BIOS 6660, Spring 2019
Homework 1: Setting up the command line, Git, and GitHub
Due: Tuesday, January 29th at 10:30am

In this assignment, you will start working with some basic tools we need for the class. Each problem requires you to set up a tool and take a screenshot to prove that you have completed the setup. Your submission will consist of six screenshots.

Instructions for turning in assignment: Copy your screenshots into a document and label each by the problem name. You will turn in this assignment by uploading a file to Canvas. Acceptable submission formats: pdf, docx, doc, ppt, pptx.

Problem 1: Linux shell on local computer

The class requires having a Bash shell set up on your computer.

Mac users: there is nothing you need to do; simply use the Terminal program.

Windows users: If you use Windows 10, you can enable and install Bash on Ubuntu on your Windows machine. See the installation guide. If you don't have the latest version of Windows 10, download VirtualBox and set up the latest version of Ubuntu with VirtualBox. Here is a sample search that should return instructions for this.

There is nothing to turn in for this problem; you will demonstrate that your shell is working in Problem 4.

Problem 2: Basic Linux commands on Yampa

Use your Bash shell to log into Yampa and complete the following steps. Each step should be done with a **single command**. Once you have figured out how to do all of them, clear your terminal window, delete any created files/directories, and redo all of the steps in sequence so all the commands and results are visible in a single terminal window. Submit a screenshot of the final terminal window with all the commands and output. (Hint: add "Linux" to Google searches for the commands.)

1. Navigate to your home directory.
2. Print your own username to the screen using the **`whoami`** command.
3. Create a directory called **`BIOS6660`** under your home directory and navigate into the new directory.

4. Create a directory called **`Homework_1`** under **`BIOS6660`** and navigate into the new directory.
5. Print the current working directory to the screen.
6. With a single command and without viewing the file, create an empty file called **`empty.txt`**.
7. Print the number of lines in the file **`empty.txt`** to the screen.
8. Navigate to your home directory.
9. Print the current working directory to the screen.

Note: Keep the created directories and file on Yampa after completing this problem.

Problem 3: Git on Yampa

Make sure Git is working on Yampa by doing the following steps. Submit a screenshot of the final terminal window.

1. Issue the command **`git`** to see that it prints its help menu.
2. Print your own username to the screen using the **`whoami`** command.

Problem 4: Checking Git on local computer

Make sure you have Git installed on your local computer; if not, install it. Repeat Problem 3 on your local computer and submit another screenshot.

Problem 5: Signing up for GitHub

Create an account on GitHub. Submit a screenshot of your profile page. (Profile page is https://github.com/*your_username*.)

Problem 6: Creating a GitHub repository for the class

Back on Yampa, make your **`BIOS6660`** directory into a **private** Git repository and then add it to GitHub as a repository named “BIOS6660”.

If you are logged into GitHub, your new repository should be visible at https://github.com/*your_username*/BIOS6660. Submit a screenshot of this web page in your browser.

Starting next time, you will turn in homework assignments by adding code or other files to your GitHub repository using the procedures covered in Lecture 2. Since your repository is private, you need to add the instructors as collaborators so we can see your work. On the web page for your repository, in Settings -> Collaborators & teams, add each username (pamelarussell, vanderll, weiming80045) as collaborators. We will receive invitations to collaborate on your repository.

Problem 7: Cloning your repository to your computer

Your repository is now hosted on GitHub (and there is a copy on Yampa), but you need to be able to work with it from your own computer. To do this, you will create a "clone" of the repository on your machine. Choose a directory on your local computer where you will keep your work for this class, and follow the procedure from Lecture 2 to clone the repository to your computer. Now there should be a directory called **`BIOS6660`** on your local computer. Submit a screenshot proving that the repository (including the contents created in Problem 1) is on your local computer.