Programmer Manual for Project 3

How to run the code:

- Get a copy of the following files:
  - **Proj3.ASM**
  - **iofar.lib**
  - **compile.bat**

- Save the files to the following drive path: **C:\tasm\tasm\cs221\p3**

- Click on the **DOS box** icon and watch the console open.

- At the DOS box prompt, make sure to change directory to your **P3** file with the specified path listed.
  - Console should now look like this:

```
C:\TASM\CS221\P3>
```

- To Assemble and Link the source file, type the following line:

```
compile
```

  - Console should now look like this:

```
C:\TASM\CS221\P3>compile
```

- **Press enter key, Proj3.EXE is now generated,** to run the program at the prompt type:

```
Proj3
```

When the program executes: The program will prompt the user for:

- a positive integer: **Num** (Num should be >= 0).

Note: if user input is negative integer, the user will be asked to try again.

Major Procedures used:

- **Find_Fib procedure (recursive procedure)**
  - **int Find_Fib (Num);**
- **Greet procedure**
  - **void Greet();**

Structure of the Code:

- Call procedure **Greet** to print introductory messages to the user.
- Receive Variable **Num** and do error checking and error recovery.

- Call procedure **Find_Fib** to compute the nth value of the Fibonacci series.

Functionality of certain aspects of the code as to the project requirements:

- It will prompt user for inputting variable: **Num**.
- Check if input value is negative, if user input is negative integer, the user will be asked to try again.
- The recursive procedure **Find_Fib (Num)** is to compute the Fibonacci series of by the input **Num**.
- Procedure **Find_Fib** uses a recursive algorithm.
    - Base Cases: **f(0) = 1 and f(1) = 1.**
    - Recursive Case: **f(n) = f(n-1) + f(n-2)**
- **Ex:**

Input:	**Series:**
0:	1
1:	1 1
2:	1 1 2
3:	1 1 2 3
4:	1 1 2 3 5
5:	1 1 2 3 5 8
6:	1 1 2 3 5 8 13
7:	1 1 2 3 5 8 13 21

- **Note**: for example, if input is 7, the series will display from f(0) to f(7), total is 8 numbers in the Fib series.