Assignment 13.2

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.

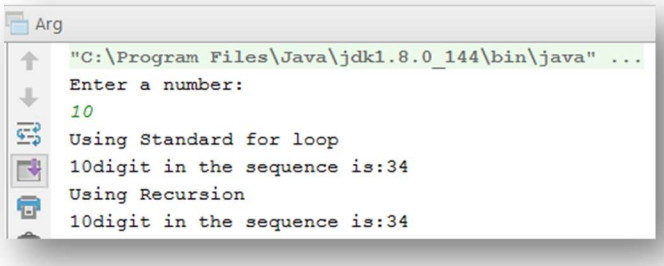
- Write the function using standard for loop
- Write the function using recursion

Test.sc | Arg.scala

```
object Arg{
  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-1){
      val sumOfPrevTwo = num1 + num2
      num1 = num2
      num2 = sumOfPrevTwo
    }
    println(num + "digit in the sequence is:"+num1)
    println("Using Recursion")
    println(num + "digit in the sequence is:"+fib1(num-2))
  }

  def fib1(n: Int): Int =
    if (n < 2)
      1
    else
      fib1(n-1) + fib1(n -2)
}
```

Output:


Arg
"C:\Program Files\Java\jdk1.8.0_144\bin\java" ...
Enter a number:
10
Using Standard for loop
10digit in the sequence is:34
Using Recursion
10digit in the sequence is:34