EE1910 Lab 3: Buttons and Text Input

Objectives
- Interface a button to the MSP432 system
- Create a simple user driven program in C

	student check off
Prelab	
• Review the Button Basics slides	☐
• Review the Reading Variables slides	☐

Assignment
- Do not start the assignment portion of the lab before the lab class. We will walk through the basics prior to starting the student portion of the lab.

Part 1: Modify the Button design we created to use two external push buttons and 3 LEDs. Buttons 1 and 2 should turn on LEDs 1 and 2 respectively when pushed. In addition LED 3 should turn on when both buttons are pushed. Print the status of the 3 leds to the serial monitor on a new line every 0.25sec. (1 0 0)…   1=0n, 0=off   ☐

Part 2: Create a console program that reads input from the user and prints the value of a resistor. Inputs will be read one at a time and assume a 4 band resistor configuration. Only the value (no tolerance) will be calculated. Input format:
Please input the ___ band color: 0 for black, 1 for brown, 2 for … 9 for white   ☐
- See example output below and required function

Check Off
- Demo and document your LED program   100~~50~~%
- ~~Demo and document your resistor program   50%~~

Checkoff due by 4:00 pm Friday of the lab week (in-person or via Teams chat)

Submit (in the box): flow diagram(~~2~~1), code(~~2~~1), schematic - due 4:00 pm, Friday of the lab week.

You will ... **he math.h library**

...onent

pow(10,3) evaluates to 10...

(10,foo) evaluates to 10^foo = 1000...

Task... | Properties ■ ✖ ✖

...onsole.exe [C/ ...\GDrive\MSOE\20_Q2_EE1910\projects\wor... 10\Lab_Project

...ter a numeric v... :
...1-brown, 2-red, 3... ow, 5-green, 6-blue, 7-violet... -white:

...nter a numeric value fo... reen, 6-blue, 7-violet, ... white:

...ter a numeric value for band... 1-brown, 2-red, 3-orange, 4-yel... -blue, 7-violet ... -white:

... = 230 Ohms

P... a numeric value for band 1:
0-... n, 2-red, 3-orange, 4-yellow, 5-green... y, 9-white:
5
Pleas... ic value for band 2:
0-black... d, 3-orange, 4-yellow, 5-green, 6-... 8-grey, 9-white:
4
Please ente... band 3:
0-black, 1-bro... iolet, 8-grey, 9-white:
3
Resistance = 54000 Ohm...