EXPERIMENT NO: 01

1. Non-Recursive (Iterative) Fibonacci Program

```
def fibonacci_iterative(n):
    if n < 0:
        return "Invalid input"
    elif n == 0:
        return 0
    elif n == 1:
        return 1
    a, b = 0, 1
    for _ in range(2, n + 1):
        a, b = b, a + b
    return b
n = 10
print(f"Fibonacci of {n} (Iterative): {fibonacci_iterative(n)}")
```

2. Recursive Fibonacci Program

```
def fibonacci_recursive(n):
    if n < 0:
        return "Invalid input"
    elif n == 0:
        return 0
    elif n == 1:
        return 1
        return fibonacci_recursive(n - 1) + fibonacci_recursive(n - 2)
```

OUTPUT:-

```
Fibonacci of 10 (Iterative): 55
Fibonacci of 10 (Recursive): 55
```