CXXDecomQt Compilation Instructions For Windows

You may attempt copying and pasting these commands, but, if errors occur, first try typing out the command, as the text from this document will most likely be corrupted with formatting. For text that can be copied and pasted, visit https://gabegordon.github.io/CXXDecomQt/compiling.html.

- Download the mysys2 installer from http://www.msys2.org/ and install (no Admin required)
  - After the install is complete, the mysys terminal will open.
  - In that terminal run:
    - pacman –Syu # Note that you will have to restart the mysys terminal after this
    - pacman –S mingw-w64-x86_64-toolchain mingw-w64-x86_64-qt5 mingw-w64-x86_64-cmake
  - Close the mysys terminal
  - Assuming that msys2 installed into C:\, add C:\msys64\mingw64 and C:\msys64\mingw64\bin to the PATH environment variable (can be environment variables for only your account)
  - Open <msys2 install dir>\mingw64\include\c++\<version number>\x86_64-w64-mingw32\bits\c++config.h and comment out the following line:
    - #define _GLIBCXX_HAS_GTHREADS 1
- Download hdf5 from https://support.hdfgroup.org/HDF5/release/obtain518.html and install (Admin required)
- Download the boost version 1.58 zip file for Windows from https://sourceforge.net/projects/boost/files/boost/1.58.0 . Note that some later boost versions (> 1.65) are not compatible with cmake yet, so use 1.58
  - Unzip the zip file into any old directory. Preferably C:\.
  - Open a non-admin command prompt and run the following commands:
    - cd <path to boost install (make sure the directory contains scripts called b2 and bootstrap>
    - .\bootstrap
      - Note that if this command errs with 'c1 not found.' Try running `bootstrap gcc`
    - .\b2 --with-system --with-filesystem --with-iostreams link=static toolset=gcc
- Download the zip of CXXDecomQt from https://github.com/gabegordon/CXXDecomQt and extract it into the desired location for compilation
  - In the non-admin command prompt run the following commands:
    - set BOOST_ROOT=<path to boost install (e.g. C:\boost_1_58_0)>
    - set BOOST_LIBRARYDIR=%BOOST_ROOT%\stage\lib
    - cd <path to>\CXXDecomQt && mkdir build && cd build
    - cmake -G"MinGW Makefiles" -DCMAKE_BUILD_TYPE=Release ..
    - cmake --build .
  - Place CXXDecomQt.exe in the same directory as the contents of the CXXDecomQt\deps directory to run. Note that if this is to be used in JPSS_tools, place the executable into the deps folder, rename it to CXXDecomQtWin, and place it in JPSS_tools\Decom_tools\
  - Now if changes are made, you can simply run the five commands above. Note that running `del .\*` in the terminal when cd'd into the CXXDecomQt directory may be

necessary before a new build. Also, the first two commands can be omitted if you add the following two lines to CMakeLists.txt starting right above the line that says “set(Boost_USE_STATIC_LIBS ON)” (note to use forward slash file separators here, or a double back slash (\\)):

- set(BOOST_ROOT <path to boost install (e.g. C:/boost_1_58_0)>)
- set(BOOST_LIBRARYDIR=${BOOST_ROOT}/stage/lib)