

Task 2: Fibonacci Sequence

The Fibonacci Sequence is the series of numbers:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, ...

The next number is found by adding up the two numbers before it.

Working Procedure:

When I run the software at first it display a message for asking insert a number. In this software have a `Fib()` method and it have an integer parameter. After taking input it go to `Fib()` method with this number and then find the Fibonacci sequence number. After finding the number it shows the number in the display.

Algorithm:

At first take a variable. Then convert string input to number. Then create a function that name is `Fib()` and it has integer parameter. Then call this function. In this function I calculate and get the Fibonacci sequence number.

Exception Handling:

In this program I use try catch for error handling. If the program have any problem or if the user insert any string value then it show an error message.

Code:

```
class Program
{
    static int Fib(int n)
    {
        int a = 0, b = 1, c = 0;

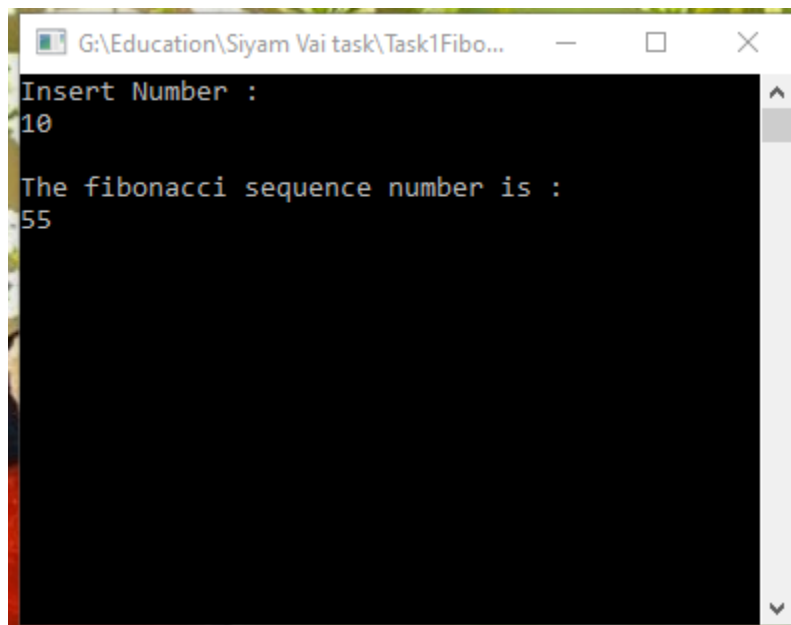
        // To return the first Fibonacci number
        if (n == 0) return a;

        for (int i = 2; i <= n; i++)
        {
            c = a + b;
            a = b;
            b = c;
        }

        return b;
    }

    // Driver function
    public static void Main(string[] args)
    {
        Console.WriteLine("Insert Number : ");
        try
        {
            int n = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("\nThe fibonacci sequence number is :");
            Console.Write("{0} ", Fib(n)); //calling fib() method
            Console.ReadLine();
        }
        catch (Exception ex)
        {
            Console.WriteLine("\nInput is not valid");
            Console.ReadLine();
        }
    }
}
```

Output:



The screenshot shows a console window titled "G:\Education\Siyam Vai task\Task1Fibo...". The output text is as follows:

```
Insert Number :
10

The fibonacci sequence number is :
55
```