

Jacob Esswein

Project 1

Part B

CS 3130

Professor Galina

**Code:** def main():

```
    userNum = -1    #Initialize variable for user input
```

```
    while userNum < 0:    #Verification loop for user input
```

```
        userNum = int(input("Enter a positive number: "))
```

```
        if userNum < 0:
```

```
            print("Invalid number")
```

```
    print(fibIter(userNum))    #fibIter functuion call
```

```
def fibIter(userNum):
```

```
    if userNum == 0:    #first fib number is 0
```

```
        return 0
```

```
    elif userNum == 1:    #Second fib number is 1
```

```
        return 1
```

```
    elif userNum == 2:    #Third fib number is 1
```

```
        return 1

    elif userNum == 3:    #4th fib number is 2

        return 2

    elif userNum > 3:    # Iterative loop for fib sequence

        fn = 0

        fn1 = 1

        fn2 = 2

        for i in range(3, userNum):    #Loop for numbers between 3 and user input

            fn = fn1 + fn2            #Fib sequence definition

            fn1 = fn2                #Swap

            fn2 = fn

        return fn

    else:

        return -1

main()
```

### Execution:

```
essweg@LAPTOP-31SK84E0:/mnt/c/Users/esswe/Documents/Coding/algorithms/project1$ python3 ESSJ1B.py
Enter a positive number: 10
55
```