Lab Exercises

Q1. Write using C, a function to initialize port F pin0 and pin 4 as digital inputs with negative edge triggered Interrupt with priority 1 and write the ISR which toggles Blue LED when interrupt occurs on pin 0 and toggles Green LED when interrupt occurs on pin 4.

Q2. Write using C, a function to initialize port F pins 1, 2, and 3 as digital outputs then write a program to toggle Green LED each 0.5 sec based on Systick timer interrupts.

Lab Submission

Q3. Write Embedded C program to increment “seconds” variable each 1 sec and toggle Green LED in SysTick_Handler(). The program also pauses the Systick timer and RED LED is turned on when SW1 is pressed, while it resumes the Systick timer and the RED LED is turned off when SW2 is pressed.

Upon starting the program, all the LEDS should be turned off. Assume the SysTick timer operates on 16 MHZ and its interrupt has priority of 1, while the priority of GPIOF interrupt has priority of 2.