Computer Science Practice and Experience: Operating Systems (Comp Sci 3SH3), Term 2, Winter 2022
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Practice Lab 1a

Outline:

This is a take home lab.

The textbook authors provide a command-line based Ubuntu Server running version 4.4 of the Linux kernel. Some standard development tools are included with it, including (see below):

- gcc
- make
- java 8
- python
- ssh

Before you begin:

1. Note to macOS Users: Apparently, there are issues running the VirtualBox with Apple's new M1 processor. Let Dr. Mhaskar know if you have a MAC with M1 processor.
2. **Before installing the virtual machine (VM) make sure to do a complete back up of your computer (my student lost all his data while installing VM!)**

Below are some of the key steps to install the virtual machine, a detailed list of steps is on the website http://cs.westminstercollege.edu/~greg/osc10e/vm/index.html

- Go to https://www.os-book.com/OS10/index.html
- Click on 'Linux virtual Machine' link on this page.
- Follow the instructions on this page (http://cs.westminstercollege.edu/~greg/osc10e/vm/index.html) to
    - Download and install the virtual machine (www.virtualbox.org).
    - download the image "OSC10e.ova" and install it as a new machine on the virtual box.

Notes:

1. If you don’t like the command-line based Ubuntu Server, you may install a GUI desktop on it.
2. Make sure you have vitalization enabled on your machine.
    a. For Windows OS, you can enable it through the BIOS.
    b. If you don't see this option under BIOS → Configuration, then you might need to download and install an upgrade to the BIOS (I had to do this on my laptop). Warning: Before following this step take a backup of your computer.
    c. After installing the upgrade, restart your computer.

In Lab 2, you will be using this Linux image to practice loading and removing kernel modules. You will not be provided any help with Lab 1 on the day of Lab 2. You are expected to have the virtual machine and Linux (from the textbook website) ready to work on Lab 2.