Guide for C++ Fundamentals Course

Please read this document before attending the C++ Fundamentals course.

1. The course is designed to run under Linux, preferably on a Diamond RedHat machine. If you intend to use a different operating system, you will need to perform setup yourself, **BEFORE** the course starts.

2. Windows: If you want to use a Windows machine you will need to install Cygwin and C++ support packages. The course examples are built with the “make” utility which is not supported by Microsoft. This means you will not be able to use the Microsoft Visual Studio. However, it is possible to use Eclipse with CDT, CLion or the excellent VSCode package from Microsoft.

Please note: The setup for Windows is quite complicated and therefore no support will be given for installing the above software on Windows.

3. MacOS: If you intend to use MacOS the situation is much better, but note Apple have discontinued support for the key components: g++ and gdb. Instead you will need to use clang and lldb.

Please note: The setup for MacOS is problematical and therefore no support will be given for installing the above software on MacOS.

4. This is a virtual course and will be delivered using Zoom. Please make sure Zoom is installed on you machine before the course starts. If you need to logon to a Diamond machine remotely you should use “NoMachine”. Again make sure you can login to your account and create a terminal window **BEFORE** the course starts.

5. I will be writing lots of example C++ programs during the course and you are encouraged to type the examples into your own development environment. It is not necessary for you to use the same environment as me, but you will need to be able to compile and debug your programs. I will be using the GNU compiler set: g++ and make for building executables. I've been using VSCode as the IDE of choice lately, so I'll probably use this on the coure.

6. It is important that you do not simply watch me writing and debugging code. You will get a lot more out of the course if you type the examples into your own IDE at the same time as I do. This makes the course much more interactive and you can report problems immediately. Copies of the examples are stored on github (see attached document).

7. I’ve written separate documents to assist you with setting up the various development environments on Linux. Remember, you only need to setup your favourite environment; you don't need the same environment as me.

8. I will be supplying a PDF that contains full course notes and all examples can be downloaded from github (see details in the setup document). A full course agenda will be distributed before the course starts.

Have fun,

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