

Unix/Linux Exercise

The following steps will guide you through the most common Unix/Linux commands. If you are using windows (rooms with XWin32: Library & Olin 170, and rooms with Xmanager Enterprise 3: Dana213, Dana223, Dana214, Dana 306, BrkI164), then start with step 1. If you are using a linux or sun workstation (Olin 170), then start with step 3.

1. Log into Windows with:

Ctrl-Alt-Del → type in your username and your password

2. As indicated above, some rooms have XWin32 (use 2a.) and some have Xmanager Enterprise 3 (use 2b).

2a. Start (left bottom) → Programs → Programs Q-Z → Xwin 32 8.2 → Xwin 32 . If asked for an upgrade answer with “Remind me in a month”. Then left click on X and choose e.g. “linuxremotel Graphical”.

2b. Start (left bottom) → Programs → Programs Q-Z → Xmanager Enterprise 3 → Sessions → Linuxremotel Graphical.

3. Log into a linux or sun workstation. To do so type after **login:** your username and hit “Enter” and after **password:** your password. Use the same username which you had gotten for windows when you were new at Bucknell. In case you do not know your password for linux computers / suns, please ask Mike Harvey.

4. With the cursor on the background click on the right mouse button and choose “Open Terminal”. This should open a window in which you can write commands.

5. Create a directory of the name “Capstone_s2009” by typing in this new window

```
mkdir Capstone_s2009
```

and hit “Enter.” For all following commands hit “Enter” after each command. Draw the tree of the directories and files for this step **and all the following steps.**

6. Check the directory name in which you are now by typing (print working directory)

```
pwd
```

answer:

We call this directory (into which you get when you log in) your “home directory”.

7. Check the contents of your current directory (list) with

```
ls
```

answer:

8. Change the current directory. Get into Capstone_s2009

```
cd Capstone_s2009
```

and redo 6.

9. Create a file with filename “unix_logfile” by typing

```
emacs -font 10x20 unix_logfile &
```

A new window will open up. Emacs is an editor, that means that you can edit files with it (so like word on windows). For more information see the summary sheet with emacs commands. In case you are used to vi or any other editor, feel free to use it instead.

Write into the unix_logfile:

```
Unix commands:
```

```
=====
```

```
mkdir   create directory
pwd     print current directory
ls      list contents of current directory
```

Save the contents of the file with C-x C-s and quit the editor with C-x C-c. You might want to use this file in the future as a reference for unix commands. Add to it new commands whenever you learn them.

10. In this course we will often want to share each others programs (files). Since usually all your files are protected from being read by anyone else but you, you will need to change this permission whenever you would like other people (your classmates and me) to be able to read your file (see also 22. of this Intro). You do this in this example with:

```
chmod a+r unix_logfile
```

“a” means “all” and “+r” means “add read permission”. With `ls -l` you can check the permissions of any file and directory. The first three digits specify your permissions, the last three digits specify the permissions of everybody else. In each case the digits are for executable, reading and writing. Change the reading and writing permissions of the `unix_logfile` and check after each change with

```
ls -l unix_logfile
```

11. Check again the contents of the current directory.

answer:

12. Create another file called “tryfile” with content

```
hello
good bye
```

and redo 4.

13. Look at the contents of the tryfile with

```
cat tryfile
```

14. Do the same with the logfile.

15. Next remove (delete) the tryfile with

```
rm -i tryfile
```

You will be asked if you like to remove tryfile. Type `y` for yes. Check again the contents of your current directory. `rm` is a dangerous command. It has together with the wild card `*` the power of removing all your files in a single command! **Think always twice before you remove a file!**

16. Create a directory with name “trydir”

```
mkdir trydir
```

and get into it with

```
cd trydir
```

17. Get back out of trydir (one step higher in the tree of directories) with

```
cd ..
```

Check in which directory you are.

18. Remove trydir with

```
rmdir trydir
```

19. Get back to your home directory either with

```
cd
```

or with

```
cd ~
```

or with

```
cd ~yourusername
```

(e.g. for me `cd ~kvollmay`). This gets you to anyone’s home directory.

20. Look at the contents of your `unix_logfile` with

```
cat ~/Capstone_s2009/unix_logfile
```

We used here the full path of the `unix_logfile`, so it would work from any directory.

21. The following guides you through the steps you will need to “hand in” any program assignment in the course. (A program, more precise “source code,” is a file like the `unix_logfile`.) The following three commands you need to do only once

```
cd
mkdir share.dir
chmod 755 share.dir
```

Check with `ls` what the last command did. Then go to the directory where your assigned program is, e.g.

```
cd ~/Capstone_s2009/
```

Then copy the file you want to have accessible, e.g.

```
cp unix_logfile ~/share.dir/
chmod a+r ~/share.dir/*
```