14) Write C programs that demonstrate the mathematical analysis of non-recursive and recursive algorithms

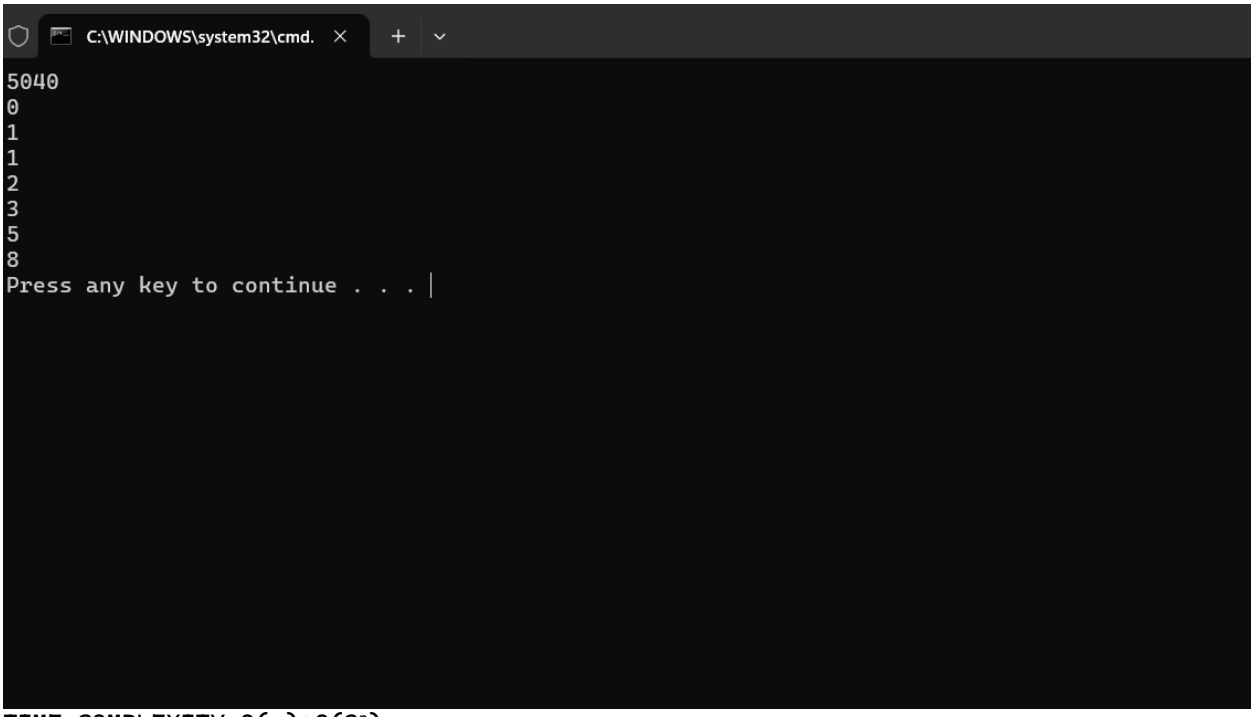
CODE:

```
def factorial_iterative(n):
    result = 1
    for i in range(1, n + 1):
        result *= i
    return result

def fibonacci_recursive(n):
    if n <= 1:
        return n
    else:
        return fibonacci_recursive(n-1) + fibonacci_recursive(n-2)

a=7
print(factorial_iterative(a))
for i in range(a):
    print(fibonacci_recursive(i))
```

OUTPUT:



TIME COMPLEXITY $O(n)+O(2^n)$