

COMP281 – Using different compilers

It can be convenient to be able to compile on your own machine. Here are some notes that should help you get started with compilers available on different operating systems.

As a piece of advice: I strongly recommend that you try and get access to a linux system (e.g., ubuntu, debian, or whatever distribution you might prefer) if necessary via a virtual machine.

GCC – the GNU C Compiler

- This is a very good compiler and it is what is used by the judgeonline system. As such it is the recommended choice. It is available on Linux, Mac Terminal, Cygwin, Windows terminal (via <http://www.mingw.org/>).
 - gcc is installed by default on most linux systems, so the easiest is to run linux.
 - if this is difficult, you can try running linux on a virtual machine such as virtualbox (www.virtualbox.org)
 - for other options, please use google! (e.g., “gcc on windows”)

- Compiling is done via:

```
gcc helloworld.c [-o executable filename]
```

if you don't specify an output file, you get one called a.out (or possible a.exe on windows/dos)

- To run the resulting program

```
./a.out
```

(or just a.exe for windows, cygwin etc.)

Visual Studio

- Choose file, new project
- Choose Visual C++, Win32, Win32 Console application and choose a name
- Click next, uncheck 'precompiled header', check 'empty project'
- Right-click the project name, choose add, new item, code
- Type in a filename (e.g. helloworld.c)
- You may find it easier to call it .cpp, but there are some differences
- Type some code in the file
- Press F7 to build the file
- Press Ctrl-f5 to run the program

XCode

- Choose file, new project
- Choose OSX, Application, Command Line Tool, click next
- Give it a name and identifier, make sure type C is selected, click next
- Create your project
- a main.c file is created for you, you can edit this
- When you click 'run' a console window should be visible at the bottom for input / output