Homework 1: CS114 Unix Tools, Fall 2007

Due electronically (via CMS) on Friday 28 September 2007, 3:30PM

Logging into the linux machines

You will need to use two programs to communicate with the CSUG linux machines: something to log in with, and something to transfer files with. From the CSUGlab Windows machines, I recommend the SSH program and the Secure File Transfer program - I will demonstrate this on the first day of class.

These programs are not free; good free alternatives for Windows are `putty` to log in with, and `WinSCP` to transfer files with. From Mac OS X, you can just open a terminal window (Applications/Utilites/Terminal.app) and run

`ssh -l`*your-netid*` empire.csuglab.cornell.edu`

To transfer files on OSX, I've heard `CyberDuck` is good. The more adventurous might use `sftp`, but this doesn't provide a GUI.

Problem 1: Looking around

When you first log in, your current directory is set to your home directory. What files are in your home directory? In UNIX, some files are "hidden" by default, typically configuration files for different applications. The way to specify that a file is hidden is to give it a name that begins with a "." - a dot, or period. There is an argument to the `ls` command that will list all the files in a directory, including the hidden ones. Use the `man` command to figure out what argument this is. What is it? What files are in your home directory, now including hidden ones?

Write the answers to the questions in this section in a document called `problem1.txt` and submit it in CMS by the due date.

Problem 2: Transferring files, permissions

Download the file `hw1-problem2.sh` from the course website (the assignment section). This file is now stored on the computer you are sitting at (e.g. your home computer or a CSUG lab machine). You need to transfer this program to the CSUG linux machines. To do this, use SSH Secure File Transfer (or another `sftp` program) to copy the file to your home directory on the linux machines.

Now, use `mkdir` to create a directory that is a subdirectory of your home directory called `homework1`. Use `chmod` to make this directory readable, writeable, executable by you (`u`), and readable and executable by your group and everyone else (`o` or `g`). Next, make the file that you have copied executable, and move it into the `homework1` directory. Run the file as a command. You can do this by `cd`ing into the `homework1` directory and typing `./hw1-problem2.sh`.

Running the command will produce as output a file called `problem2-output.txt`. Use Secure file transfer again to move this file back to your computer, and submit it in CMS by the due date.