Practical No 1

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Code :-

```
def fibonacci_iter(n):
    if n < 0:
        return -1, 1
    if n == 0 or n == 1:
        return n, 1
    steps = 0
    a = 0
    b = 1
    for i in range(2, n+1):
        c = a + b
        a = b
        b = c
        steps += 1
    return c, steps+1

def fibonacci_recur(n):
    if n < 0:
        return -1, 1
    if n == 0 or n == 1:
        return n, 1
    fib1, steps1 = fibonacci_recur(n-1)
    fib2, steps2 = fibonacci_recur(n-2)
    return fib1 + fib2, steps1 + steps2 + 1

if __name__== '__main__':
```

```
n = int(input("Enter a number: "))
print("Iterative:", fibonacci_iter(n)[0])
print("Steps:", fibonacci_iter(n)[1])
print("Recursive:", fibonacci_recur(n)[0])
print("Steps:", fibonacci_recur(n)[1])
```

Output :-