Josh Privett and Omar Rodriguez

Section 502

Lab 5 Report

The goal of this assignment was to hook up a PSOC to a Breadboard connecting 4 MOSFET into a motor in a way that pushing a switch on the PSOC would alternate the direction that the motor rotates, also known as an “H-bridge” circuit. This is likely designed to be an extension of the previous lab by moving from mostly digital systems to a more balanced physical/computer system. To achieve this we used many of the parts from the previous project, involving one of the button interrupts. This was repurposed to be a single toggle to affect all four MOSFET. Instead of making 2 flags, we figured it more efficient to have a single flag work like it was two. If the flag is set to 1, 2 MOSFET are opened and the other 2 are closed and vice versa for the flag not being set to 1. We were able to properly have the motor switch directions when the button is pressed, although the motor does spin faster in one direction than it does in the other. This perhaps could have been some wiring not functioning as intended. In this assignment we learned a few important things. Firstly we learned how to use interrupts with physical systems outside the PSOC. For Omar this was most of his learning, Josh learned a lot about how a breadboard works, because he hasn’t worked with them prior to this course. Overall this was considered a great success compared to the previous labs, with everything being able to work in time for demos.