

ECE 2534

Lab1 Report

Section 1:

My application should have two functions. The first one is that the left button could control LED1. Specifically, the left button could toggle LED1 with red color. Therefore every time when the user presses and released the left button, the LED1 will be turned off if it was turned on or be turned on if it was turned off. The second function is that the right button could control LED2. Specifically, the right button could change the color of LED2 with the order "red, blue, green and purple". Therefore, every time when the LED2 is pressed and released, the color of LED2 will change its color by following the required color order.

Beside those two functions, there are two more requirements for this application. The first one is that both button could work properly at the same time, that is, if a user presses two button at the same time, two LEDs should have the properly responses and do not interrupt each other. The second one is that both LEDs should be turned off at the beginning.

Section 2:

In order to keep both buttons responsive at the same time, I have four variables (*left_button_prev*, *left_button_cur*, *right_button_cur*, and *right_button_prev*) to keep track the history of each button, and they are connected with each button's pin. In addition, two buttons have two independent control blocks and both are in one while loop. Therefore, two buttons can work at the same time.