

# CS061 - Lab 01

## Setting up

### 1 High Level Description

Today all we will do is get you set up with all the systems you'll need for programming the LC-3 and submitting your assignments.

### 2 Objectives for This Week

1. Installing the Virtual Machine manager and software
2. Creating and managing a VM from a provided image
3. Setting up a GitHub account and linking to a GitHub classroom assignment
4. Do a sample assignment and submit to GitHub

### 3 Pre-lab *(you are required to bring your laptop for all labs in this class)*

See the [BCOE laptop policy](#) - the minimum memory requirement is 4 GB RAM, but I would **STRONGLY** recommend **8GB**, PLUS a minimum of **40GB** of free disk space.

*Note that netbooks and Chromebooks and tablets do **NOT** meet the requirements!!*

In order to maintain a uniform working environment for all students, in your first lab we will have you set up a virtual machine on your laptop, with pre-installed tools for the class.

*(Among other things, this will give you early experience with a hugely important technology that you will be needing throughout your career).*

**STEP 1 (to be completed before lab): DOWNLOAD THESE TWO PACKAGES** *(but don't install them yet):*

- **VirtualBox** *(just the "VirtualBox platform package", not the Oracle Extension or the SDK); and*
- **Vagrant** *(Instal the latest version for your corresponding operating system)*
- Do not install these packages until lab *(unless you're already experienced with VMs)*

**STEP 2 (to be completed before lab): DOWNLOAD** either [CS61\\_Files.zip](#) (Windows) or [CS61\\_Files.tgz](#) (linux/Mac) and unzip it to a convenient location in your directory - remember, you will not be able to delete, rename or move this directory once you have set up your virtual box.

This will set up the ucrse directory for your virtual machine, with folders for all your labs & assignments.

**STEP 3 (in lab): Now install the VirtualBox and Vagrant packages**, following the steps here:

[http://learn.cs.ucr.edu/faqs/virtual\\_machine.html](http://learn.cs.ucr.edu/faqs/virtual_machine.html) *(note that you will NOT need to write your own vagrant file, as we have already provided it for you in Step 2)*

You can accept all the default installation configurations.

#### STEP 4: RESTART YOUR COMPUTER

If you encounter problems at any point in these steps, don't worry - in lab, your TA will help you complete the process, and then walk you through configuring the VM, launching it, and shutting it down when you're done.

All assembly language programming and testing, including all lab exercises and programming assignments, will be done in your VM box, starting with lab 1 - so make sure you get all the above done before coming to lab!

#### 4 GitHub account

If you don't already have one, sign up for a [free GitHub account](#).

Then tell us [your GitHub username](#)

#### 5 GitHub classroom *(that's where you'll find your assignments)*

All your assignment and lab specs will be set up as GitHub Classroom links - see our [Guide to GitHub](#). Then set up your private repo for Lab 1, clone it, do the exercise (*write a C++ "Hello World" program*), commit it & push it, as described in the specs. Then show the commit on GitHub to your TA.