



Assignment 3

Preface

Do you know how to explore your computer's operating system software? Because Linux is an open source operating system, we have the means to learn as much as we want about how it works. This assignment shows you various tools and methods of exploring how the operating system works. Because we have Ubuntu Linux installed on our systems, this assignment is designed around Ubuntu.

Overview

In this assignment, you are asked to find the answers to various questions and write them in a file that you will then submit using the `submithwk_cs340` command. In this respect it is like Assignment 2. To facilitate the grading of this assignment, I have created a specific file, in essence a template, that you must copy into your own home directory, and then edit and submit. ***You must follow the instructions below exactly in order to receive full credit. If you do not do exactly what the instructions state, the scripts that process your submission will not find your complete answers.***

Resources

There are various commands, local files, and on-line resources that you will need to complete this assignment. Following are suggestions for what to look at and how to proceed.

1. Read about the `uname` command by reading its man-page. Type the command
`$ man uname`
2. Read about how to use the `hostnamectl` command. Again you would use the man page to do this.
3. Learn a bit about the powerful `find` command in its man page, or in my tutorial,
http://www.compsci.hunter.cuny.edu/~sweiss/course_materials/csci395.86/slides/linux_command_tutorial_01.html
You will need to use the `find` command to answer one of the questions (or spend hours if you do not use it.)
4. Read about Ubuntu kernels in general and about how they are named on the Ubuntu website, <https://ubuntu.com/kernel>. In particular, read the section titled "Identifying a kernel".
5. Learn a bit more about kernel releases on the webpage <https://www.kernel.org/releases.html>.
6. The `/proc` file system is a pseudo-file system on Linux. The files that appear in it are not real files, but they look like them. It provides a wealth of information about the state of the computer and all of the processes running on it. Read what information is in the file `/proc/version_signature`.

Deadline

You must complete this assignment before its *deadline*, which is ***Friday, March 11, at 7:00 PM. This is important.***

Detailed Instructions

1. Using any *ssh client* on your computing device, remotely login to `eniac.cs.hunter.cuny.edu` using your CSDN username and password.
2. When you login successfully, ssh to **any cslab host**. For example, to ssh to `cslab12` you would type:



```
$ ssh cslab12
```

- The remaining instructions assume that you have logged into some `cslab` host.
- Copy the file `/data/biocs/b/student.accounts/cs340_sw/hwks/hwk3_questions` to your home directory using the command

```
$ cp /data/biocs/b/student.accounts/cs340_sw/hwks/hwk3_questions ~
```

- Answer the questions in the file `hwk3_questions` that you just copied into your home directory. You will need to use a text editor to do this. **Do not use a word processor to do this.** If you do, the file will not be readable and you will get a zero on the assignment. Instead, if you edit it on Linux, use an editor such as `vim`, `emacs`, `pico`, or `nano`. If you choose not to do this and instead use *Windows*, use *WordPad* or *NotePad*, but be warned - these programs may create a file with the wrong end-of-line characters and may make your assignment unreadable. You must convert your file to a UNIX format before submitting it. Learn how to do this by searching on the web. On a Mac, use an editor such as `NotePad++`, `atom`, or any commandline editor like the ones in the Linux list above. Make sure that you follow the instructions for how to write the answers in order to receive full credit.
- Save your file and **make sure that you do not add an extension to its name**. It can be named anything as long as it does not have periods in the name and has no extensions such as `.txt`.
- Assuming the file is named `myhwk3_questions`, you would submit it by running the command

```
submithwk_cs340 -t 3 myhwk3_questions
```

The program will copy your file into the directory

```
/data/biocs/b/student.accounts/cs340_sw/hwks/hwk3/
```

and if it is successful, it will display the message, `"File hwk3_username successfully submitted."` where `username` is your username. If you do not receive this message, it was not submitted successfully and you should try again. You will not be able to read this file, nor will anyone else except for me.

- You can do step 7 as many times as you want. Newer versions of the file will overwrite older ones.**

Grading Rubric

This assignment is 2% of your final grade. Each question is 20% of the grade for the assignment. Partial credit will be given for partially correct answers. The deadline again is **Friday, March 11 at 7:00 PM**.