

Practical – 1

#Recursive:-

```
def fibonacci(n):  
    if(n <= 1):  
        return n  
    else:  
        return(fibonacci(n-1) + fibonacci(n-2))  
n = int(input("Enter number of terms:"))  
print("Fibonacci sequence:")  
for i in range(n):  
    print(fibonacci(i))
```

#Non-Recursive:-

```
a=int(input("Enter the first number of the series "))  
b=int(input("Enter the second number of the series "))  
n=int(input("Enter the number of terms needed "))  
print(a,b,end=" ")  
while(n-2):  
    c=a+b  
    a=b  
    b=c
```

```
print(c,end=" ")
```

```
n=n-1
```

Output

```
>>> = RESTART: C:/Users/Harshal Gunjal/AppData/Local/Programs/Python/Python310/fib recursive.py
Enter number of terms:10
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
>>>
```

```
>>> = RESTART: C:/Users/Harshal Gunjal/AppData/Local/Programs/Python/Python310/fib non recursive.py
Enter the first number of the series 0
Enter the second number of the series 1
Enter the number of terms needed 10
0 1 1 2 3 5 8 13 21 34
>>>
```