**PART I**

The File we are running contains two functions, **factorial** and **check\_leap\_year**.

In this discussion section you need to design test cases to test whether the code in functions of these classes is correct. The following section provides the syntax for invoking the function, and English descriptions of what each function is supposed to do.

You should plan and then write tests in your groups for these functions.

Things to keep in mind as you go :

1. Initialize a local git repository (git init)
2. Check status continuously to keep track of changes in your code and directory (git status)
3. After writing each test, add your modified code to the local repo (git add <filename>)
4. Commit the changes in code to the local repo (git commit -m “Added test…”)
5. After each commit, check the history of your commits (git log)
6. Once all test cases are done, push your code to github. You may need to create a repository on github for that.  
   - (git add remote origin <remote repository URL>)  
   - (git remote -v)  
   - (git push -u origin master)

**1. factorial(num) : Accepts num (int), computes its factorial and returns the value**

For example:

factorial(0) should return 1

factorial(1) should return 1

factorial(4) should return 24

factorial(-1) should return None

**2. check\_leap\_year(year) : Returns a boolean value True if year is a leap year, or a boolean value False in other cases**

For example:

check\_leap\_year(2000) should return True

check\_leap\_year(1900) should return False

check\_leap\_year(2016) should return True

check\_leap\_year(1987) should return False