CMPE 460 Exercise 1

Intro to MSP432

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By submitting this report, you attest that you neither have given nor have received any assistance (including writing, collecting data, plotting figures, tables or graphs, or using previous student reports as a reference), and you further acknowledge that giving or receiving such assistance will result in a failing grade for this course.

Your Signature: _____

Description

The focus of this laboratory exercise was to introduce the basics of operating the MSP432 development board as well as familarize students with GPIO pin operation. LEDs were controlled as GPIO pin outputs controlled from switches on the board.

GPIO Commands

Each register below will control the settings for multiple pins on a single port. Most ports contain 8 pins each of which can be selected by the bit number on that register. For example, `BIT3` will select pin 3.

1. `P1->SEL0`, `P1->SEL1`: Two bits that select the functionality of the pin in question. `00`: General purpose IO. `01` Primary function, `10` Secondary function, `11` Tertiary function. Primary, secondary, and tertiary function will vary based on the specific pin in question.

2. `P1->DIR`: Selects the direction of the pin IO. `0` input direction, `1` output direction.

3. `P1->DS`: Selects the drive strength of the pin if the pin supports high drive strength. `0` regular drive strength, `1` high drive strength.

4. `P1->OUT`: When the pin is configured as an output, this bit will control the output value. On input mode it will control if the bit is being pulled down (`0`) or pulled up (`1`) by a pull-up or pull-down resistor.

5. `P1->REN`: Selects whether or not the pull-up/pull-down resistors should be enabled. Only useful when pin is in input mode. Disabling this bit will cause the `OUT` bit value on this pin to be ignored.

Exercise 1: Intro to MSP432 GPIO and Keil MicroVision

Student's Name: Andrei Tumbar Section: 2

Demo		Point Value	Points Earned	Date
Demo	Port & Pin Table	10	10	x3 1/14
	LED1 with SW1	20	20	x3 1/14
	LED2 Cycle with SW2	30	30	x3 1/14

To receive any grading credit students must earn points for both the demonstration and the report.

Exercise 1: Intro to MSP432 GPIO and Keil MicroVision

Worksheet		Point Value	Points Earned	Comments
Worksheet	Lab Description	20		
	Question	20		
Total for prelab, demo, and report		100		