PICMG IOT Toolchain Setup

Prerequisites:

* Linux OS running Ubuntu 20.04.1 LTS (Focal Fossa) (Tested using VirtualBox on Windows 10)

Visual Studio Code setup

This document is dedicated to setting up Visual Studio Code for Linux and integrating it with the GitHub repository. Visual Studio Code is the Linux version of the Visual Studio IDE, which natively supports GitHub. This tool is necessary for code development and syncing with GitHub.

1. Open a terminal and enter the command

sudo apt-get install git

to install the Linux GitHub package. This step is necessary for Visual Studio Code to access the GitHub repository.

1. Download and install Visual Studio Code from the Ubuntu Software Center.
2. Open Visual Studio Code and hit Ctrl+Shift+X to open the extensions window.
3. Search for and install the C/C++ and C++ Intellisense extensions.
4. Once the extensions are finished installing, open the Explorer menu at the top left of the screen and click Clone Repository.
5. In the text box in the top center of the screen, enter the URL provided below:

<https://github.com/dsandy12/picmg_iot>

1. When prompted for authentication, follow the on screen directions to authenticate with GitHub using your username and password.
2. Once the repository clone is done, click on the Source Control tab on the left side of the screen and initialize the repository.
3. With the main installation and GitHub syncing complete, the next step is to finish the build process. Open a terminal and enter these commands to install the build dependancies

sudo apt install make

sudo apt install g++

sudo apt-get install gcc-avr binutils-avr gdb-avr avr-libc avrdude

1. Install and build simulavr. Start by going to the docs folder, then open a terminal/command prompt and run the install\_simulavr.sh file by using the following command ./install\_simulavr.sh. The install will take a bit of time installing and building but should get everything needed for the server side.
2. Open the Run menu and select the project folder for the build process.
3. At the top left of the screen pick which build process to run and hit run.
4. The project will build and the installation process is complete.