**Install Windows Toolchain**

**X. Install Cygwin**

<https://www.cygwin.com/>

Download and install setup-x86\_64.exe

Use default settings and select nearby mirror.

Under Select Packages, change View to Full, enter desired application name in Search box, click down arrow next to name to choose latest standard version.

make

vim

Then click Next> Next> to download and install packages

Start Cygwin

right-click top border, chose Text, and adjust as desired.

Exit Cygwin

**2. Install Git for Windows**

<https://gitforwindows.org/>

Under “Adjusting the name of the initial branch in new repositories, and select “Override the default branch name for new repositories” and leave as “main”

Start GitBash

Set your username: git config --global user.name "FIRST\_NAME LAST\_NAME"

Set your email address: git config --global user.email [MY\_NAME@example.com](mailto:MY_NAME@example.com)

Exit GitBash: exit

**3. Install STM32CubeProgrammer**

<https://www.st.com/en/development-tools/stm32cubeprog.html>

Get Software -> Get latest for Win64 -> ACCEPT

Enter First Name, Last Name, E-mail address , then click Download

Open email from STMicroelectronics, and click on Download now button

Click Get Software -> Get latest for Win64 ->ACCEPT

Extract en.stm32cubeprg-win64-v2xxx.zip and run

Next -> Next -> Accept license agreement -> Tick “I have read and understood…” -> Next

Confirm the installation path. Probably something like:

c:\Program Files\STMicroelectronics\STM32Cube\STMCubeProgrammer

->Next -> OK to creating target directory -> Next

Agree to install related device drivers.

Add bin folder for the STMCubeProgrammer to the path.

Windows Start -> Path ->Edit the system environment variables -> Environment Variables…

Select “Path” under User variables for ~ account -> Edit…

New -> Browse -> This PC -> Local Disc (C:) -> Program Files -> STMicroelectronics -> STM32Cube -> STM32CubeProgrammer -> bin -> OK -> OK -> OK to exit

**4. Install Arm GNU Toolchain**

<https://developer.arm.com/downloads/-/gnu-rm>

Download and install this file. It is reportedly depreciated, but seems to work more smoothly than the latest version.

gcc-arm-none-eabi-10.3-2021.10-win32.exe

Note the installation Destination Folder is something like:

C:\Program Files (x86)\GNU Arm Embedded Toolchain\10 2021.10

Important: At end of installation, check “Add path to environment variable” and click “Finish”

**5. Install the STM32 CMSIS headers from GitHub using git inside Cygwin**

Open Cygwin terminal and navigate to location where you want to do work:

cd /cygdrive/c/Users/$USERNAME/Documents

Clone the STM32CubeF1 repo to your PC:

git clone https://github.com/STMicroelectronics/STM32CubeF1.git

**6. Install sample Blinky program from GitHub using git**

Clone the BluePill-Blinky-For-Windows repo to your PC:

git clone https://github.com/sandynomike/ch1-blinky.git

**7. Test installation**

Open Cygwin terminal. Navigate to the working directory of the Blinky project:

cd /cygdrive/c/Users/WDAGUtilityAccount/Documents/ch1-blinky

make clean

make