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Laboratory 1: "Tool Time"

Pre-lab Submittal:	None.
Demonstration and Submittal:	Due at the end of the Week 2 lab session day. Late submittals will be penalized per the course syllabus.

Objectives

- Install Code Composer Studio (CCS) software tool and become familiar with using it.
- Gain experience using the MSP432 and the LCD display.

This is an individual lab. Each student must independently complete this assignment. While discussing ideas and potential solutions with your classmates is permitted, sharing code is prohibited.

All software must be written in C using the CCS IDE.

For this laboratory, you will install the Code Composer Studio (CCS) software and verify its functionality. You will need to write C code to run on the MSP432 system utilizing GPIO and interfacing to the display.

Specifications:

- Install the TI Code Composer Studio (CCS) software using the CCS_installation.pdf instructions or the tutorial from Dr. Johnson's site.
- Write a C program to do the following:
 - On the first line of the LCD, print the text "EE4930-XXX", where XXX is your section number.
 - Repeatedly do the following:
 - Read the state of a pushbutton switch connected to one of the GPIO inputs.
 - If the pushbutton is not pressed, turn off an LED connected to one of the GPIO pins. Also, on the LCD display, write the following text on the **second** and **third** lines:
OFF
First name
Where 'First name' is replaced with the first 12 letters of your first name. You also must blank the **fourth** line, so that if there was text there, it will disappear.
 - If the pushbutton is pressed, turn on the LED. Also, on the LCD display, write the following text on the **second** and **fourth** lines:
ON
Last name
Where 'Last name' is replaced with the first 12 letters of your last name. You also must blank the **third** line, so that if there was text there, it will disappear.
 - The text displayed on the first line of the LCD must be written there once, and only once. Do not re-write it every time you change other lines on the LCD (also do not clear the whole screen).
 - Functions you can use for interfacing to the display are in the MSOE_LIB library.

Submittal

In your lab report, include:

- Standard cover page (items 1 – 4)
- Printed copies of your source code
- Wiring/circuit diagrams (generated electronically)