CS 302 – Assignment #0

Purpose: Become familiar with the CS 302 class web page
Due: Friday (1/20)
Points: 10

CS 302 Class Web Page URL: `http://osserver.cs.unlv.edu/moodle`

Assignment:

- Access the class site and register for access.
  class site: http://osserver.cs.unlv.edu/moodle
  Select the class, ***CS 302 , Data Structures***

- Become familiar with the on-line course system.
  - Copies of lecture topics, assignments, and handouts will be posted on the site.
  - General announcements will be posted to the News Forum.
  - Questions regarding class lectures and assignments should be posted to the Questions Forum (and not via e-mail).
  - Assignments will be submitted on-line through the system.

- You are expected to login regularly and check the Forums.

- Complete *Assignment #0 Quiz* on the class web site to confirm completion of the site registration and familiarization. The quiz must be completed before the scheduled due date. Completion of the quiz is worth 10 points.

- The assigned ID is the last four digits of your NSHE ID number.
  - The ID number will be used for posting scores periodically throughout the semester.
  - If you would like a different ID number, please send an e-mail to **`jorgense@unlv.nevada.edu`** with a new four digit ID number.

- Create an Ubuntu 16 LTS x86-64 based development environment. There are several options for creating the environment.
  - Install Ubuntu on a PC
  - Install Ubuntu on a PC as dual boot
  - Use Ubuntu via Virtual Machine in TBE-A311 lab
  - Install VirtualBox Virtual Machine (VM) software and install Ubuntu as a VM
    - *Note*, this is the safest option.

- Install the following required software:
  - Virtual Box Guest Additions
  - g++ compiler

  Refer to the following page or the *VM Installation Instructions* for additional information and more detailed instructions.

VirtualBox / Ubuntu Installation

The following are the instruction for installing the VirtualBox Virtual Machine (VM) software and installing Ubuntu as a VM under Windows.

A small Netbook will not be suitable to for this software.

Below are the instructions to install VirtualBox and use the VM:

- Download and install Virtual Box software (http://www.virtualbox.org/) to support creation and use of a VM.

- Once Virtual Box is installed, download **Ubuntu 16.04 LTS Desktop, x86 (64-bit)** (http://www.ubuntu.com/download/desktop). You will need to choose the long term support option. It will be an CD image file (**ubuntu-16.04.1-desktop-amd64.iso** or something very close to that). You will not need to burn a DVD.
    - *Note*, ensure to get the 64-bit version, **not** the 32-bit version (which is different).
    - *Note*, current hardware will be able to run the 64-bit version (even with 32-bit hardware).

- Start Virtual Box and create a new VM using the downloaded Ubuntu image file (*.iso). To create a new VM, click on the "New: icon (upper left hand corner). Follow the prompts for the Wizard, use all defaults for memory and disk settings. *Note*, you will need to remember where the (*.iso) file is. You will be asked for a username and password which will be used to login to the Ubuntu OS once installed. This could take up to an hour depending on the machine.

- Once the VM is installed, should make sure to perform any OS updates. This could take 30+ minutes (even longer on older/slower systems).

- Install Virtual Box **Guest Additions**. From the Virtual Box header menu, select **Devices**, -> **Install Guest Additions**. This will mount a CD image with the software. You can use the autorun to start Guest Additions install. This is optional, but, it will improve screen/Windowing handling and performance. This can take 5+ minutes.

- Install g++ compiler. This can be done from the command line as follows:
    - **`sudo apt-get update`**
    - **`sudo apt-get upgrade`**
    - **`sudo apt-get install g++`**

- It is ***strongly*** suggested that you use some kind of backup for the course files. Something like Dropbox (which is free). No assignment extensions will be provided for crashed computers.

Refer to the *VM Installation Instructions* startup instructions for a detailed, step-by-step example of the Virtual Box and Ubuntu installation process (with pictures).