LAB 2 Deliverables

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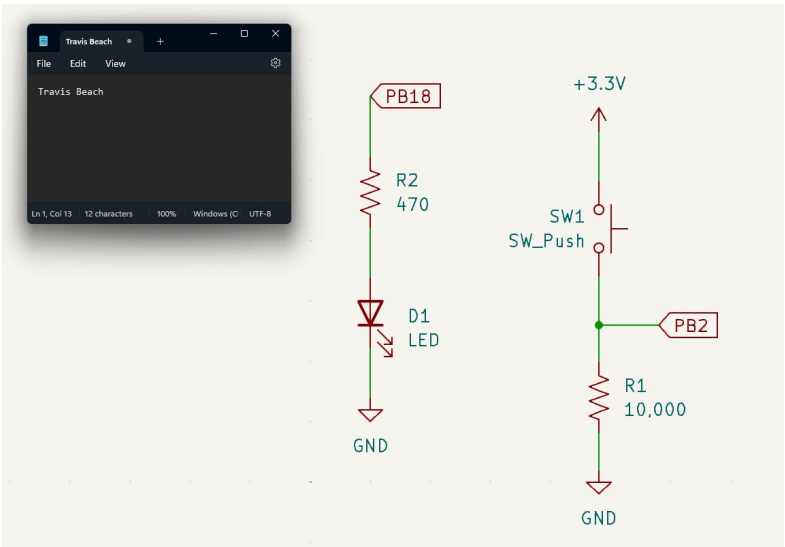
Dr. Y

Circuit Diagram:



Estimated LED:

$3.2V = 470\Omega\, I_R + \frac{I_d + 32}{20}$

I in mA

$3.2 = 0.470 I + \frac{I + 32}{20}$

$64 = 9.4I + I + 32$

$32 = 10.4I$

$I = 3.1 mA$

$I_d = 20V_d - 32$

$V_d = \frac{I_d + 32}{20} = 1.755 V$

$I_d = 3.1 mA \quad V_d = 1.76 V$

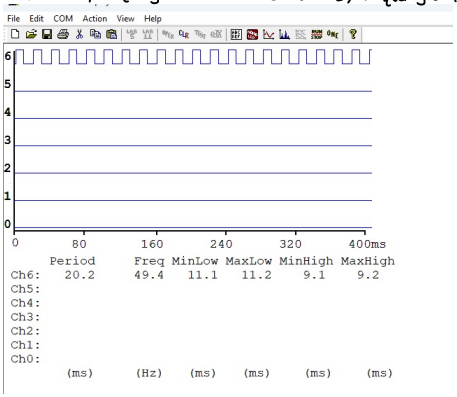
Switch Measurements:

Input V	0V	not pressed
Resistor I	0 mA	not pressed
Input V	3.264 V	pressed
Resistor I	0.3346 mA	pressed

LED Measurements:

LED V	0V	LED off
LED I	0V	LED off
LED V	1.849 V	LED on
LED I	2.856 mA	LED on
LED P	5.281 mW	LED on

Period/Frequency: Period = 20ms, Frequency = 49.4



Terminal:

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ECE319K Lab 2, Spring 2025
Student EID= TMB3956
Running the grader
15,34,75,45, Perfect,  Score=25
End of Lab 2, Spring 2025
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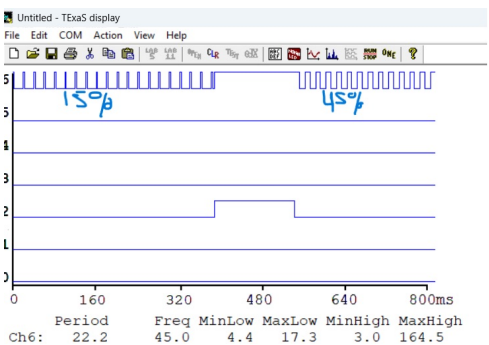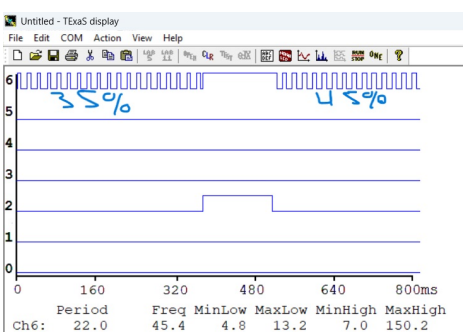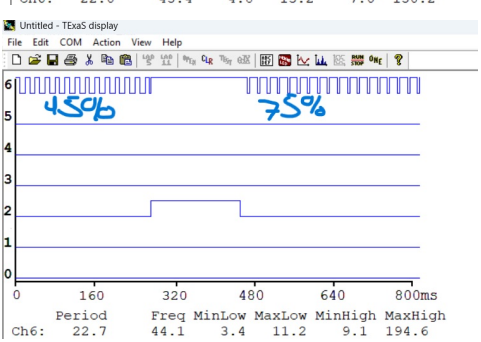
Duty Cycle Switching: