Assignment 1

Recursive

main.py

```python
def recur_fibo(n):
    if n <= 1:
        return n
    else:
        return(recur_fibo(n-1) + recur_fibo(n-2))

nterms = 10

# check if the number of terms is valid
if nterms <= 0:
    print("Plese enter a positive integer")
else:
    print("Fibonacci sequence:")
    for i in range(nterms):
        print(recur_fibo(i))
```

input

```
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34


...Program finished with exit code 0
Press ENTER to exit console.
```

Non-recursive

main.py

```python
def fib(n):
    if n == 1:
        return [1]
    if n == 2:
        return [1, 1]
    fibs = [1, 1]
    for _ in range(2, n):
        fibs.append(fibs[-1] + fibs[-2])
    return fibs
print(fib(3))
```

```
[1, 1, 2]


...Program finished with exit code 0
Press ENTER to exit console.
```