

Compiling & running programs

The C++ source code files for the examples in this book are stored in a directory created expressly for that purpose. The directory is named “MyPrograms” – its absolute address on a Windows system is **C:\MyPrograms** and on Linux it’s **/home/user/MyPrograms**. You can recreate this directory to store programs awaiting compilation:



You can see the compiler version number with the command

c++ --version and display all its options with **c++ --help**.

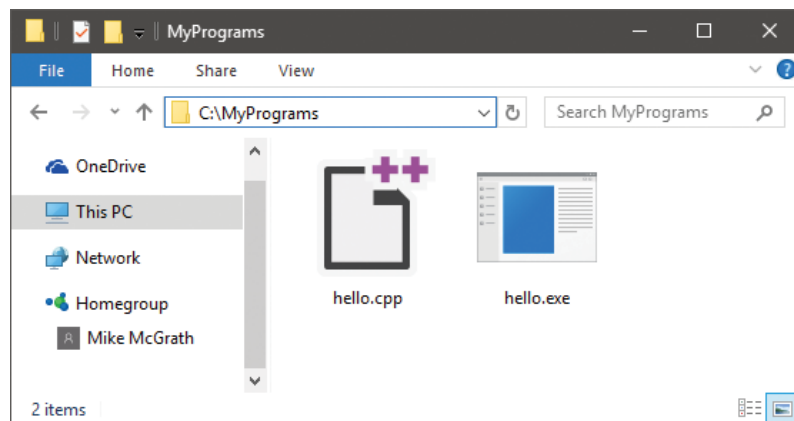
- 1 Move the “hello.cpp” program source code file, created on page 12, to the “MyPrograms” directory on your system
- 2 At a command prompt, use the “cd” command to navigate to the “MyPrograms” directory
- 3 Enter a command to attempt to compile the program **c++ hello.cpp**

When the attempt succeeds, the compiler creates an executable file alongside the original source code file. By default, the executable file is named **a.exe** on Windows systems and **a.out** on Linux. Compiling a different source code file in the same directory would now overwrite the first executable file without warning. This is obviously undesirable, so a custom name for the executable file should be specified when compiling programs, using the compiler’s **-o** option in the compile command.

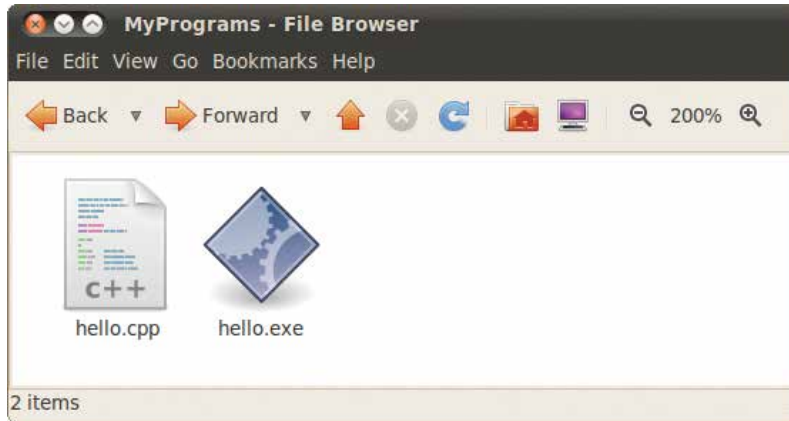
- 4 Enter a command to compile the program, creating an executable file named “hello.exe” alongside the source file **c++ hello.cpp -o hello.exe**



The command **c++** is an alias for the GNU C++ Compiler – the command **g++** can also be used.

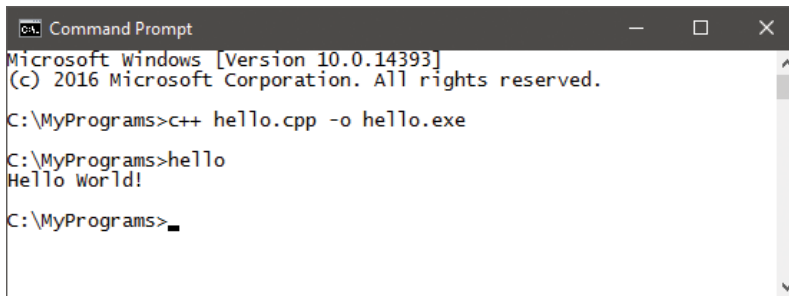


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To run the generated executable program file in Windows, simply enter the file name at the prompt in the “MyPrograms” directory – optionally, the file extension may be omitted. In Linux, the full file name must be used, preceded by a `./` dot-slash – as Linux does not look in the current directory unless it is explicitly directed to do so:



All command line examples in this book have been compiled and tested with the latest GNU C++ Compiler available at the time of writing – they may not replicate exactly with other compilers.