DATE: 06/06/2024

14.Write a program that demonstrate the mathematcal analysis of non

recursive and recursive algorithms.

AIM: To fnd demonstrate the mathematcal analysis of non recursive and

recursive algorithms.

CODE:

def non\_recursive\_algorithm(n):

result = 0

for i in range(1, n+1):

result += i

return result

def recursive\_algorithm(n):

if n == 0:

return n + recursive\_algorithm(n-1)

n = 5

non\_recursive\_result = non\_recursive\_algorithm(n)

recursive\_result = recursive\_algorithm(n)

print(f"Non-Recursive Algorithm Result for n={n}: {non\_recursive\_result}")

print(f"Recursive Algorithm Result for n={n}: {recursive\_result}")

OUTPUT:

