- 1. Have a file extractor installed (i.e. winrar or 7zip)
- 2. Download and install Cmder
- 3. Download linaro arm-linux-gnueabihf
 - o Go to the linaro downloads website
 - Click on Binaries on the arm-linux-gnueabihf row of the Latest Linux Targeted Binary Toolchain Releases (see Figure 1)
 - Download gcc-linaro-7.5.0-2019.12-i686-mingw32_arm-linux-gnueabihf.tar.xz (see Figure 2Error! Reference source not found.)
- 4. Extract the .tar.xz file to somewhere on the C:/ Drive, this document has the file extracted to C:/bin (see Figure 3)
- 5. Go to the extraction folder, and inside the extracted folder, copy the path of the bin folder (see Figure 4Error! Reference source not found.), for this document, the path is "C:\bin\gcclinaro-7.5.0-2019.12-i686-mingw32_arm-linux-gnueabihf\bin"
- 6. Go to the windows Environment Variables
 - o Open file explorer
 - o Right click on "This PC"
 - Click on Properties
 - A window like Figure 5 should appear, click on "advanced system settings"
 - The "System Properties" window should open, click on "Environment Variables..."
 (see Figure 6)
- 7. Double click on path under both "User variables for <username>" and "System variables" (see Figure 7)
- 8. Add a new path, and paste the copied path from step 5 to the list (see Figure 8 for User variables)
- 9. Open Cmder (if it is already open, close the program and re-open it to update the path)
- 10. Type "arm-l" and press tab, it should auto complete to "arm-linux-gnueabihf-", then press tab twice in a row which should display a list, "arm-linux-gnueabihf-gcc.exe" must be o=among them (see Figure 9)
- 11. To test the compiler, create a simple C file somewhere on your PC (see Figure 10 for a hello world example called helloworld.c)
- 12. In cmder, go to the C file folder (using the cd command, see [])
- 13. Use the compiler to output a file (use -o parameter to have a custom name, extension does not matter, the extension ".o" is used in this document) with the simple C file as input (see Figure 11)

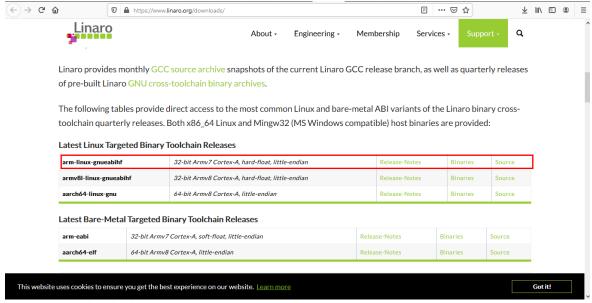


Figure 1: Linaro downloads

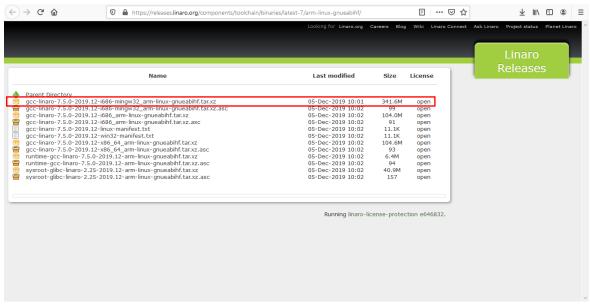


Figure 2: Linaro toolchain

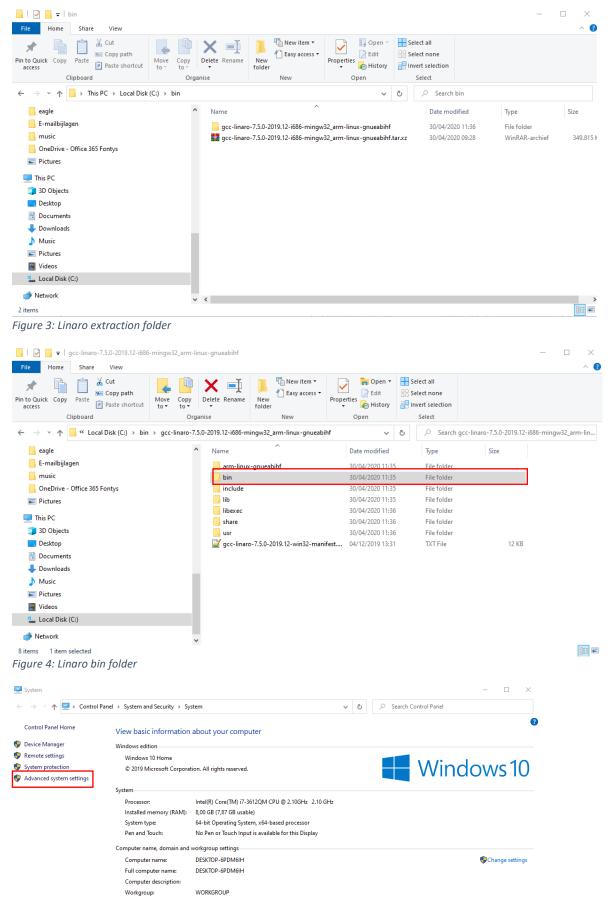


Figure 5: Windows advanced system settings

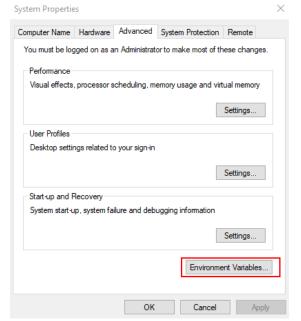


Figure 6: Windows Environment Variables

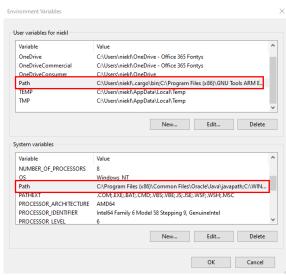


Figure 7: Windows Path

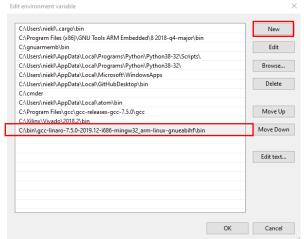


Figure 8: add Linaro directory path to windows path

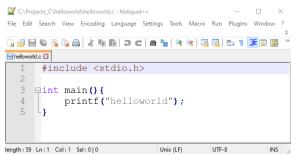


Figure 10: example simple C program

```
C:\Users\niekl
\[ \lambda \] arm-linux-gnueabihf-adralline.exe
\[ \text{arm-linux-gnueabihf-ar.exe} \] arm-linux-gnueabihf-ar.exe
\[ \text{arm-linux-gnueabihf-cr.exe} \] arm-linux-gnueabihf-cr.exe
\[ \text{arm-linux-gnueabihf-cr.exe} \] arm-linux-gnueabihf-cpc.exe
\[ \text{arm-linux-gnueabihf-cpc.exe} \] arm-linux-gnueabihf-ld.bfd.exe
\[ \text{arm-linux-gnueabihf-gcc-ran.exe} \] arm-linux-gnueabihf-ld.bfd.exe
\[ \text{arm-linux-gnueabihf-gcc-ran.exe} \] arm-linux-gnueabihf-gcc-ar.exe
\[ \text{arm-linux-gnueabihf-gcc-ran.exe} \] arm-linux-gnueabihf-gcc-ar.exe
\[ \text{arm-linux-gnueabihf-gcc-ranlib.exe} \] arm-linux-gnueabihf-scc-arollib.exe
\[ \text{arm-linux-gnueabihf-gcc-can.exe} \] arm-linux-gnueabihf-scc-arollib.exe
\[ \text{arm-linux-gnueabihf-scc-arollib.exe} \] arm-linux-gnueabihf-strings.exe
\[ \text{arm-linux-gnueabihf-scc-tool.exe} \] arm-linux-gnueabihf-scc-tool.exe
\[ \text{c-sudd} \] arm-linux-gnueabihf-scc-tool.exe
\[ \t
```

Figure 9: compiler existence verification

```
C:\Users\niekl
\[ \lambda_{arm-linux-gnueabihf-addr2line.exe arm-linux-gnueabihf-as.exe arm-linux-gnueabihf-c+f-kexe arm-linux-gnueabihf-c+f-kexe arm-linux-gnueabihf-dwp.exe arm-linux-gnueabihf-dyp.exe arm-linux-gnueabihf-defedit.exe arm-linux-gnueabihf-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-size.exe arm-linux-gnueabihf-f-get-exe arm-linux-gnueabihf-size.exe arm-linux-gnueabihf-gcc-exe arm-linux-gnueabihf-gcc-exe arm-linux-gnueabihf-gcc-exe arm-linux-gnueabihf-size.exe arm-linux-gnueabihf-s
```

Figure 11: compile simple C program