= number; i++)
                {
                    Console.Write(" {0} ", Fib(i));
                }
                Console.WriteLine("\nDo you Want to Continue?");
                string rep = Console.ReadLine();
                if (rep == "y" || rep == "Yes" || rep == "yes" || rep == "Y")
                {
                    Main(args);
                }
            }
        }
        public static int Factorial(int num)
        {
            if (num <= 1)
            {
                return 1;
            }
            else
                return num * Factorial(num - 1);
        }
        static int Pow(int a, int b)
        {
            if (b == 0)
            {
                return 1;
            }
            else
            {
                return (a * Pow(a, b - 1));
            }
        }
        public static int Fib(int num)
        {
            if (num == 0)
            {
                return 0;
            }
            if (num == 1)
            {
                return 1;
            }
            else
            {
                return Fib(num - 1) + Fib(num - 2);
            }
        }
    }
}
```

Output:


C:\Users\ESHOP\source\repos\CP Lab Tasks\CP Lab Tasks\bin\Debug\netcoreapp3.1\CP Lab Tasks.exe
Math Solution
1)Press 1 for Power
2)Press 2 for Factorial
3)Press 3 for Fibonacci Series
1
Enter The Number:
3
Enter Length:
4
3,9,27,81,
Do you Want to Continue?