

**CSCI 2270 – Data Structures and Algorithms**  
**Instructor: Hoenigman/Jacobson**  
**Recitation 1**

**Objectives:**

1. Setup your **Moodle** account and test that it works
2. Setup the **VM** image on your laptop
3. Programming **exercise** in Moodle using CodeRunner

**What to submit and when:**

1. **Recitation exercise** due in recitation
2. **Recitation 1 submission** due Sunday at 5pm

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## Moodle Accounts

All students in CSCI 2270 this semester will be accessing course materials through the Computer Science Moodle: <http://moodle.cs.colorado.edu>

To use Moodle, you need to login using your CU identikey and password, and then enroll in your class. Once you've logged in, select the CSCI2270 – Hoenigman class and enter the enrollment key: **csci2270** to enroll.

Once you're enrolled in the class, you should see the course materials that have been uploaded so far, organized by weeks.

### Moodle Account Test

To test that you have set up your Moodle account and are able to submit your assignments, upload a file to the **Recitation 0 Submit** link. It doesn't matter what file you submit; this exercise is to verify that you know how to upload your assignments before the first assignment is due. You should receive a confirmation email once your file is submitted. Verify that you receive that email. If you do not receive this email, you did not submit correctly.

## Virtual Machine Image

In recitation today, you will be installing the Computer Science Virtual Machine (VM), which is designed to provide a consistent development environment for all students. In addition to the VM Image, you need to install VirtualBox to run the VM Image. Your TA has USB drives with both

VirtualBox and the VM. The steps to install are:

1. Plug in USB drive
2. Navigate to USB Drive > cu-cs-vm-spr16-x64-v1.0 directory
3. Run (e.g. double click + follow prompts) Virtualbox installer (included in above directory: .dmg for OSX, .exe for Windows)
4. Import VM image (either double click on .ova file or open Virtualbox -> File -> import -> navigate to flash drive -> .ova)
5. When import completes, eject the flash drive and pass it on to the next person.
6. Launch the VM to make sure it works.

Many of you have the VM from last semester. We encourage you to install this semester's VM as it should be faster and has additional software.

If you do not install the VM in recitation, there is information about the VM, and how to install it on your computer can be found on the CU CS Foundation Website:

<https://foundation.cs.colorado.edu/vm>.

The link "Obtaining the VM Image" explains how to download the Image using either BitTorrent (recommended), or through direct download. To download by BitTorrent, you first need to download a BitTorrent client, such as Transmission. Downloading the VM takes a long time and it is recommended that you do this when you will have a reliable Internet connection for several minutes.

In addition to the VM Image, you need to download VirtualBox to run with the VM Image. Instructions for how to


do this are found under the link “Installing the VM”. Install VirtualBox and then import the VM Image following the instructions on “Installing the VM”.

If you encounter issues getting the VM setup on your machine, there are help sessions available. The times and days are listed on the Foundation website

<https://foundation.cs.colorado.edu/vm/>.

Finally, we encourage students to **install Sublime** and use it as your favourite text editor. Sublime is a good compromise between command line editors like Emacs or Vim and IDEs like Code::Blocks or Eclipse. You can use it as an unregistered user (i.e. without paying).

To install Sublime follow the steps below:

1. Navigate to <https://www.sublimetext.com/3>
2. Download the Ubuntu 64 bit version.
3. Click on the downloaded file.
4. Click Install in the upper right corner of the Ubuntu Software Center.
5. Once installed, click on  and type *Sublime* in the search box to run the program.
6. Run it to make sure it works fine.

## Recitation Exercise (due in class)

For Recitation 1, you will need to write a function that determines whether a number is prime. Before implementing it though, we want you to think about the algorithm. Thus, in your preferred text editor (or on paper), write the pseudo code for your *isPrime(n)* function and show it to your TA before leaving recitation.

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*isPrime* takes an integer argument and identifies whether the argument is prime or not. The function does not have a return value. It should print "Yes" if the number is prime, "No" otherwise.

## Recitation Submission

Now that you have the algorithm in mind it is time to code it up using the CodeRunner programming plug-in in Moodle.

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1. Click on the Recitation 1 Programming Exercise link on Moodle:



[Recitation 1 Programming Exercise](#)

2. Click the start button for the Quiz. **Note:** we use the term Programming Exercise, but Moodle sees these exercises as quizzes.
3. Write the code for your *isPrime(n)* function. Click Check to run the code in CodeRunner.
4. Fix any errors that show up. Errors are displayed on the bottom of the screen. Click Check again. Once your code is correct, all test cases will appear green.

If you are not familiar with CodeRunner and can't figure it out on your own, post a question on the Piazza forum, or ask a classmate or your TA for help.

**Note:** If you don't get your VM working in recitation, go to VM help hours with Ethan or the CAs in the CSEL computing

lab in ECCS 112. The schedule for VM help sessions will be posted on the Piazza forum.

**You have until Sunday at 5pm to submit the CodeRunner Recitation 1 Quiz.**