Assignment 13.2

Problem Statement :-

A Fibonacci series (starting from 1) written in order without any spaces in between, thus producing a sequence of digits.

Write a Scala application to find the nth digit in the sequence.

Write the function using standard for loop

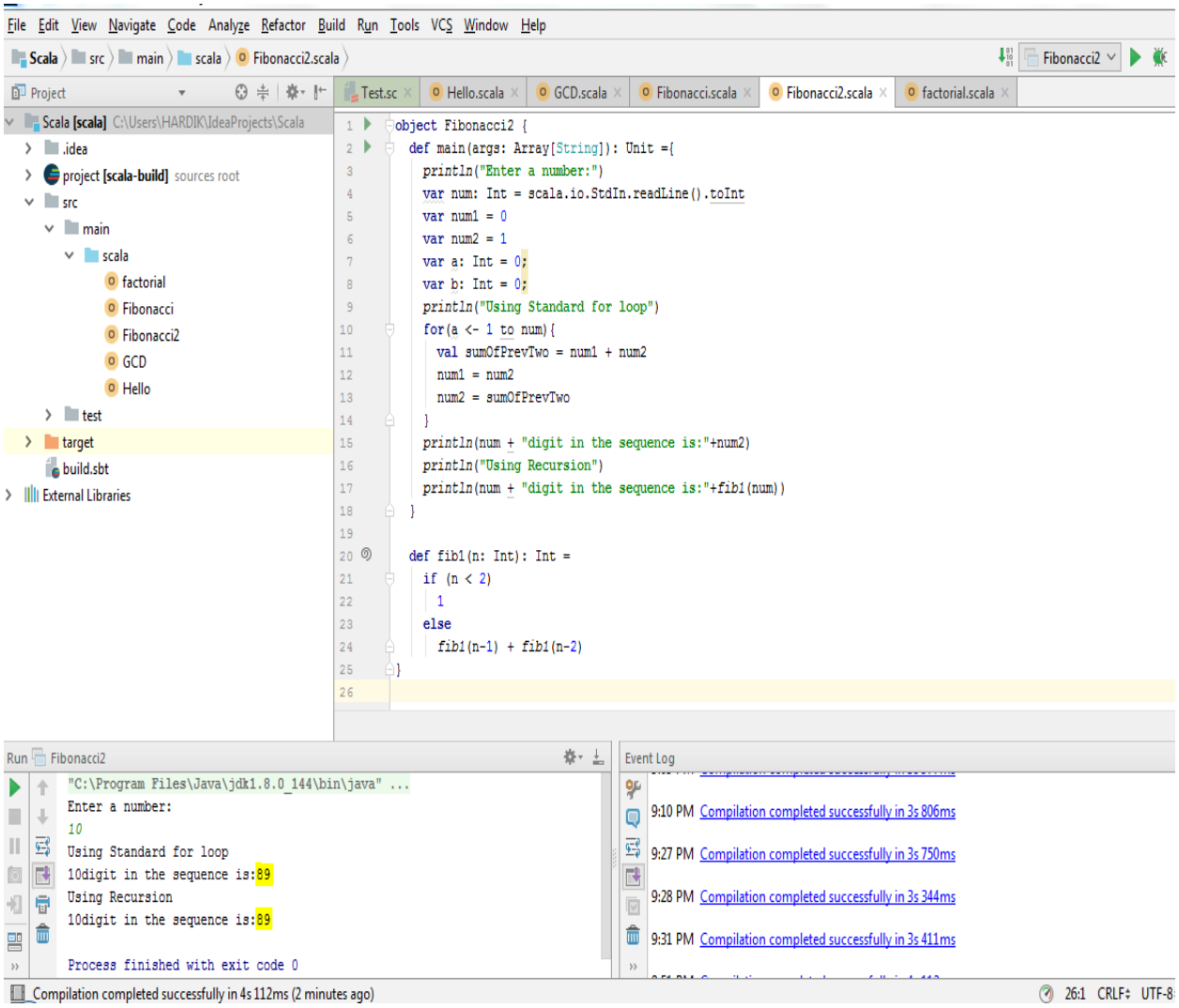
Write the function using recursion

Solution:-

The Scala Application for the above Problem Statement is as follows:-

```
object Fibonacci2 {
  def main(args: Array[String]): Unit ={
    println("Enter a number:")
    var num: Int = scala.io.StdIn.readLine().toInt
    var num1 = 0
    var num2 = 1
    var a: Int = 0;
    var b: Int = 0;
    println("Using Standard for loop")
    for(a <- 1 to num){
      val sumOfPrevTwo = num1 + num2
      num1 = num2
      num2 = sumOfPrevTwo
```

```
    }
    println(num + "digit in the sequence is:"+num2)
    println("Using Recursion")
    println(num + "digit in the sequence is:"+fib1(num))
  }
  def fib1(n: Int): Int =
    if (n < 2)
      1
    else
      fib1(n-1) + fib1(n-2)
}
```



Submitted By:-

Hardik Kaushik