

- 1. Capture the results of the `uname -a` command. What is the purpose of the `uname` command? How did you find help information on the `uname` command?

```
ttanassel@cslinux: $ uname -a
Linux cslinux 3.13.0-48-generic #80 precise1-Ubuntu SMP Thu Mar 12 19:30:15 UTC 2015
x86_64 x86_64 x86_64 GNU/Linux
```

Gives system information including kernel name version and release, network node host, machine hardware, processor type, hardware type, and OS. **—help** is the option which gives additional information for the **uname** command, but the **man** manual command also brings up information and options for **uname**.

- 2. Capture a detailed list of ALL files and directories, including dot (hidden) files, in the `/lib` directory. By editing your text file, indicated which lines refer to: files, directories and links. You don't need to do this for all the files, just a few to illustrate you understand the difference. (2 of each)

```
ttanassel@cslinux:/lib$ ls -al
total 1468 drwxr-xr-x 19 root root 4096 Feb 27 06:47 .      #directory
drwxr-xr-x 26 root root 4096 Mar 24 06:58 ..      #directory
drwxr-xr-x 2 root root 4096 Aug 12 2014 apparmor      #directory
lrwxrwxrwx 1 root root 21 May 21 2012 cpp -> /etc/alternatives/cpp      #link
-rwxr-xr-x 1 root root 70680 Mar 30 2012 klibc-bhN-zLH5wUTKSCGch2ba2xqTtLE.so      #file
lrwxrwxrwx 1 root root 20 Feb 25 09:45 ld-linux.so.2 -> /lib32/ld-linux.so.2      #link
-rw-r--r- 1 root root 97072 Apr 13 2012 libcryptsetup.so.4.0.0      #file
```

[redacted to save paper]

- 3. Capture the command and a detailed listing of the file properties of the `.bashrc` file in your home directory. Add a comment below this capture that explains all the file properties of `.bashrc`.

```
ttanassel@cslinux: $ ls -al
total 36
drwx--- 6 ttanassel IT-GenericLinuxGroup 4096 Apr 2 11:06 .
drwxr-xr-x 14 root root 0 Apr 6 19:06 ..
-rw---- 1 ttanassel IT-GenericLinuxGroup 476 Apr 6 15:31 .bash_history
-rw-r--r- 1 ttanassel IT-GenericLinuxGroup 220 Jan 2 10:30 .bash_logout
-rw-r--r- 1 ttanassel IT-GenericLinuxGroup 3486 Jan 2 10:30 .bashrc
```

`.bashrc` is a regular file, the user currently has read and write permissions, the group and other users have read permissions, it has one link, I am the owner, it belongs to the IT-GenericLinuxGroup, the file size is 3486 bytes, it was last accessed at the date, and is hidden.

- 4. Create a subdirectory called `cscd240` in your home directory. Capture the command that created the directory and the output of an `ls` command that shows that the new directory exists.

```
ttanassel@cslinux: $ mkdir cscd240
ttanassel@cslinux: $ ls
copyTest cscd240 netstorage TestFolder
```

- 5. Create another subdirectory inside cscd240 that is named lab1. Capture the command that created the directory and the output of an ls command that shows that the new directory exists. NOTE: The creation of the directory lab1 must be made from /home/EASTERN/yourusername

```
ttanasse1@cslinux:$ mkdir cscd240/lab1 ttanasse1@cslinux: $ cd cscd240 ttanasse1@cslinux: /c-
scd240$ ls lab1
```

- 6. With the home directory still as your current working directory, capture the command that copies the .bashrc file from your home directory to a file called copy.bashrc in the lab1 directory.

```
ttanasse1@cslinux: $ cp .bashrc cscd240/lab1/copy.bashrc
ttanasse1@cslinux: $ cd cscd240/lab1
ttanasse1@cslinux: /cscd240/lab1$ ls
copy.bashrc
```

- 7. Within the home directory, capture a detailed listing of all the files in the lab1 directory.

```
ttanasse1@cslinux: $ ls -al cscd240/lab1
total 12
drwxr-xr-x 2 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:17 .
drwxr-xr-x 3 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:12 ..
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 3486 Apr 6 19:17 copy.bashrc
```

- 8. Change to the lab1 directory capture the change directory command and capture a command that renames the copy.bashrc in lab1 to my.copy.bashrc.

```
ttanasse1@cslinux: $ cd cscd240/lab1
ttanasse1@cslinux: /cscd240/lab1$ mv copy.bashrc my.copy.bashrc
ttanasse1@cslinux: /cscd240/lab1$ ls
my.copy.bashrc
```

- 9. Capture a detailed listing of all the files in the lab1 directory.

```
ttanasse1@cslinux: /cscd240/lab1$ ls -al
total 12
drwxr-xr-x 2 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:22 .
drwxr-xr-x 3 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:12 ..
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 3486 Apr 6 19:17 my.copy.bashrc
```

- 10. Starting in your lab1 directory, capture a command that uses a relative pathname to make cscd240 the current working directory.

```
ttanasse1@cslinux: /cscd240/lab1$ cd ..
```

- 11. Use the pwd command to indicate the current working directory.

```
ttanasse1@cslinux: /cscd240$ pwd
/home/EASTERN/ttanasse1/cscd240
```

- 12. Starting in /usr/bin, (you will have to change to /usr/bin) (Prove you are in /usr/bin with pwd) capture the command using an absolute path that will make your home directory the current working directory. Prove the directory change with pwd.

```
ttanasse1@cslinux: /cscd240$ cd /usr/bin
ttanasse1@cslinux:/usr/bin$ pwd
/usr/bin
ttanasse1@cslinux:/usr/bin$ cd /home/EASTERN/ttanasse1
ttanasse1@cslinux: $ pwd
/home/EASTERN/ttanasse1
```

- 13. Capture the command and output using `rmdir` (with no other commands) to delete the `lab1` subdirectory. Does it delete the directory? Why or why not?

```
ttanasse1@cslinux: /cscd240$ rmdir lab1
rmdir: failed to remove 'lab1': Directory not empty
```

It does not delete the directory because **rmdir** only removes directories which are empty.

- 14. Change directory so you are working from within the `lab1` directory. Once in the directory:
 - a. Capture the command that will create 6 files using the `touch` command. The files will be named `test`, `test1`, `test21`, `test3`, `something`, `nothing`.

```
ttanasse1@cslinux: /cscd240/lab1$ touch test test21 test3 something nothing
ttanasse1@cslinux: /cscd240/lab1$ ls
my.copy.bashrc  nothing  something  test  test1  test21  test3
ttanasse1@cslinux: /cscd240/lab1$ nano test1
ttanasse1@cslinux: /cscd240/lab1$ head test1
add text to test1 with nano :D
ttanasse1@cslinux: /cscd240/lab1$ ls -al
total 16
drwxr-xr-x 2 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:34 .
drwxr-xr-x 3 ttanasse1 IT-GenericLinuxGroup 4096 Apr 6 19:12 ..
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 3486 Apr 6 19:17 my.copy.bashrc
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:34 nothing
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:34 something
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:34 test
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 31 Apr 6 19:35 test1
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:34 test21
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:34 test3
```

- b. Capture the use `NANO` to add text to the file `test1`. (hint: using command `nano file_name`, then follow the instructions in `nano`.)
 - c. Capture the long listing of `test1` to show the size changed.
- 15. Change directory into your `lab1` directory again, make a new file called `rules.log`. Then using `ls al` to find the permission for this `rules.log` file. Explain the permission of this file for the owner, group and other users in the system. Find which group does your account belongs to? Capture all above activity and results in your terminal.

```
ttanasse1@cslinux: /cscd240/lab1$ touch rules.log
ttanasse1@cslinux: /cscd240/lab1$ ls -al
total 16
-rw-r--r- 1 ttanasse1 IT-GenericLinuxGroup 0 Apr 6 19:38 rules.log
```

User has read and write permissions, group users and other users have only read permission. I belong to the `IT-GenericLinuxGroup` of users.

- 16. Change directory into `lab1` directory, and make a new subdirectory named `test_code`.
 - a. Using `cd ..` to go into `lab1`'s parent directory. Then capture the results of making a copy of `lab1` directory, including all its subdirectories, named as `lab1.copy`.


```
ttanasse1@cslinux: /cscd240$ cp -r lab1 lab1.copy
ttanasse1@cslinux: /cscd240$ ls
lab1  lab1.copy
```
 - b. Go into `lab1.copy` and run command `rm *`, explain what you get after run this command. Removes all files from `lab1.copy`, but not the directory `test_code`.

- 17. Make a new command `dir` that is equivalent to linux command `ls -alh`, when type `dir` in your terminal, the shell will actually run `ls -alh`. Capture the command that can achieve that and the results.

```
ttanasse1@cslinux: /cscd240$ alias dir='ls -alh'
ttanasse1@cslinux: /cscd240$ dir
total 16K
drwxr-xr-x 4 ttanasse1 IT-GenericLinuxGroup 4.0K Apr 6 19:47 .
drwx—— 7 ttanasse1 IT-GenericLinuxGroup 4.0K Apr 6 19:11 ..
drwxr-xr-x 4 ttanasse1 IT-GenericLinuxGroup 4.0K Apr 6 19:42 lab1
drwxr-xr-x 4 ttanasse1 IT-GenericLinuxGroup 4.0K Apr 6 19:47 lab1.copy
```

- 19. With your regular account, change directory to `/usr` directory and try to create a new folder called `junk`. Are you able to create this new folder? Capture the command and the execution results. Explain Why or Why not successful?

```
ttanasse1@cslinux:/usr$ mkdir junk
mkdir: cannot create directory 'junk': Permission denied
```

I do not have write permissions for `/usr`.