Bigdata assignment 5.2

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

Solution-

**object Fibonacci {**

**//recursive fibonacci function**

**def fib\_recursive(n: Int):Int = {**

**if(n==1){**

**0**

**}**

**else if(n==2){**

**1**

**}**

**else {**

**fib\_recursive(n-1)+fib\_recursive(n-2)//recursive call**

**}**

**}**

**//fibonacci function using loop**

**def fib\_loop(n :Int) : Int = {**

**if(n == 1){**

**return 0**

**}**

**else**

**if(n == 2){**

**return 1**

**}**

**var a = 0**

**var b = 1**

**var i = 1**

**while(i<n){//loop**

**val c = a+b**

**a = b**

**b = c**

**i = i+1**

**}**

**return a**

**}**

**def main(args: Array[String]){**

**println(args(0)+" position in fibonacci series is "+fib\_loop(args(0).toInt)+" using loop")**

**println(args(0)+" position in fibonacci series is "+fib\_recursive(args(0).toInt)+" using recusrion")**

**}**

**}**

Input - 7

Output -

From the below screenshot it , in the console we can see that the 7th term in fibonacci series is 8. Both the output are same using function using loop and other using recursive function

