Session 13 : SCALA Session II

Assignment 2 Questions

**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:-**

Scala Project - 

Code –

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\* This class provides two methods to find Nth number in fibonacci series

\*/

**class** FibonacciSeries {

/\*\*

\* Method to find Nth number in fibonacci series using for loop

\*/

**def** findViaLoop(n: Int) = {

**if** (n < 2) n

**else** {

**var** ans = 0

**var** n1 = 0

**var** n2 = 1

**for** (i <- n-1 to 1 by -1)

{

ans = n1 + n2

n1 = n2

n2 = ans

}

ans

}

}

/\*\*

\* Method to find Nth number in fibonacci series using recursion

\*/

**def** findViaRecursion(n: Int): Int = {

n **match** {

**case** i **if** i < 2 => i

**case** i => findViaRecursion(n-1) + findViaRecursion(n-2)

}

}

}

//Main object

**object** mainObj

{

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

**var** obj = **new** FibonacciSeries();

**val** fibLoop = 5;

**val** fibRecur = 3;

//Passing fibLoop as parameter to FibonacciSeries.findViaLoop method to determine Nth fibonacci number

println(fibLoop+" Fibonacci number using For Loop: " +obj.findViaLoop(fibLoop));

//Passing fibRecur as parameter to FibonacciSeries.findViaRecursion method to determine Nth fibonacci number

println(fibRecur+" Fibonacci number using Recursion: " +obj.findViaRecursion(fibRecur));

}

}

Output screenshots:-



