Dear students,   
  
For this course, we will be developing mainly in a Linux environment. Please consult this guide for getting the cross-platform compilation options available to you.  
  
**Cygwin instructions:**

Cygwin is a large collection of GNU and Open Source tools which provide functionality similar to a Linux distribution on Windows. This is the main tool we'll be using in this course. (If you have a Linux machine or you use Mac, you won't need it). To download Cygwin follow the below instructions:

Download Cygwin. Run the installer.

When prompted, pick a mirror. If that mirror is too slow, exit the installer and re-run with a different mirror.

When prompted to install packages, search for and select the following:

                - gcc-core (GNU)

                - gcc-g++ (GNU)

                - make (GNU)

                - gdb (GNU)

                - nano (A simple text editor)

Click next, and check the review page before installing. Some packages require other packages as dependencies, which you will have to also install.

When the installer finishes, launch Cygwin.

Check that your packages installed correctly with the 'which' command, for example 'which gcc'.

**The following are NOT must:**

Ubuntu terminal for Windows 10:

- Available on the windows store, however the Griffith computers are missing the required Windows Creator update.

- For your personal computer, simply follow the instructions listed on the windows store page.

- Note that this option is a few gigabytes in size, and this could be a problem for tablet pc's with small SSD's.

VirtualBox:

Oracle provides their virtualisation technology (industry leading) free for home use. You can use this to create an Ubuntu virtual machine.

You can download VirtualBox installer from the oracle website (no product key required), and the Ubuntu ISO is available free on the Ubuntu website.

Due to the download times for Ubuntu, this option is likely only feasible for your home computer, unless you bring a portable HDD with you to class.

Windows:

GCC is installed on campus computers, but is not available in the standard cmd terminal, and is not available in the system path.

A separate terminal with GCC enabled is listed under start -> programs list -> 'CMD with GCC'.

Visual studio 2015 installed on campus computers, which has a better documentation base than visual studio 2017.

If you have VS 2017 at home, it is possible to move a project between VS 2015 and VS 2017.

Git:

I would recommend every student to use a cloud git service of some kind, such as GitHub.

Check the getting started 'hello world' guide at guides.github.com/activities/hello-world/

GIT is installed on campus computers, in the programs list as ‘CMD with GIT’.

IMPORTANT! Please ensure your Git repository is set to 'private'. Public repositories lead to plagiarism, and both parties will be penalised accordingly.