**Ex No: 3(b) Roll no:231901002**

**Date: 29.01.2025**

**Shell Script – Fibonacci Series**

**Aim:**

To write a Shell script to generate a Fibonacci series using a for loop.



**Algorithm:**

1. Start the script.
2. Prompt the user to enter a limit number.
3. Read the input.
4. Initialize the first two Fibonacci numbers (a = 0, b = 1).
5. Use a loop to generate and print Fibonacci numbers up to the given number.
6. Continue until the number exceeds the input.
7. End the script.



**Program: (indhu.sh)**

#!/bin/bash

# Script to generate Fibonacci series using for loop

echo "Enter number:" read n

a=0 b=1

echo "Fibonacci series:" echo $a

echo $b

for (( i=0; i<n; i++ ))

CS23431-OPERATING SYSTEMS R o l l N o : 2 3 1 9 0 1 0 3 3

do

fib=$((a + b))

if [ $fib -gt $n ]; then break

fi

echo $fib a=$b

b=$fib done



**Sample Input and Output:** [REC@localhost ~]$ sh indhu.sh Enter number:

21

Fibonacci series:

0

1

1

2

3

5

8

13

21



**Result:**

The Shell script to generate a Fibonacci series using a for loop was successfully implemented, executed, and the output was verified.

