

The Beauty and Joy of Computing

Lab Exercises: UNCG-specific information

The lab exercises that we do in this course are written in a general way, that assumes very little about the specific computers and tools available to the student. This was done on purpose so that the exercises could be easily used in a variety of schools, that provide a diverse array of computing environments.

This document explains how lab exercises work at the University of North Carolina at Greensboro, which depends on the configuration of our computing labs (Windows workstations that distribute software in a specific way) and the tools that we use (e.g., Blackboard for submitting programs). If other schools use these exercises, you can simply replace this part with an explanation for your own school's environment.

Initial Exercises: BYOB at UNCG

The first few labs use a programming system called BYOB ("Build Your Own Blocks"), a system developed at the University of California at Berkeley for their Beauty and Joy of Computing class. Berkeley has since created a new version that they call Snap!, but as of 2014 we are sticking with BYOB for a variety of reasons. BYOB is available in the Petty 222 Lab that we use for our class lab meetings, and can be used both during our organized labs and during open lab times in Petty 222. To find open lab times, just check the schedule posted outside the lab.

BYOB is "available" on all of the computers in Petty 222, but that does not necessarily mean it is installed! To see if BYOB is installed, after you log in check the "Start" menu and look for a folder named "BYOB" - if it's there, you can open it and run BYOB right away! If BYOB is not in the Start menu, then you will have to install it. There should be an icon on the desktop named "Run Advertised Programs," which you can double-click and it will give you a long list of software that can be installed on this computer. Select BYOB, and go through the prompts and it will install on this computer, which should take less than a minute - after installation, you should be able to find it in the Start menu to run.

There are several options for saving your work in the UNCG computer labs. You should not save your work directly on the "C:" drive or in some specific location on the computer, because then your work will only be available on that specific computer, and could in fact be wiped out if maintenance or "reimaging" of that computer is done. One option is to have your own thumb drive (or USB drive), and save your work to that device. The benefit of this option is that you can take your programs with you wherever you go, and can easily transport your work between your own computer and the UNCG lab computers. The disadvantage is that if you don't remember to back up your storage, and you either lose or damage your thumb drive, then you could lose all of your work. Losing your thumb drive will not be accepted as an excuse for turning in homework late (nor will "my dog ate it" be a good excuse). You are responsible for keeping track of your work, and if you lose it that is your responsibility, not mine. A second option is to save to the UNCG network servers. All students have storage space on the network servers that you can access as the "S:" drive in the lab (labeled as "SpartanDrive"). Anything

saved to this drive will be available whenever you log in to any other computer in that lab or in any other lab on campus. It also has the advantage that it is stored on professionally managed servers, that have redundant storage (multiple copies) and are regularly backed up. The chance of you losing your data if it is stored on the UNCG network server is very, very small. The disadvantage is that this storage is only easily accessible from an on-campus lab, and not from your home. The best solution is probably a combination: always save to the network drive, so everything is backed up, and if you need to take your work home to your own computer, make a copy onto your thumb drive.

Installing BYOB on Your Own Computer

BYOB is freely available, and can be downloaded and installed on your own computer. We don't use the latest version of BYOB (Snap!) since it doesn't have the large set of built-in sprites that older versions had, so you need to get a "version 3" of BYOB (version 3.1.1 is the one we use in the labs). To install on your own computer, the first step is to go to the BYOB web site at <http://byob.berkeley.edu/> and scroll down to "BYOB (old version) Downloads." There is a Windows installer link - depending on which browser you use, the exact series of steps you will follow is slightly different, but you basically want to download and run the installer. Instructions for Apple Macintosh and Linux systems are also included on that web page.


Later Labs: Python and Other Tools

In 2014 we will be transitioning from BYOB to more powerful languages and tools after the first few labs. Unfortunately, as of the time of this writing, these plans haven't been finalized. Once the new labs have been created, so we know what tools are required, we will update these instructions.

Submitting Your Solutions

For the UNCG class, you will submit your programs through the UNCG Blackboard system. After logging into Blackboard and entering the CSC 100 class, there will be a link for "Lab Exercises" on the left. Select that, and a list of "active" lab exercises will come up - each lab exercise is only active for a short period of time around the scheduled lab, so don't expect to see it at other times. This page should look something like this (on the top of the next page):


Lab Exercises



Lab Exercises

Lab exercises are kept in this area - they are only visible around the scheduled time of the lab, and are used for submitting completed lab exercises.


For actual lab exercise writeups, see the [lab exercises page](#) on the main class web site.



Lab Exercise 1

This is Lab 1: Introduction to Scratch/BYOB - animation and communication

Required files: Lab1-v1, Lab1-v2, Lab1-v3, and Lab1-myscript



Lab 1 Quiz

This is a simple quiz over Lab 1 and the concepts that you encountered in that lab.

To submit your lab activities, click on the title (in bold) of the appropriate lab exercise (not the quiz). This will bring up the submission page, which looks like this:

Upload Assignment: Lab Exercise 1

1. Assignment Information

Name	Lab Exercise 1
Instructions	This is Lab 1: Introduction to Scratch/BYOB - animation and communication Required files: Lab1-v1, Lab1-v2, Lab1-v3, and Lab1-myscript
Due Date	Friday, August 23, 2013 12:00:00 PM EDT
Points Possible	80

2. Assignment Submission

Attach File

▶ [Type Submission](#)

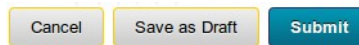
3. Add Comments

Comments

You submit your files in section 2 (“Assignment Submission”) by clicking “Browse My Computer” and selecting a file to submit. You can do this as many times as needed to submit all the required files.

For a lab that uses pair programming (everything except the first lab), your solution should be submitted by only one of the students in the pair (it doesn’t matter which), and the other student’s name should be entered in the “Comments” area.

Finally, make sure you scroll down and click the Submit button:



Until you press submit, nothing is sent to the instructor - if you just exit Blackboard after uploading files, but not clicking “Submit,” it will look like you didn’t complete the assignment. And if you don’t submit your files (even if they have been uploaded/attached) before the assignment submission area disappears at the end of the lab, it might not be possible for you to get credit for your work, so be careful to always submit your work!