Introduction

Overview of 201 Lab and Linux Tutorials

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Can you Log In?

- Should be same logins and passwords from 115.
  - CS (Computing Science) id for computers.
  - CCID (Campus Computing Science ID) for Moodle.
- If you cannot log in, get your ONE Card and go to the Helpdesk.
- The Helpdesk is in CSC 1-32.

Overview

Lab Description

- Welcome to the 201 Lab!
- You will learn the basics of C programming.
- This will be done in a Linux environment.
- Like Windows, Linux is an operating system.
- You will be doing
  - Linux and Linux programming tools tutorials.
  - Lab Exercises
  - 3 Programming Assignments.
  - A Lab Exam.
- Lots of new stuff.
- So it will be interesting and challenging!

Getting Xfce ... most will already have it

Xfce is a desktop environment (basically a GUI interface to Linux). It will be used in 201.
Do you have Xfce or FVWM? (towards top of home page, go to Linux tutorial, see screenshots) Follow along with your TA to "get" Xfce:

- Everyone is to type `copyrcfiles` at the command prompt.
  - If you already have Xfce: menu (left on button bar, black mouse over a blue X) →System →Terminal
- If you have FVWM, **s**kip all files except
  - **b**ackup .emacs, .xinitrc, .Xresources
  - logout: $Alt - F1 \rightarrow Exit/Restart\ FVWM \rightarrow Yes, Really\ Quit$
  - log back in

  else, if you already have Xfce, just **b**ackup .emacs (it's okay if you're not prompted)

A Typical Lab

- Attendance is recommended, but not required.
- Interactive presentations for up to about two hours.
- Then work on Lab Exercises (linked to from current week on home page)
  - Submitted electronically.
  - Due at end of lab period.
- When no presentation, can get 1-on-1 help from TA. When there are many questions:
  - There will be a *Questions* list on the board.
  - If you have a question, write your name in the list.
  - 10 minutes per question.

Communication Outside the Lab

- You need to read the News and Notices Forum, and it is best to read and post to the Course Discussion Forum. TA will briefly describe:
  - both linked to towards top of home page
- Don't post or attach code. You can get into trouble.
- Can email TA (email address online, and on whiteboard)
  - Use CCID.
  - Attach all relevant code.
  - Ask specific questions.
  - TA will spend about 15 minutes, and will reply with what they have found.
- Read about this and more at Course Policies (linked to towards top of home page)
- Questions?

Linux and Emacs Tutorials

- You will learn not only C basics, but also Linux basics.
- C and Linux have steep learning curves.
- Linux has many tools which support programming.
- One of those tools is an *Emacs* editor for text files, with support for C source code.
- There are introductory Linux and Emacs tutorials
  - linked to towards, you guessed it, top of home page
  - TA will show you quickly.

Preparing Source Code

Note most of the following are in the Linux tutorial. Follow along with your TA:

1. Xfce menu (left on button bar, black mouse over a blue X) →System →Terminal
2. make a directory with `mkdir C201`
3. go into that directory with `cd`, and use tab completion (`cd C201`, `mkdir Lab1`, `cd Lab1`)
4. create a new file and edit it: `emacs hello.c &`
5. copy `hello.c` from online, paste into Emacs, save

Compile and Run

Compile, run, then fix code:

1. compile with `gcc`
2. fix the mistake, save, compile then run, then exit
   - look mainly at first compilation error
3. `ls`
4. `man ls`, search `man` page for "long listing", and `ls -l`
5. `cd ..`

After doing the Lab Exercise, do Linux and Emacs tutorials on your own (and feel free to ask questions).

Learning More

To learn more about Linux and Emacs:

- Go to the *Learning more* sections of the tutorials.
- Experiment and ask the TA.
- Get used to using `man` pages. See the *Using man Pages* section in the Linux Tutorial.

Before Next Lab

- Once it's released, it's very important to start on Assignment 1
  - Its release will be announced.
  - Read it (will be linked to from home page, in first week), and try starting
  - You will learn most of the concepts throughout the next few weeks. Complete right away the parts you can do
  - Jot down concepts you don't yet understand, but will need to know. When covered, attempt to apply them to Assignment 1.
- Questions?