INSTRUCTION MANUAL

Project Milestone 1 (LED Blinking)

GROUP MEMBERS

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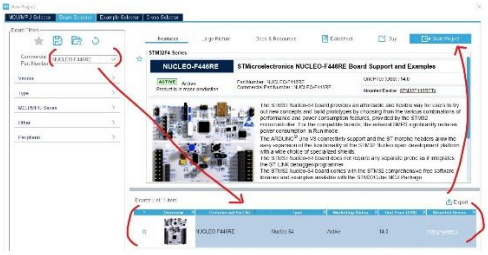
This simple manual shows the steps to successfully develop, compile and flash the Blinky app.

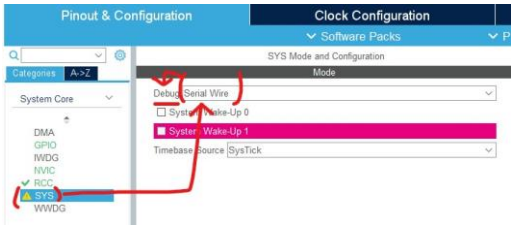
(A) CREATE PROJECT USING STM32CUBEMX

1. Run STM32CubeMX tool.
2. Click *New Project -> Board Selector*.
3. Select *Nucleo-F446RE -> Start Project*.



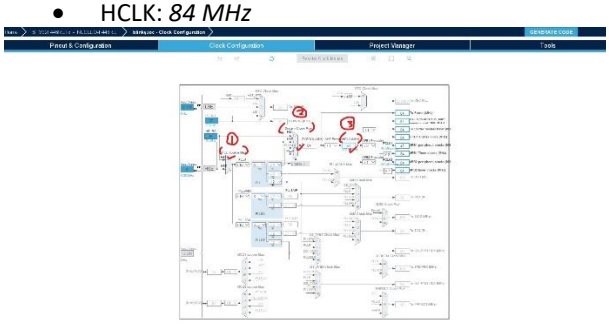
(B) PINOUT SELECTION & CLOCK CONFIGURATION

1. Under *Pinout & Configuration -> SYS* peripheral, verify that *Serial Wire* is selected as *Debug* interface.



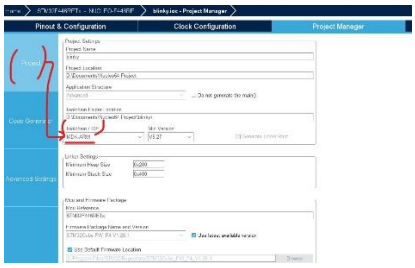
2. Enable *Ld2* (green LED) to *PA5 pin* as *GPIO_Output*.

3. Use *default* clock configuration setting.
   - PLL Source Mux: *HIS*
   - System Clock Mux: *PLLCLK*
   - HCLK: *84 MHz*

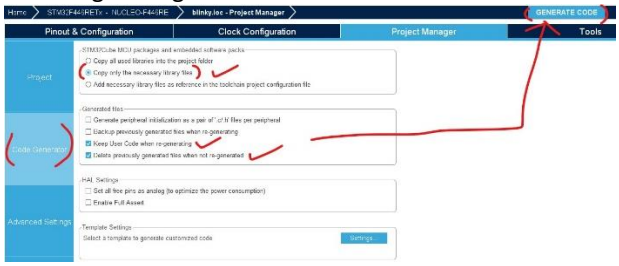


(C) GENERATE SOURCE CODE

1. Click *Project Manager -> Project -> Toolchain/IDE*, select *MDK-ARM* to run source code on Keil IDE.

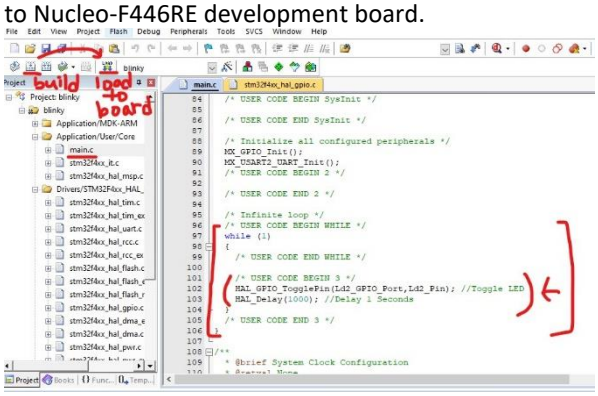


2. Select *Code Generator*, and configure with the following settings. Then click *GENERATE CODE*.



(D) BUILD AND FLASH BLINKY APP

1. After source code generated successfully, click *Open Project* to open the blinky project on Keil IDE.
2. Go to *main.c* under project, insert code to execute blinky app in the while loop. *(Note: Insert code only between specify lines or user code will be deleted after each source code generation in STM32CubeMX tool)*.
3. Click *Build -> Load* to build source code and flash it to Nucleo-F446RE development board.



4. Observe the *Green LED (Ld2) blinking* on the development board and debug the program if LED toggling is not functioning or working as expected.