GEN BUS 760
Homework 1 — *Fall 2021*

Part A [5 points]: Fork an existing Github repository

1. Complete Lab 1 (i.e. make a change to STUDENTS.md) and send a pull request from your fork of GENBUS760/Lab01 to GENBUS760/Lab01.

2. Check if your pull request appears in the list of pull requests for GENBUS760/Lab01. If it does, you have completed this part and nothing further needs to be submitted.

Part B [5 points]: Create a new Github repository

1. Create a new private repository on your Github profile (call it HW01).

2. Give me access to the repository by going to Settings (top right of your repository webpage) -> Manage access (left panel) -> Invite a collaborator (green button) -> type emaadmanzoor in the text box. This way I can see your work, other students cannot.

3. Repeat step 2 to give access to yangster1 (the course TA).

4. Clone your repository locally and create a README.md file in this repository with your name and email address in it.

5. Add, commit, and push README.md to your repository on Github.

6. Tag and release your repository after you have pushed README.md to it.

Part C [5 points]: Linux Shell Commands

1. Create a new file called COMMANDS.md in your Part B repository.

2. For each of the tasks below, provide the Linux shell command on a single, separate line in COMMANDS.md (i.e. on completion, COMMANDS.md should have 3 lines):

    i. Print the number of items in the /etc/ folder

ii. Print the number of unique (non-duplicate) lines in /etc/ssh/ssh_config which contain the word "IdentityFile"

iii. Print the total space on disk consumed by your home directory in gigabytes (not covered in lab, will require some research on your end)

3. Add, commit, and push COMMANDS.md to your Part B repository on Github.

4. Tag and release your repository after you have pushed COMMANDS.md to it.

Part D [10 points]: Counting Stars

Every repository on Github has a number of "stargazers" (Github users interested in the repository). For example, this repository has 3 "watchers" and 5 "stargazers".

1. Create a new Python script called count_stars.py in your Part B repository.

2. Write code in count_stars.py to calculate and print the total number of stargazers for all my Github repositories. The output of this script should be a single number.

   Hint: You may use the Github REST API (i.e. the /users/{username}/repos endpoint) to get the list of repositories for any user, and then parse the returned JSON using the json Python library (included in Python by default, no installation required).

3. Add, commit, and push count_stars.py to your Part B repository on Github.

4. Tag and release your repository after you have pushed count_stars.py to it.

Canvas Submission

In your Canvas submission, copy and paste the link to your private Part B repository (note that the this link will have your username in it somewhere).

Make sure you have given emaadmanzoor and yangster1 access to your repository.

Your Part B repository should have 3 tags/releases: (i) one after completing Part B, (ii) one after completing part C, and (iii) one after completing part D.