Class: EE3501

Assignment: Lab 5

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Pre-Lab:

Graphical user interface, text, application

Description automatically generated

Figure 1: prelab code

Text

Description automatically generated

Figure 2: Potentiometer adjustment readings

Lab Results:

Graphical user interface, text, application

Description automatically generated

Figure 3: Volt reading code

Text

Description automatically generated

Figure 4: Volt measurements

Video submission of the LED dimming in the drop box.

Graphical user interface, text, application

Description automatically generated

Figure 5: PWM code for part 8 of the lab

Discussion:

1. Explain why is the highest value you can get out of the ADC is 0xFFFF?

The highest value you can get out of ADC is 0XFFFF is because that is the maximum positive value for a 32-bit signed binary number in hexadecimal notation.

1. Describe the measured values on the terminal and how you set up the PWM to control the LED brightness.

The values on the terminal range from 0V – 3.3V as the resistance goes from infinity – 0 ohms respectively. The PWM was set to PB\_3 terminal which was inputs to the LED1. The resistance effects the current flowing through the LED which will change the brightness of the bulb.