ECS 122B Environment Setup Project 1

Setting up your development environment

1. Virtual Box
   1.1. Download virtualbox: https://www.virtualbox.org/wiki/Downloads
   1.2. Download 16.04.3 LTS from https://www.ubuntu.com/download/desktop
   1.3. Follow this guide to install Ubuntu: https://linus.nci.nih.gov/bdge/installUbuntu.html

Install packages

2. Add repository: sudo add-apt-repository ppa:ubuntu-toolchain-r/test
3. Sudo apt-get update
4. Update gcc
   4.1. Use “sudo apt-get install g++-6”
      4.1.1. Make gcc-6/g++-6 your default gcc/g++ compiler by executing "sudo update-alternatives --install /usr/bin/gcc gcc /usr/bin/gcc-6 60 --slave /usr/bin/g++ g++ /usr/bin/g++-6"
      4.1.2. g++ --version to check, you should see version 6.*.* (mine is 6.3.0 as of 1/31/18, yours may be a later version)
5. Install CMake with “sudo apt-get install cmake”
6. Install Google test
      6.1. use git to clone the repository at https://github.com/google/googletest
      6.2. After cloning, a directory googletest is created. To build the source:
         6.2.1. Create directory with “mkdir googletest/mybuild”
         6.2.2. Move to the build directory with “cd googletest/mybuild”
         6.2.3. Prepare build environment with “cmake -DBUILD_SHARED_LIBS=ON ..”
         6.2.4. Build with “make”
         6.2.5. Copy shared object files using “sudo cp -a *.so /usr/lib/”
         6.2.6. Your shared object files should now be available for linking. To verify this, use “sudo ldconfig -v | grep gtest” and you should see something like:
            libgtest.so -> libgtest.so
            libgtest_main.so -> libgtest_main.so
      6.3. Copy header files so they are available for including via #include “gtest/gtest.h”
         6.3.1. Change directory to “googletest/include” using “cd ../include”
         6.3.2. Copy header files using “sudo cp -a gtest /usr/include”
   6.4. Check your build with the Project. In the project directory, create a build directory and build using:
         6.4.1. “mkdir build”
         6.4.2. “cmake ..”
         6.4.3. “make”