Linux set-up

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Objective

Install/configure software so you can use Linux on:

- the CSUMB Linux machine (mlc104)
  - logging into mlc104 is your top priority!
- your laptop
- AWS cloud 9

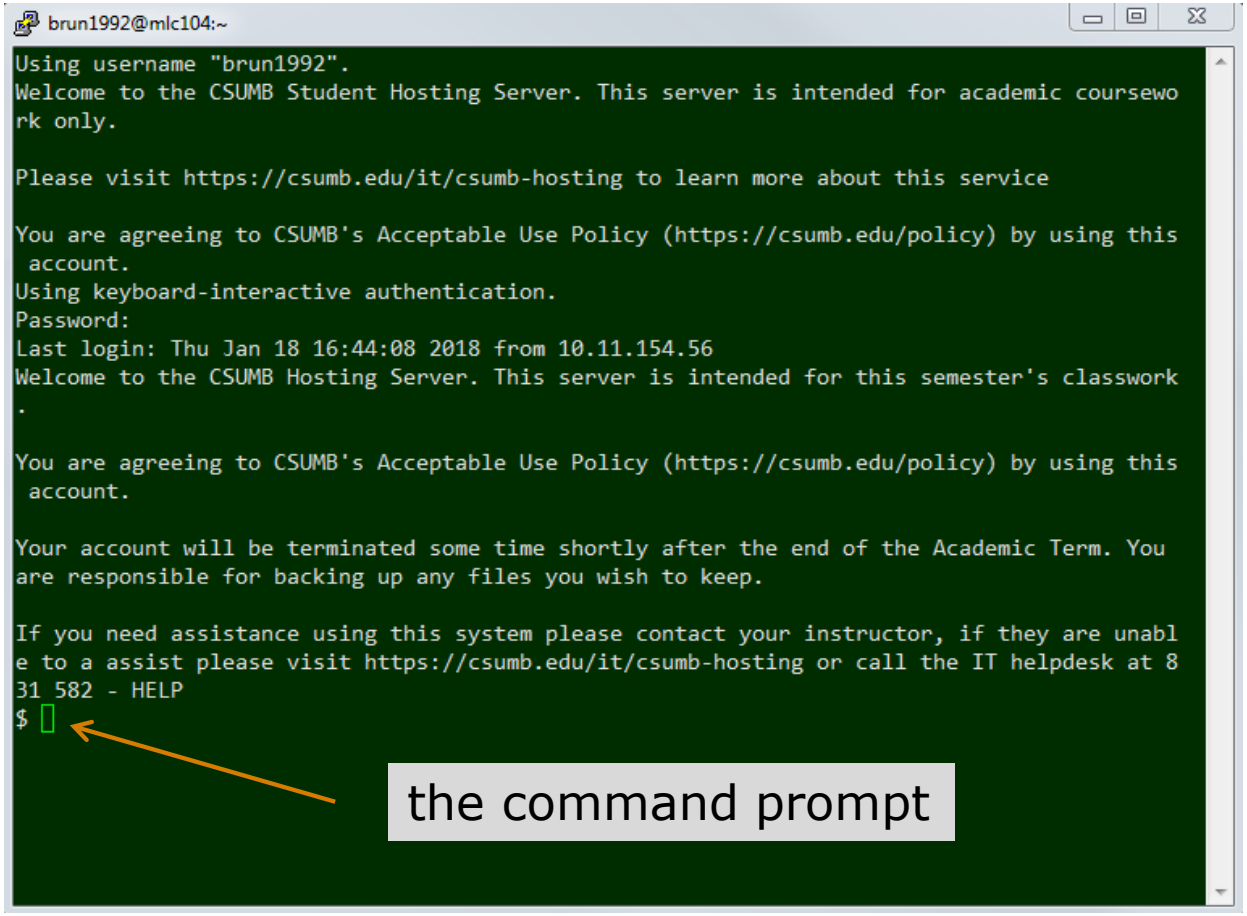
Homework code is expected to run properly on Ubuntu 14.04 or later.

The next few slides show what to do after you login to Linux.

Following that are instructions on Linux setup.

What you see after logging in

When you login to Linux you will see a bash terminal window with a command prompt:



Try some commands

Try command 'ls':

Try command 'man ls'

Try command 'pwd'

Try command 'ps –l'

what do these commands do?

Exit the shell

Use command 'exit'

1. Linux on mlc104.csumb.edu

This machine is known as "the hosting server" and "mlc104".

You all have an account on this machine:

- username: your Otter ID (like brun1992)
- password: your Otter ID password

To access, use SSH (secure shell)

- Linux and Mac: use 'ssh' command in terminal (you need to supply Otter ID on command line)

  $ ssh <otterid>@mlc104.csumb.edu

- Windows: use Putty or another SSH client (see next slide)

If you write bad code, you can bring the machine to a standstill.

Avoid "fork bombs"!

Installing PuTTY (Windows)

1. Download PuTTY

   http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

2. Create folder C:\Program Files\putty
3. Copy downloaded file to that folder
4. For convenience, create shortcut to the downloaded file

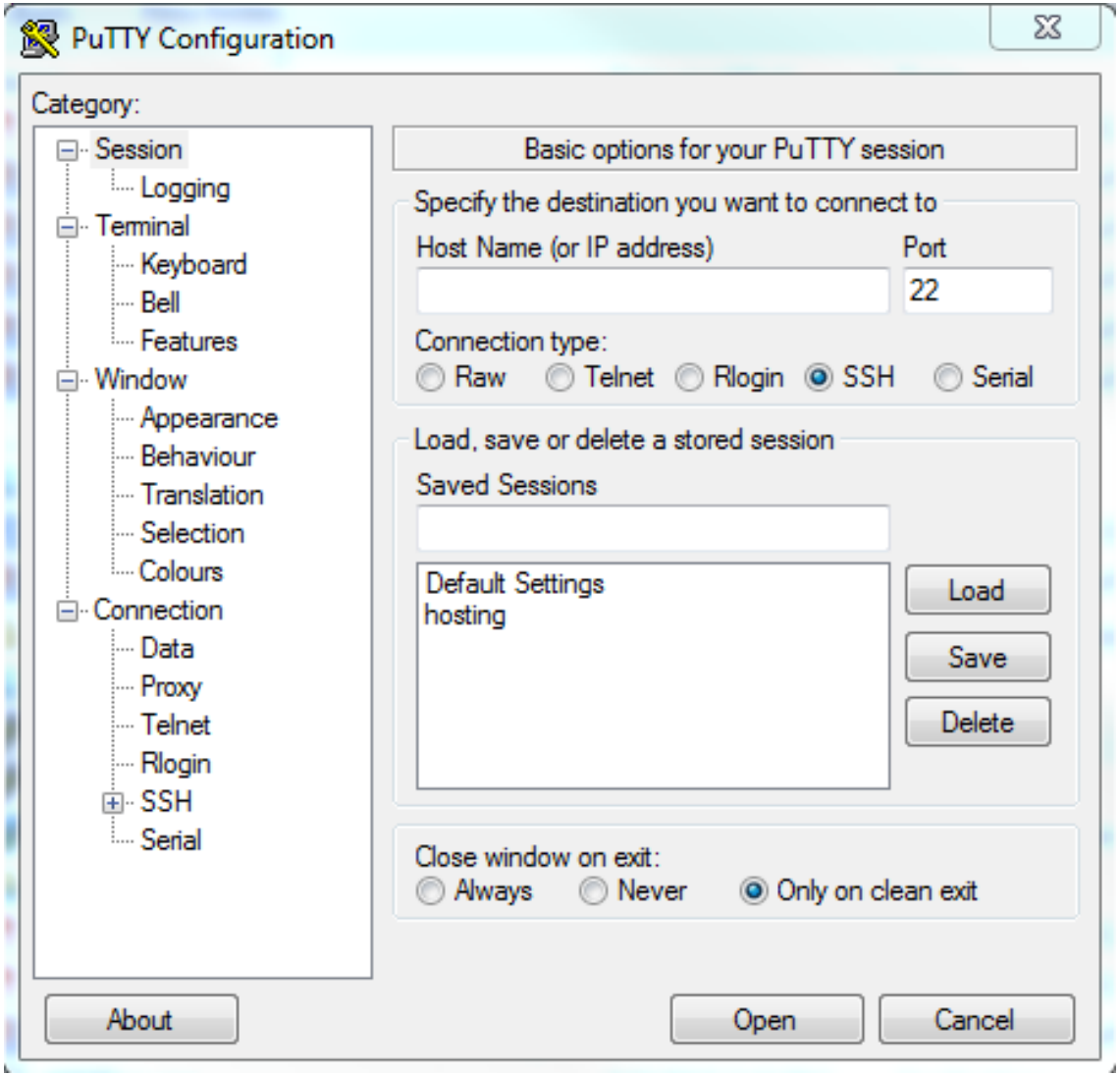
Process should be similar on Apple machines

Configuring and running PuTTY

1. Session (see left side), 'Host Name' field, enter
   `hosting.csumb.edu`
2. Connection, 'Seconds between keepalives', enter
   `10`
3. Connection/Data, "Auto-login username" field, enter
   `<your user name>`
4. Session, 'Saved Session' field, enter
   `hosting` (or what ever you want to name it)
5. Session, In "Session" category, click button "Save"
6. Exit PuTTY

Now you can bring up PuTTY, double-click on the name you used in step 3, and enter Otter ID password to log in

Putty start-up window



2. Linux on your laptop

What OS are you running?

Linux – ☺

Mac:

- run Linux on a virtual machine (like VirtualBox)
- The Mac OS is a variant of Unix
  - you can run bash in a terminal; but this isn't exactly Linux

Windows:

- Windows 10 Linux subsystem (needs to be installed)
- Cygwin (see next slide)
- Dual-boot Windows and Linux
- run Linux on a virtual machine (like VirtualBox)

VirtualBox

1. Go to https://www.virtualbox.org/
2. Download and install VirtualBox
3. Download Ubuntu Desktop, version 18.04 LTS

For Windows installation details, see

https://www.youtube.com/watch?v=sB_5fqiysi4

or https://www.codeooze.com/windows-10/windows-10-ubuntu-vbox/

For Mac installation, ss

https://www.youtube.com/watch?v=sNixOS6mHlU

(I have not tested this)

VirtualBox (continued)

Install git:

https://www.digitalocean.com/community/tutorials/how-to-install-git-on-ubuntu-18-04-quickstart

3. Linux on AWS Cloud 9

Follow instructions on AWS Cloud
https://aws.amazon.com/cloud9/

Installing Cygwin (Windows)

cygwin.com/install.html

Installing cygwin takes a while – do it outside of class.

Leave a shortcut to the setup program on your desktop

- when you need to add programs, you run the setup program again

Not needed for Windows 10 – Windows Linux Subsystem can be used instead

Text editors

Some popular and free text editors:

- nano
- vim
- GNU Emacs
- Visual Studio Code (Microsoft)
- Atom (may go away since MS acquired github)
- Sublime Text (evaluation version)

nano, vim, and emacs are available on mlc104