

Section 1: Description

My application accomplishes all tasks required by the Lab 1 Description page. The full functionality of LED1 and its respective pushbutton is still intact and I have added working functionality of the color rotation of LED 2. LED2 stays off at the beginning like what is stated in the specification sheet and cycles through the colors in the proper order: red, blue, green, purple. There is never a time when the light is not turned off momentarily. Additionally, LED1 stays functional if pressed at the same time. My code is well documented and includes some comments for almost every line of code that I have typed.

Since LED1 only has one color, which is red, operates as expected with the starter code. When the application is first run, the red LED1 begins as off, and alternates between the on and off state for every press of the pushbutton. Additionally, LED2 is initialized using the same GPIO functions from the “driverlib.h” library and the proper pins are initialized for the tri-color LED2. My LED follows the proper order of red, blue, green, purple.

Section 2: Real-time response requirement

I kept both pushbuttons responsive by not altering the starter code given and simply adding code to modify pushbutton 2. Since the starter code already gave LED 1 full functionality with the pushbuttons, there was no need to modify anything related to the pushbutton or LED1. I wrote a code for the LED2 using a switch case statement block. However, I initialized output pins/ports and input pins/port that were different than the connections put towards left pushbutton or LED1. Therefore, it would not mess up the functionality of LED1. Defining the pushbutton mask as bit 4 on the same port, which is different than the pin for pushbutton 1, allows me to perform similar presses which alter the respective bits. The output ports are different, and the input pins are different. I am not blocking the functionality of LED1 and LED2 or vice versa, and in real time, the response is fast enough. I am separating the two LED functionalities by creating a switch case for LED2, and an if statement for LED1.