EECS 281 Lab 1: Prelab

Before you attend your first lab section, we want you to accomplish two things. First, make sure that you have a laptop available that you can use during labs. If you do not have a laptop, you have two options:

1) Do the work for each lab outside of class on your own and turn them in by the deadline. You must still go to a lab section to do the on-paper assignment, and you can also ask questions, participate in practice problems, and so on.
2) Borrow a laptop from the DCO (Department Computing Organization). Go to 2917 Beyster and talk to any of the staff members there. If you're embarrassed about not being able to afford a laptop, you can speak directly to the DCO Coordinator, Dr. Don Winsor (don@umich.edu). He has offices in 4403 EECS and 2917 Beyster.

Second, get a development environment set up for yourself, including completing any necessary downloads and installations. Here are some options (we recommend Visual Studio or Xcode as they are the two IDEs we will most be able to support during the class, and due to their large body of users have plenty of help available online):

1) Visual Studio (for Windows - see Visual-Studio-Installing-Using.pdf on Canvas in the Files/Resources folder for instructions)
2) XCode (for Mac - see Xcode-Installing-Using.pdf on Canvas in the Files/Resources folder for instructions)
3) CLion (for Windows, Mac, and Linux - see https://www.jetbrains.com/clion/ - you will need to get an educational license with your umich email address)
4) Another IDE, such as Eclipse or NetBeans (for Windows, Mac, and Linux)
5) A text editor of your choice (such as Atom, Sublime Text, vim, or emacs) together with a command line debugger (such as gdb)

We want you to get used to using an IDE (Integrated Development Environment) this semester. IDEs combine an editor, compiler, debugger, and other tools into a single software package. Since this involves downloading and installing the software, we would like you to do that ***before*** coming to lab. The Visual Studio download is 5 GB, and if an entire room full of people all start trying to download it at once, no one is going to finish before lab is over.

Once you've downloaded and installed your development environment, test it out by creating, running, and debugging a small program. The more time you spend learning your IDE now, the more time it will save you throughout the semester. If you're not using an IDE or equivalent development environment, you are wasting time every single day that you sit down to code. The visual (and/or command line) debugger that is part of most IDEs is particularly crucial - it makes finding the source of runtime errors much easier than using print statements, and can easily save you many hours throughout the semester.