Compiling and running Project 2-1

Step 1: Download Project Code

Download the project code zip file and extract to a convenient folder that you create for this specific project. Rename all files with "shell" to not have "shell" in the name.

Step 2: Download GTest Source Code

Visit https://github.com/google/googletest and download the entire source (the green download button). Once downloaded, open the .zip file (or if you cloned it, just navigate to the folder) and extract the folder named "googletest" to the folder you made for your project. Once the "googletest" folder is in your project's folder, rename the folder to "gtest". Once completed, your project folder should look like this:
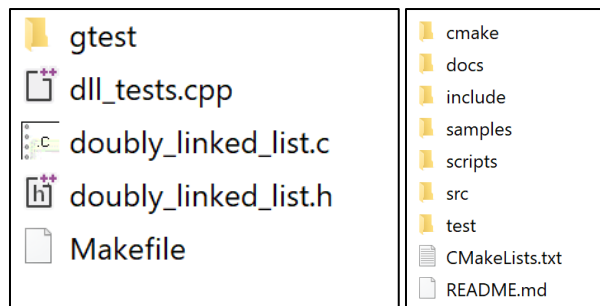

Figure 1. The project folder (left), inside the gtest folder (right)

Step 3: Verify and Locate Make

NOTE: If you are using mingw, the Make that comes installed will be named mingw32-make.

Open a terminal and navigate to a directory other than your project folder. Either type "make" or "mingw32-make", and you should get the following result:

```
C:\Users\dcoop\Documents>mingw32-make
mingw32-make: *** No targets specified and no makefile found.  Stop.
```

This tells us that we have Make installed and that the command line can find Make. If it came up with a message such as:

```
C:\Users\dcoop\Documents>make
'make' is not recognized as an internal or external command,
operable program or batch file.
```

This either means that make is not installed on your computer or that it is not added to your system path.

If it is the former, review your options for your operating system, for linux, run "sudo apt-get install build-essential". If your linux distribution uses other package managers such as "yum", install as applicable. If on Windows, you can use Cygwin or mingw.

If it is not added to your system path, make sure to edit your system environment variables. For windows, search for environment variables, then locate the system PATH variable, and add the directory that make is installed to. For mingw:
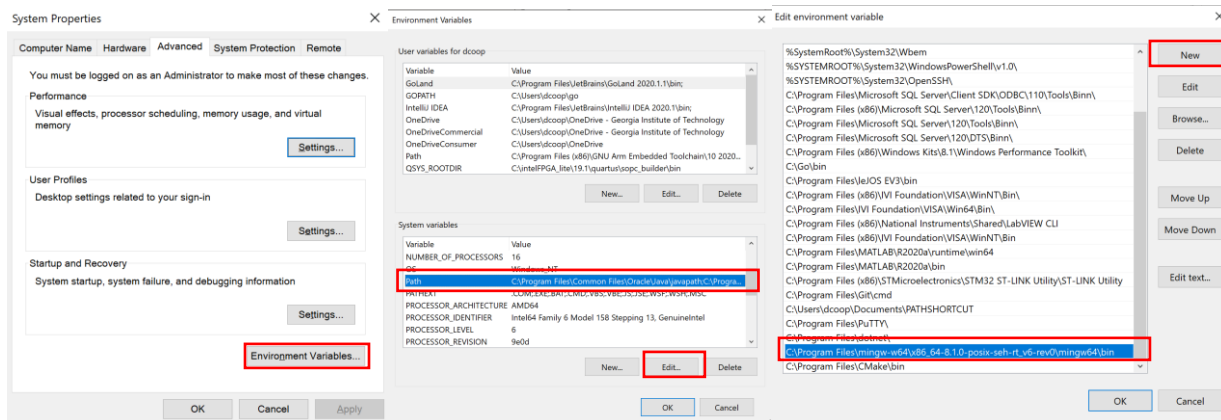
Try running the "make" or "mingw32-make" command again and it should produce the desired result.

Step 4: Build and Run Your Project

Using the terminal, navigate to your project's directory. From the command line, run "make test" (or "mingw32-make test". This should produce an output that looks like the following: (NOTE: This compiled my code, not the shell code so it doesn't have any failed tests, but the shell code will have some failed tests since you have not completed it)

If it doesn't work, try uncommenting the -pthread flag in the Makefile on line 12.