

**Discipline of Computer Science and Software Engineering
The University of Newcastle**

**SENG1120/6120 – Semester 2, 2017
Week 2**

In this lab you will use Cygwin to write, compile and execute your first C++ program.

First, go to <https://www.youtube.com/watch?v=DtUTe4Xk--8> and watch the video tutorial. It goes through all steps for this lab, except the temperature program.

1. Cygwin:

1. Open Cygwin (Start->All Programs->Cygwin)
2. A terminal window should appear. Type **pwd** and press <enter>.
3. The current directory should be `/home/cXXXXXXXX`. If that is not the case, move to the folder by typing

```
cd /home/cXXXXXXXX
```
4. Create a subdirectory called lab1 on the terminal window using the command **mkdir lab1**. Move to that directory using the command **cd lab1**. Go to Blackboard, course materials, computer lab section, and save `test.cpp` onto the folder.
5. Compile the program using the command **g++ -o myCode test.cpp**. Use **ls** to see that you have created a new file called `myCode.exe`.
6. Run the program using the command **./myCode.exe**

That's it again! You have compiled and run your first C++ code in Cygwin.

2. Using Cygwin with the files supplied on Blackboard:

1. Copy the sample files for Laboratory 1 from the SENG1120/6120 Blackboard site (in Course Documents -> Laboratories) into the folder for SENG1120 in your Cygwin personal area. (Normally `/home/cXXXXXXXX`)
2. You can use the supplied Makefile to compile other programs. For example, issue the command **make add** and observe that the program defined in the file `add.cpp` is now compiled. Use the command **make clean** to remove any `.o` or core files in your directory. In case you were unaware, core files are memory dumps produced by some operating systems when a program

crashes – something that happens from time to time when you are developing software!

Last point: Remember the code that you prepared during the lecture for the temperature conversion, from degrees Celsius to Fahrenheit? Code it, compile and run.

Just to help, to convert between Celsius and Fahrenheit, the formula is:

$F = 9/5 * c + 32$, where F is the temperature in Fahrenheit and c is in Celsius.

Good Luck!

