**PRACTICAL NO. - 1**

# Program to display the Fibonacci sequence up to n-th term (Iterative)

nterms = int(input("How many terms? "))

# first two terms

n1, n2 = 0, 1

count = 0

# check if the number of terms is valid

if nterms <= 0:

print("Please enter a positive integer")

elif nterms == 1:

print("Fibonacci sequence upto", nterms, ":")

print(n1)

else:

print("Fibonacci sequence:")

while count < nterms:

print(n1)

nth = n1 + n2

# update values

n1 = n2

n2 = nth

count += 1

OUTPUT:

(base) kjcoemr@kjcoemr-HP-Pro-SFF-280-G9-Desktop-PC:~/Desktop/BE-15$ python practical3\_iterative.py

How many terms? 9

Fibonacci sequence:

0

1

1

2

3

5

8

13

21

# Python program to display the Fibonacci sequence using recursion

def recur\_fibo(n):

if n <= 1:

return n

else:

return recur\_fibo(n - 1) + recur\_fibo(n - 2)

nterms = 9

# check if the number of terms is valid

if nterms <= 0:

print("Please enter a positive integer")

else:

print("Fibonacci sequence:")

for i in range(nterms):

print(recur\_fibo(i))  
  
  
(base) kjcoemr@kjcoemr-HP-Pro-SFF-280-G9-Desktop-PC:~/Desktop/BE-15$ python practical3\_recursive.py

Fibonacci sequence:

0

1

1

2

3

5

8

13

21