ECE 266 – Introduction to Embedded Systems
Spring 2018

Lab #4

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1: Contributions: 50% Jonathan 50% Thomas

2: **Describe what driver functions for the motion sensors are implemented in "motion.asm", and why do you choose to implement those driver functions for your need in this lab.**

Much like the buzzer driver "buzzerInit", the "motionInit" from our driver function set the pin location and define it as input. "motionDetected" function role is to read what the input is detecting which is require for motion detecting part of the lab.

3: **Describe how you revise "main.c" in Part 2 to add the feature of motion detection**

The "buzzerPlay" function was modified so that the "motionSysState" (Similar to the "buzzerSysState") could be considered when buzzing. If motion state is on then the function of motionDetected would be called to return a bool value; true results in the buzzer activating while false will skip activating the buzzer. The "checkPushButton" function was changed so that the "motionSysState" would activate. When switch one was pressed, the "motionSysState" would be turn on and turn off when switch two was pressed.

4: **How much flash memory does your program take? How much SRAM memory?**

The flash memory is 12,840 and SRAM memory is 2,864.

5: **Estimate the number of hours in total you and your partners have worked on this lab.**

The lab took about 1.5 hours.