

Ex No: 3(b) Shell Script – Fibonacci Series**Date: 29.01.2025****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

Fibonacciseries:

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.