**Code**

# Non-Recursive

def fibonacci\_iterative(n):

if n <= 0:

return "Invalid input. Please enter a positive integer."

if n == 1:

return 0

elif n == 2:

return 1

fib\_prev = 0

fib\_current = 1

for \_ in range(2, n):

fib\_next = fib\_prev + fib\_current

fib\_prev, fib\_current = fib\_current, fib\_next

return fib\_current

def main():

n = int(input("Enter the value of 'n' to calculate the nth Fibonacci number (iterative): "))

fib\_result = fibonacci\_iterative(n)

print(f"The {n}th Fibonacci number (iterative) is: {fib\_result}")

if \_\_name\_\_ == "\_\_main\_\_":

main()

**Output**

Enter the value of 'n' to calculate the nth Fibonacci number (iterative): 10

The 10th Fibonacci number (iterative) is: 34

**Code**

# Recursive

def fibonacci\_recursive(n):

if n <= 0:

return "Invalid input. Please enter a positive integer."

if n == 1:

return 0

elif n == 2:

return 1

else:

return fibonacci\_recursive(n - 1) + fibonacci\_recursive(n - 2)

def main():

n = int(input("Enter the value of 'n' to calculate the nth Fibonacci number (recursive): "))

fib\_result = fibonacci\_recursive(n)

print(f"The {n}th Fibonacci number (recursive) is: {fib\_result}")

if \_name\_ == "\_\_main\_\_":

main()

**Output**

Enter the value of 'n' to calculate the nth Fibonacci number (recursive): 7

The 7th Fibonacci number (recursive) is: 8