Lab 3 grading sheet, Spring 2021 Circle professor

1) Name Last_____ First_____ EID_____ AC, VT, RY, JV

2) Name Last_____ First_____ EID_____ AC, VT, RY, JV

Use same spelling as listed on Canvas

1. Deliverables 20%:

Upload your main.s file to Canvas. Combine the following components into one pdf file and upload this file also to Canvas. Have the pdf file and Keil open on the computer during demonstration

0) Your names, professors, and EIDs
1) Circuit diagram (hand-drawn or optionally using PCB Artist)
2) Estimated LED voltage and current using the data sheet
3) Screenshot like showing your debugging in the simulator
4) Switch measurements (Table 3.1)
5) LED measurements (Table 3.2)

2. Performance 35% (10% OFF for NO Breathing):
Does it handle correctly all situations as specified?

3. Adhere to coding standard 5%
Good Names have meaning
Variables have units in comments
Consistent indentation
Consistent style

	1)	2)
4. Demonstration 40%:		

You will show the TA your program operation on the actual TM4C123 board. The TA may look at your data and expect you to understand how the data was collected and how the switch and LEDs work. Also be prepared to explain how your software works and to discuss other ways the problem could have been solved. What is the purpose of the 10k resistor on the switch interface? Why the ULN2003 was not used to interface the LED? i.e., why did we connect the LED directly to the TM4C123? What would the flashing LED “look” like if the frequency were 1kHz (period=1ms)? Why did your calculations change between the simulator and the real board? What operating point (voltage, current) exists when the LED is on? Sketch the approximate current versus voltage curve of the LED. Explain how you use the 470 ohm resistor value to select the operating point of the LED. What is the difference between a positive logic and negative logic interface for the switch or the LED? We may test to see if you can measure voltage, current and/or resistance with your meter (so bring your meter to the demonstration).

1) 2)

Total:		