

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.
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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.
