Lab 1

Course Logistics and Linux Tutorial

Objectives of this Lab:

1. To discuss course logistics and communication
2. Login to department systems
3. Explore the course website
4. Login to the Canvas course
5. Learn how to launch Linux applications
6. Introduce a small set of Linux commands
7. Discuss the Linux file system and play with text files

Course Logistics:

1. Lecures (including peer instruction), 2 labs, 1 programming assignment, and 1 online assignment weekly.
2. Bring your iClicker to lecture every lecture, TA will show you how to register on Canvas
3. Labs are the hands-on part of the course takes place, i.e.: where you learn to code!
4. Labs are open 24/7, building an dlab access comes with your student card.
5. CSB 110 is Windows, CSB 120 is Linux, CSB 130 is the lecture room.
6. Help desk is the breakout room on the north side of CSB 120 lab. Hours will be limited due to summer.
7. No food and only covered drinks are allowed in the labs.
8. Most communication with course staff is through Piazza.

Notes:
You will take notes from today's lecture and show them to the TA at the end of class to receive credit. A single sheet of paper will suffice, there is paper at the front of the class.

Logging In

1. Login to the machine using your electronic ID (same username that you use for RamWeb).
2. The initial password should be your student ID number (same as nine digit number on your RamCard).
3. Choose "Xfce session" from the list of Linux configurations in the upper right hand corner of the screen.
4. Click "Use default configuration" when the pop-up message comes up (first log-in only).
5. The teaching assistant will show you how to change your password as described below.
6. Troubleshooting: Raise your hand if you cannot login!

Class Website

1. Start your preferred internet browser and type in your course URL
    a. www.cs.colostate.edu/~cs163
2. Look at the syllabus and progress pages.
3. Open another tab and type in the URL: http://info.canvas.colostate.edu/login.aspx
4. Login to Canvas using your EID and password and make sure that you can see the course.

Launching Applications

1. Your TA will show you how to launch applications and add them to the task bar.
2. Select "Activities" in the upper left corner of the screen, then select "Applications."
3. Run firefox, kate, file manager, and a terminal.
4. The terminal command brings up a window where you can type in Linux commands.
5. Note: this is similar to using the DOS command prompt in Windows.
6. Use the passwd command to change your password.
7. We recommend changing it to your RamWeb password, if possible.

Useful Terminal Commands

Your TA will show you how to use the man command. For each of the following, figure out what action is performed and try the command. Be careful with the remove command!

man - read the manual page for a command
pwd - print working directory
ls - list working directory
cd - change working directory
cp - copy file(s)
mv - move or rename file(s)
rm - remove file(s)
cat - list file(s)
less - list file(s)
diff - compare files
mkdir - make directory

Your TA will talk about launching programs from a terminal using the ampersand (&), and will show you how to look at the history of commands, and how auto completion with the tab key works.

Linux File System

Your TA will describe the Linux file system. Make sure you know each of the following shortcuts for directory names:

~ home directory
. current directory
.. parent directory
/ file extensions

Manipulating Text Files

Perform the following tasks and add to your notes to show the TA:
1. Use gedit to create the Name.txt:

```
gedit Name.txt &
```
2. The file should contain one line which has your first and last name.
3. Save the file.
4. Copy Name.txt to another file called Name.bak
5. Compare the contents of the files by using the **diff** command. Are they the same? How can you tell?
6. Open Name.bak as a second tab in gedit.
7. Add a second line to Name.bak with your preferred email address.
8. Compare the files again. Are they the same? How can you tell?
9. Remove Name.txt
10. Move Name.bak to Name.txt
11. **cat** the contents of Name.txt. Is your email there?

Log into Canvas and answer the Lab 1 Question to get credit for the recitation.