Programming Lab 1 – Github Access
PHYS 2511 – Prof. Matthew Newby – Spring 2019

Goal:	Set up a Github account and fork the course materials into a repository.
Requirements:	Have a personal code repository (private or public) on Github that is a copy (fork) of the course master repository.
Inputs:	• N/A
Outputs:	• Place a text file named "completed.txt" in your Lab 1 folder.

Background:

Github (https://github.com/) is a centralized online platform for computer code version control and collaboration, based on the Git version control software.

Github is commonly used by individual researchers, research collaborations, open-source code development and delivery, and several major corporations (including Comcast). Experience with Github is a great resume item, and your personal repository serves as a record of your programming ability.

Github is useful for many reasons. It not only backs up your code online, but also backs up all of your changes, which means you can 'roll back' mistakes. It makes collaboration straightforward, allowing collaborators to work on the same code and merge differences naturally, as well as keeping track of the changes made by each collaborator. It allows for easy sharing of code, and features great development features such as easy branching and forking.

A summary of Git commands can be found in the figure to the right and the list below. "Local" refers to your computer, and "Remote" refers to the centralized repository, which in our case is Github.

Git Jargon
- *add* – stage a change (local)
- *commit* – commit stages to local repo
- *push* – send local repo changes to remote (main) repo
- *pull* – get changes from remote and add to local repo
- *checkout* – create (or switch to existing) branch
- *merge* – combine (merge) current branch with original branch (or master)

- **Master** – The main, original branch
- **Branch** – A split of the master, used to develop an idea or feature before merging back to master
- **Clone** – Creation of a local Git repo from a remote
- **Fork** – A new project that begins as a copy of an existing one