# CSE 4251: Lab 1

**Overview**

These exercises will allow you to have some practice with the Unix/Linux environment.  
  
**Please do the lab independently and all submissions must be your own work.**  
**References about academic integrity regarding code:** [**1**](https://www.eecs.psu.edu/students/resources/eecs-cse-academic-integrity.aspx)**,** [**2**](https://integrity.mit.edu/handbook/writing-code)**.**

# Objectives

* Get familiar with the system working environment and basic commands
* Get familiar with a line editor
* Review of Unix/Linux most used commands

# Instructions

Create a new folder named Lab1 in your UNIX working directory. The exercises below should all be created within that new folder. (Max. points are mentioned within [])

Login into a Unix/Linux server based on the lecture. Go over the tutorial to practice the UNIX commands and get yourself familiar with your working directory and environment.

***How can you save the terminal procedure you do in a text file to submit those results?***

To record your session in a file, use the command *script*. This command sends everything you do in the terminal to a file. Read the man page (*man script*).

Try:

*script* labtext.txt (it starts recording) then type commands like *ls, date*

when done, type the command *exit* (it terminates the type scripting - “recording”- of the terminal session. Take a look at the file created to validate it (use the command *more* or *cat* and filename).

Now start to record your session in a text file.

# Exercise 1 (8 points)

After you start recording the session. Please use the following commands to get familiar with editing text files, creating and deleting directories.

* In the home directory make a directory named Lab1
* Enter the directory and create a file **one.txt** using vim
* Type something and save the file and quit
* Copy the file **one.txt** to a new file **two.txt**
* Use the *ls* command to list the files and verify the path with pwd
* Create a sub directory under the Lab1 directory, the name is up to you
* Move the second file **two.txt** into the sub directory just created in the previous step
* Go back to home directory and use find command to find the path of the **two.txt**
* Delete the Lab1 directory

# Exercise 2 (6 points)

Try the following commands to help

* Try to use echo $SHELL to find out the name of the shell.
* Try uname to get following information: OS version and kernel release, processor type, etc. You may need to add some options or try the command multiple times.
* Use the command ps –ef to list the current processes in the server
* Try to use the command which echo to find which directory the echo belongs to, use cd to go to that directory and try ls echo
* Try to use the command date to find the time of the server and time zone.

# Exercise 3 (6 points)

Some commands are useful to check and organize file content and file systems. Try to compare the following commands, if some commands are not covered in the lecture, use man to find out how to use them.

* df and du
* cmp and diff
* cat and wc

After Exercise 1~3 are finished. Type exit to stop recording the commands.

# Submission Instructions

For the first homework, please submit a single text file which records all the commands you have used in Exercise 1~3.