

**Ex. No.: 3(b)**

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### **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++ ))
```

```
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.