

ARM Project #1

1. Start from the example project titled “GPIONToggle”
 - a. Connect your STM32 Value Line Discovery Evaluation Board
 - b. Load the project into the MDK-ARM IDE.
 - c. Start by reading the “readme.txt” file to know the purpose of the project.
 - d. Compile and load the project into your STM32 Value Line Discovery Evaluation Board and verify that it works as described in the “readme.txt” file.
2. Trace and find the part of the project that initializes the GPIO port connected to the green and blue LEDs on the board.
3. Trace and find the part of the project that turns the two LEDs on the board on and off.
4. Modify the code such that it performs the same function using a different method for changing the status of the LEDs. (Hint: Use ODR for that port instead of BRR or BSRR)
5. Compare the output of your code in part 4 to the output of the original code and report your results. (Hint: use logic analyzer to see the output waveforms from the two LEDs)
6. Write code to configure the port pin connected to the user switch as input pin.
7. Modify your original project to make the green and blue LEDs blink only when the user switch is pressed. (Hint: make the blinking occur only when the user switch is pressed)
8. Modify your original project to toggle the blinking of the green and blue LEDs when the user switch is pressed. (Hint: make the blinking occur when the user switch is pressed once and stop it when it is pressed twice)
9. Report any problems that you found when trying part 8. (Hint: research the practical problem of “key debouncing” to understand the results)