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Test Name:

**Mock Test** 

Ankush

Taken On:

6 Jun 2022 17:15:24 IST

Time Taken: Invited by:

19 min 26 sec/ 20 min

Invited on:

6 Jun 2022 17:15:01 IST

Skills Score:

Tags Score:

Algorithms 120/120

Core CS 120/120

Dynamic Programming 120/120

Medium 120/120

problem-solving 120/120

100% 120/120

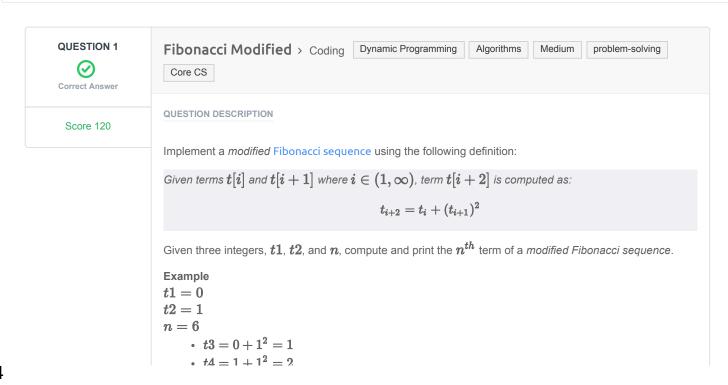
scored in Mock Test in 19 min 26 sec on 6 Jun 2022 17:15:24

IST

#### **Recruiter/Team Comments:**

No Comments.

	Question Description	Time Taken	Score	Status
Q1 Fibonacci Modified >	Coding	19 min 7 sec	120/ 120	<b>Ø</b>



•  $t5 = 1 + 2^2 = 5$ •  $t6 = 2 + 5^2 = 27$ 

Return 27.

### **Function Description**

Complete the *fibonacciModified* function in the editor below. It must return the  $n^{th}$  number in the sequence.

fibonacciModified has the following parameter(s):

- int t1: an integer
- int t2: an integer
- int n: the iteration to report

#### Returns

•  $\mathit{int}$ : the  $n^{th}$  number in the sequence

**Note:** The value of t[n] may far exceed the range of a 64-bit integer. Many submission languages have libraries that can handle such large results but, for those that don't (e.g., C++), you will need to compensate for the size of the result.

#### **Input Format**

A single line of three space-separated integers, the values of  $\emph{t1}$ ,  $\emph{t2}$ , and  $\emph{n}$ .

#### **Constraints**

- $0 \le t1, t2 \le 2$
- $3 \le n \le 20$
- $t_n$  may far exceed the range of a 64-bit integer.

## Sample Input

```
0 1 5
```

### **Sample Output**

5

## **Explanation**

The first two terms of the sequence are t1=0 and t2=1, which gives us a modified Fibonacci sequence of  $\{0,1,1,2,5,27,\ldots\}$ . The  $5^{th}$  term is 5.

## **CANDIDATE ANSWER**

# Language used: Java 8

```
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.function.*;
import java.util.regex.*;
import java.util.stream.*;
import static java.util.stream.Collectors.joining;
import static java.util.stream.Collectors.toList;
```

```
/*
       * Complete the 'fibonacciModified' function below.
       * The function is expected to return an INTEGER.
        * The function accepts following parameters:
       * 1. INTEGER t1
       * 2. INTEGER t2
       * 3. INTEGER n
       */
       public static String fibonacciModified(BigDecimal t1, BigDecimal t2, int
28 n) {
           if(n == 1) return t1.toString();
          if(n == 2) return t2.toString();
           BigDecimal tNext = t1.add(t2.pow(2));
          return fibonacciModified(t2, tNext, --n);
37 }
39 public class Solution {
     public static void main(String[] args) throws IOException {
          BufferedReader bufferedReader = new BufferedReader(new
42 InputStreamReader(System.in));
           BufferedWriter bufferedWriter = new BufferedWriter(new
44 FileWriter(System.getenv("OUTPUT PATH")));
           String[] firstMultipleInput =
47 bufferedReader.readLine().replaceAll("\\s+$", "").split(" ");
           BigDecimal t1 = new BigDecimal(firstMultipleInput[0]);
           BigDecimal t2 = new BigDecimal(firstMultipleInput[1]);
           int n = Integer.parseInt(firstMultipleInput[2]);
           String result = Result.fibonacciModified(t1, t2, n);
           bufferedWriter.write(String.valueOf(result));
           bufferedWriter.newLine();
           bufferedReader.close();
           bufferedWriter.close();
       }
```

TESTCASE	DIFFICULTY	TYPE	STATUS	SCORE	TIME TAKEN	MEMORY USED
Testcase 1	Easy	Sample case	Success	0	0.1115 sec	23.9 KB
Testcase 2	Easy	Sample case	Success	0	0.0943 sec	24 KB
Testcase 3	Easy	Hidden case	Success	15	0.1766 sec	38.4 KB
Testcase 4	Easy	Hidden case	Success	15	0.4377 sec	52.4 KB
Testcase 5	Easy	Hidden case	Success	15	0.1174 sec	24.7 KB
Testcase 6	Easy	Hidden case	Success	15	0.0935 sec	24 KB
Testcase 7	Easy	Hidden case	<b>⊘</b> Success	15	0.5395 sec	58.2 KB
Testcase 8	Easy	Hidden case	Success	15	0.1218 sec	24.1 KB

	Testcase 9	Easy	Hidden case	Success	15	0.0931 sec	24.2 KB	
	Testcase 10	Easy	Hidden case	Success	15	0.089 sec	23.6 KB	
N	o Comments							

PDF generated at: 6 Jun 2022 12:06:49 UTC