Ex No: 3(b)   **Shell Script – Fibonacci Series**

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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++ ))
```

```
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.