Install Instructions for Team 21 Project 3 Code

These are the install instructions specifically for a 64-bit Windows machine.

Installing Geany and MinGW

First you need to install the compiler that will allow the computer to be able to understand and run the code.

1. Open your browser.
2. Go to <https://www.geany.org/>.
3. Click ‘Download Geany 1.36’. If this page doesn’t have a button saying this, go to <https://download.geany.org/> instead, and scroll to find “geany-1.36\_setup.exe” and “geany-1.36\_setup.exe.sig”, and click both of these to download them.
4. Go to <https://sourceforge.net/projects/mingw-w64/files/Toolchains%20targetting%20Win64/Personal%20Builds/mingw-builds/7.3.0/threads-posix/seh/x86_64-7.3.0-release-posix-seh-rt_v5-rev0.7z/download>.
5. This website will automatically download the latest version of MinGW as a .7z file.
6. Go to the Windows store and download BreeZip: Rar, Zip & 7z Extractor (or a 7z extractor equivalent that you trust).
7. Right-click the .7z file you downloaded in step 4 (it will be in the Downloads folder of your directory) and go to Open With > BreeZip (or equivalent) and click. This will open the application (close any and all ads that pop up).
8. Click ‘Extract’ at the top (if you’re using BreeZip, otherwise find an equivalent button to extract the files), and specify where you would like it to be extracted to. Just set this to C:\\MinGW (put it in its own folder called MinGW in the C: drive).

Installing the SFML Library

Next, you need to download the library that our code works with. This means that the compiler will recognise new commands (from this library) that it doesn’t currently have installed.

1. Go to <https://www.sfml-dev.org/download/sfml/2.5.1/>.
2. Download ‘GCC 7.3.0 MinGW (SEH) – 64-bit’ from this website.
3. Once it has finished downloading, unzip the file by right-clicking on it in the Downloads folder of your file system and clicking ‘Extract All’. This will bring up a window asking you where to extract the files to. Put it into a new folder. This is where we will also put the code.
4. Go inside the SFML-2.5.1 folder and select all of the contents.
5. Right-click and select cut.
6. Go into the main SFML folder, right-click and select paste.
7. Delete the SFML-2.5.1 folder (it should be empty now).

Downloading the Files

Now that you have the compiler set up, you need to have the files to open in it.

1. Download the AVC\_robot.zip and AVC\_server.zip files from the Team 21 GitHub repository (<https://github.com/AmyBroeders/ENGR101Project3>).
2. Right click AVC\_robot.zip in your Downloads folder and select Extract All, and extract it to the folder where you put the SFML library. Repeat for the AVC\_server.zip file.

Setting up the makefile Files

1. Go into the AVC\_robot folder and right-click the file called makefile. Select ‘Open with Geany’.
2. Go into your file directory and find the ‘include’ folder within the SFML folder.
3. Right-click it and select ‘Properties’.
4. Click and drag over the entire Location and press Ctrl + C to copy it.
5. Where it says ‘C:\\SFML\include’ on the makefile in geany, replace it with the location you just copied (select it and press Ctrl + V).
6. Paste the location again into the section which currently reads ‘C:\\SFML\lib’ and replace the ‘include’ on the end of the location with ‘lib’
7. Close the makefile.
8. Go into the AVC\_server folder and find the makefile for that folder. Select ‘Open with Geany’.
9. Replace the path ‘C:\\SFML’ with the location again, taking off the ‘\include’ on the end entirely.

Compiling/Building

1. Right click on the robot.cpp file in the AVC\_robot folder and select ‘Open with Geany’.
2. Click the arrow next to the build button in the menu at the top.
3. Select ‘Set Build Commands’ from the drop down list.
4. Under ‘Independent commands’ in the Command section of Make, write ‘mingw32-make’.
5. In the same section except of Make Object, write ‘mingw32-make %e.o’.
6. Exit the menu.
7. Click the arrow next to the build button.
8. Select ‘Make All’ from the drop down list.
9. The compiler should say ‘Compilation finished successfully.’ At the bottom of the Geany window.
10. Right click on the server3.cpp file in the AVC\_server folder and select ‘Open with Geany’.
11. Repeat steps 7 and 8 for the server.cpp file.

Running

1. Close Geany and open the directory, going into the AVC\_server folder.
2. Double click on the server3.exe application (it may just say server3, but check the file type says Application).
3. A window should start up with the graphics pane, and a terminal with the bottom line reading “Listening…”
4. Go into the AVC\_robot folder.
5. Double click on the robot.exe application (as above, it probably just says robot but check the file type).
6. Reopen the graphics pane, the program should be running.