

# Lab 2: Exploring the UNIX/Linux File Systems and File Security

## Goals

- A. To get comfortable navigating the directory structure
- B. To make and delete directories and files and fill them with content
- C. Create and switch between users
- D. To edit permissions on folders and files
- E. To use the mount command

## Directions

Follow the Instructions below and describe what you see

### A. NAVIGATING THE DIRECTORY STRUCTURE

1. pwd
2. ls
3. cd /
4. ls
5. cd /home/yourUsername

## B. MAKE AND DELETE DIRECTORIES AND FILES

1. mkdir do-not-open
2. cd ./do-not-open
3. pwd
4. ls -al
5. touch diary.txt
6. ls -al
7. echo "Dear Diary," >> diary.txt; echo "Today I used bash to write in you" >> diary.txt
8. cat diary.txt
9. cd ..
10. pwd
11. ls -al
12. cd ./do-not-open
13. touch special-text.txt
14. ls -al
15. rm special-text.txt
16. ls -al
17. cd ..
18. mkdir everyone-is-allowed
19. ls -al
20. cp /home/yourUsername/do-not-touch/diary.txt /home/yourUsername/everyone-is-allowed/public.txt
21. echo "This is the version of the diary that will be kept open" >> /home/yourUsername/everyone-is-allowed/public.txt
22. cat /home/yourUsername/everyone-is-allowed/public.txt

### C. CREATE AND SWITCH BETWEEN USERS

1. `sudo useradd smithers`
2. `sudo passwd smithers`
3. `su smithers`
4. `whoami`
5. `ls`
6. `cat /home/yourUsername/do-not-open/diary.txt`
7. `exit`
8. `whoami`

### D. EDIT PERMISSIONS ON FILES AND DIRECTORIES

1. `chmod -R 700 /home/yourUsername/do-not-open`
2. `su smithers`
3. `cd /home/yourUsername/do-not-open`
4. `cat /home/yourUsername/do-not-open/diary.txt`
5. `cat /home/yourUsername/everyone-is-allowed/open.txt`

### E. TO USE THE MOUNT COMMAND

1. Load the virtual CD-ROM drive with an ISO file (such as the fedora install)
2. We'll experiment to see if the VM's perform well in class