

# CECS 347 Lab 2    Hardware PWM Controlled LED

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## **Preparation:**

Review Lecture 2 – PWM, with a focus on hardware PWM, and study example project HardwarePWM. You only need a TM4C123 LaunchPad for this lab.

**Startup Project:** CECS 347 Lab1

**Reference Projects:** HardwarePWM

## **Purpose:**

This lab is designed to help student practice how to use hardware PWM for TM4C123 Launchpad to control the brightness of an LED.

## **System Requirements(10 points):**

Use the two switches on LaunchPad to control the brightness of one of the three onboard LEDs: switch 1(left push button) increase the brightness of the chosen light; switch 2(right push button) decrease the brightness of the chosen light. Hardware PWM is required to implement the required features.

**You are required to name your project as CECS347Lab2.**

## **Extra challenge(5 points):**

Implement multiple onboard LEDs on/off at the same time to generate a color different than RGB.

## **Deliverable:**

- 1) Demonstrate your lab on board through Zoom breakout room and video tape it.
- 2) Video record your onboard demonstration and submit a link to your video.
- 3) Submit your software source code to beachboard dropbox.