MIlestone 1 Report

Group Member: Wong Chain Hui (MKE201062), Sung Yun Ping (MKE201080), Reteesh A/L Mohan (MKE201076)

Introduction on the process of setting up the Blinky app

Tools Required: STM32 Nucleo-F446RE, USB wire, STM32CubeIDE 1.6.1 (Software)

Procedure

1. Install the STM32CubeIDE 1.6.1 from the website (https://www.st.com/en/development-tools/stm32cubeide.html) into PC and unzip it.
2. Connect the Nucleo --F446RE to the PC by using the mini USB wire.
3. Open the STM32CubeIDE 1.6.1 then create a new project.
4. Select the tab “Board Selector” and then fill in the “Nucleo-F446RE” under the commercial part number.
5. Select the model that corresponds to the Nucleo-F446RE under the boards list.
6. Click Next, and then name the project name and then click finish without adjusting the default setting.
7. Click Yes for the board project options so that it will automatically program the pins into what is functioning on the board.
8. As the project required the LED to blink, then select one LED output which is “GPIO_Output (PA5) LD2 [Green Led]” and name it with “BlinkLED”.
9. After ensuring every pin is configured well then save the project and generate the codes.
10. For the output of the program, it is required to select the port ID and the pin number to be toggled. Hence, from the code at main.c, type in the following code in the while loop:
    HAL_GPIO_TogglePin(BlinkLED_GPIO_Port, BlinkLED_Pin); // port A and pin 5
    HAL_Delay(1000); // Delay 1 second
11. Click the debug button and then click “OK”.
12. If no error, click the run button to download the program into the board.
13. Then, the Green LED which is connected with GPIO pin 5 at Port A starts to blink with 1 second “on” and 1 second “off” interval.

Project code file location

GitHub link: https://github.com/hui3678/Milestone1.git