Code::Blocks on Windows Installation Guide using Msys

October 10, 2018, revised August 15, 2019

This is with Windows 7 Professional 64 bit, with the variations for 32 bit given as alternatives.

This approach uses Msys2. Msys2 is a software distribution and building platform for Windows. This isn't exactly simple, but it does simplify the task of getting the toolchains. This won't work on Windows XP.

Note: Msys2 is UNIX-like, in that it is case sensitive and sometimes requires exact spacing. *In the following, some things have to be entered **exactly** as they appear.*

If you have already installed LLVM, uninstall it.

Go to http://www.msys2.org . There are two choices at the top of the page; pick the 32 bit or 64 bit version as appropriate for your system.

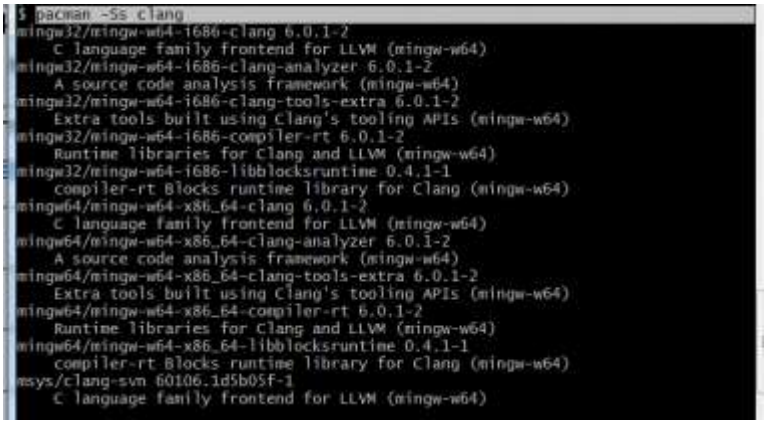
Run the installer. It should open a command-type window for Msys. On the msys2 page above, there are instructions that walk you through a sequence of steps. Accept the default locations. Step 5 seemed to get stuck; after a minute, I closed the page, restarted Msys from the Start menu, then moved to step 6.

This installed around 58 packages. Once that is complete, go to https://github.com/msys2/msys2/wiki/Using-packages for the manual.

In the Msys window we can search for packages at the `$` prompt, by typing

```
pacman -Ss clang
```

Here's what I got:



The one we want is the sixth entry, the "clang" package for x86_64. (for 32 bit, the first one, for i686)

Copy and paste doesn't seem to work here. At the prompt, type

```
pacman -S mingw-w64-x86_64-clang
```

(32 bit: `pacman -S mingw-w64-i686-clang`)

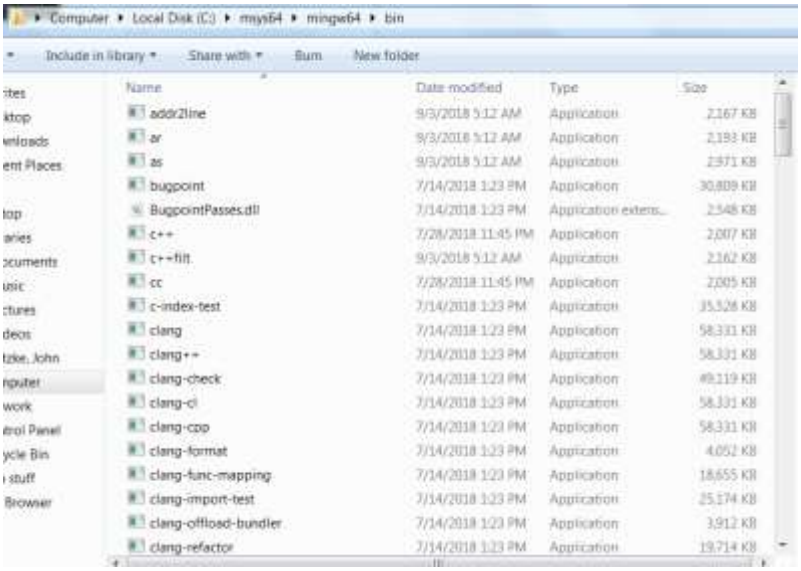
Here's what I got:

```
$ pacman -S mingw-w64-x86_64-clang
resolving dependencies...
looking for conflicting packages...

Packages (18) mingw-w64-x86_64-binutils-2.31.1-2
              mingw-w64-x86_64-crt-git-7.0.0.5245.edf66197-1
              mingw-w64-x86_64-gcc-8.2.0-1  mingw-w64-x86_64-gcc-libs-8.2.0-1
              mingw-w64-x86_64-gmp-6.1.2-1
              mingw-w64-x86_64-headers-git-7.0.0.5245.edf66197-1
              mingw-w64-x86_64-isl-0.19-1  mingw-w64-x86_64-libffi-3.2.1-4
              mingw-w64-x86_64-libiconv-1.15-3
              mingw-w64-x86_64-libwinpthread-git-7.0.0.5231.7da6518b-1
              mingw-w64-x86_64-llvm-6.0.1-2  mingw-w64-x86_64-mpc-1.1.0-1
              mingw-w64-x86_64-mpfr-4.0.1-2
              mingw-w64-x86_64-windows-default-manifest-6.4-3
              mingw-w64-x86_64-winpthreads-git-7.0.0.5231.7da6518b-1
              mingw-w64-x86_64-z3-4.7.1-2  mingw-w64-x86_64-zlib-1.2.11-4
              mingw-w64-x86_64-clang-6.0.1-2

Total Download Size:    345.93 MiB
Total Installed Size:  1642.58 MiB

:: Proceed with installation? [Y/n] y
```

Enter `y` to proceed with the installation. I got another 18 packages.

That should install clang in the `c:\msys64` directory (32 bit: `msys32`)

You can verify that you have it by looking at the contents of `C:\msys64\mingw64\bin`. (32 bit: `msys32\mingw32\bin`)



Next, install Code::Blocks from http://www.codeblocks.org/downloads/binaries. I used `codeblocks-17.12mingw-setup.exe`.

Then, configure Code::Blocks.

First, start Code::Blocks and follow these instructions (from Dr. Beck at http://borax.truman.edu/180/codeblocks_settings.txt)

```
The following settings should be sufficient to ensure that a local copy of
Code::Blocks that you install on your own computer has the configuration needed to
complete assignments for CS180 at Truman for fall 2018.

Last updated: 24 August 2018
```

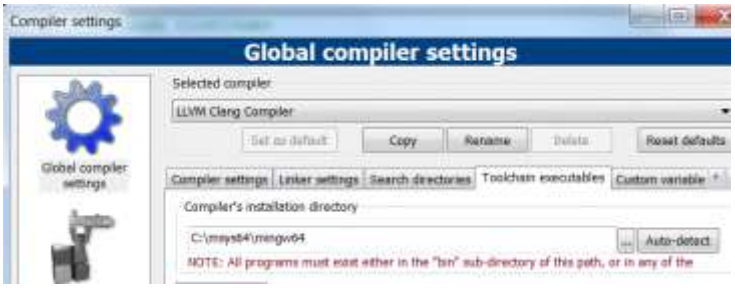
```
Settings -> Editor... -> General settings:

  Use TAB character: make sure it's unchecked
  TAB indents: checked
  TAB size in spaces: 2

Settings -> Editor... -> Margins and caret

  Right margin hint: Visible line
  Hint column: 78

Settings -> Compiler... -> Global compiler settings

  Selected compiler: LLVM Clang Compiler   Then click the Set as Default button

  Compiler settings -> Compiler Flags

    Enable all warnings -Weverything: checked
    Error on language extensions -pedantic-errors: checked
    Have clang++ follow the C++11 ... -std=c++11: checked

  Compiler settings -> Other compiler options
```

in the text box, enter the following, EXACTLY:

```
-Wno-c++98-compat
-Wpadded
```

In addition, make these settings:

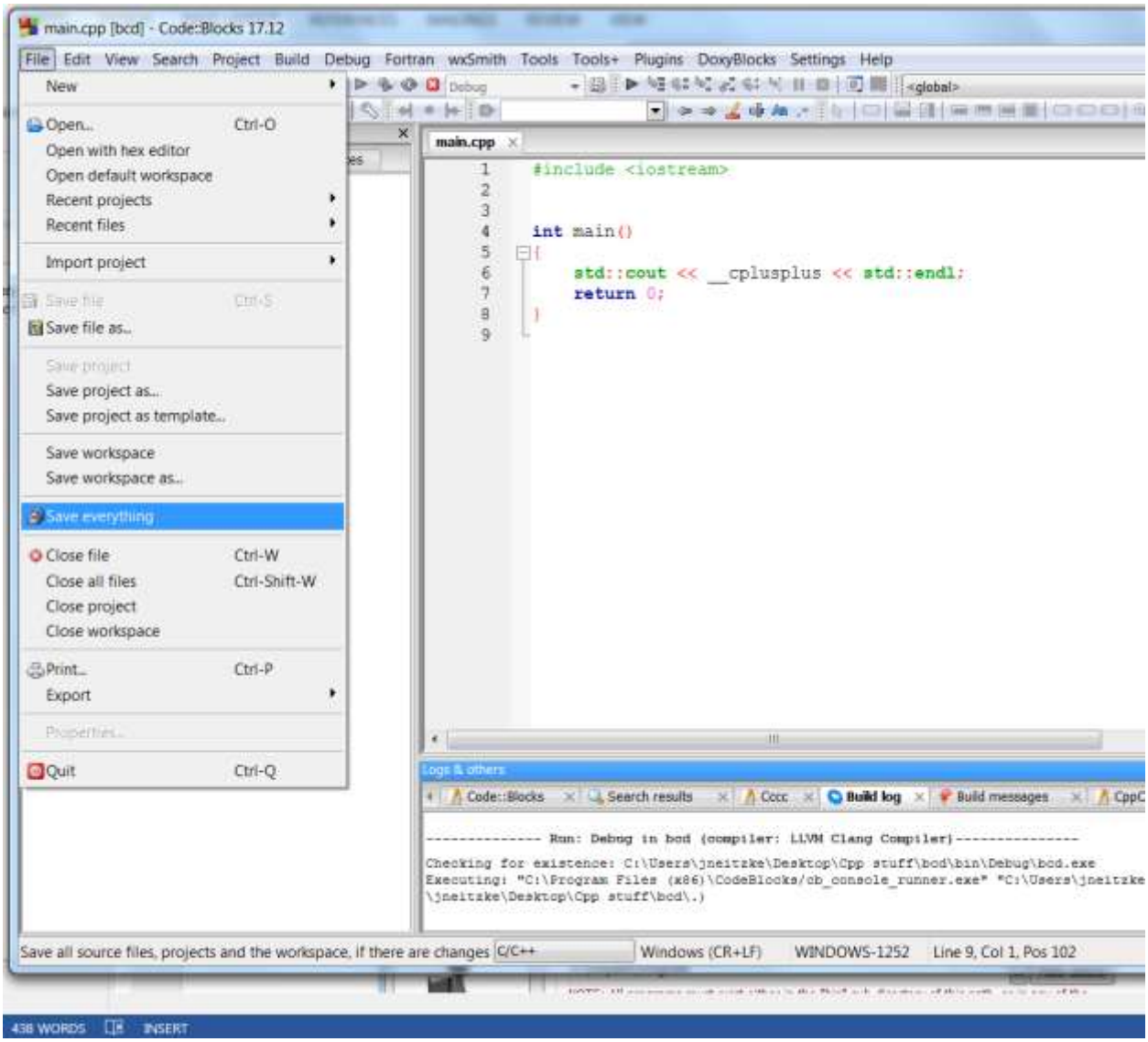
Under **Toolchain executables**, put the correct path to the Compiler's installation directory. That is `C:\msys64\mingw64` (32 bit: `C:\msys32\mingw32`)



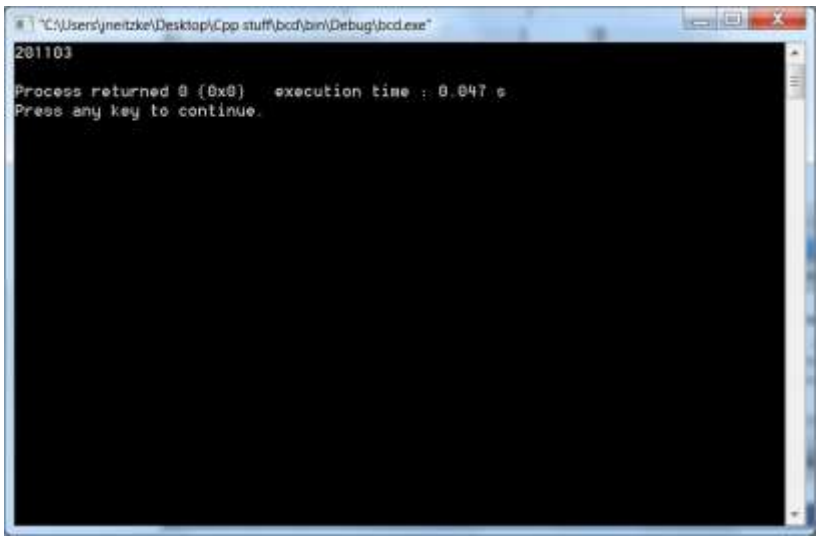
Then, from the file menu of Code::Blocks, click **Save Everything**

There are additional options for configuring the editor to match your preferences. I find some of the colors used for syntax highlighting hard to see – in particular, comments. If you wish to make changes:

In Code::Blocks, select **Settings**, then **Editor**, then **Syntax Highlighting**. There are many distinct categories, so you may suit your personal preferences.



Then close Code::Blocks. Reopen it and verify that the settings are correct. Then, type in the code shown in the screen shot above, and try building the project (which compiles main.cpp), making sure there are no errors, and run the program. The output should look like this:


"C:\Users\jneitzke\Desktop\Cpp stuff\bcd\bin\Debug\bcd.exe"
201103
Process returned 0 (0x0)   execution time : 0.047 s
Press any key to continue.