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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.
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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++ ))
```

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```
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.
