Weeks 1 - 2 Status Report

**Name:** Jacob Knaup

**Section:** 9 AM

**Date:** 8/30/17

1. What were the most important things you learned from Homework 1? *(45 points)*

The most important thing I learned from Homework 1 was how to design an op amp circuit to boost the signal from an analog sensor to match the maximum input voltage of a microcontroller’s ADC. This will be useful for our project so that we can design circuits on our PCB to match up the voltage from our sensors with the PSOC’s inputs. Another import thing I learned was how to select the right current limiting resistor to get the maximum brightness from an LED without frying it. This will also be useful for our project because if we include any LEDs, we will want them to be bright without burning out.

2. What obstacles did your team encounter over the past 2 weeks, and how did you individually contribute to their resolution? Provide specific examples. *(45 points)*

One obstacle we encountered was finding comparable products against which to benchmark out solution. I contributed to the solution of this by researching products on Amazon, which resulted in me finding the Oittm Smart Pillow Mat—a benchmark product that closely matches our project. Another obstacle we encountered was figuring out how to make our criterion and constraints quantifiable and measurable. I contributed to this challenge by revising our data logging criteria to list specific frequencies of data collection.

3. How will you individually contribute to the project in the next 2 weeks? *(45 points)*

I will contribute to the project in the next two weeks by selecting what aspect of the project I will be working on and completing my subsystem of the block diagram. I will also contribute by completing my section of the major component selection assignment for my chosen subsystem. Another means by which I will contribute is through completing the individual PSoC programming assignment which will prepare me to program the PSoC for our project.

4. What resources do you need to be more productive? *(45 points)*

In general, I’ve noticed that the benches at the Peralta Lab tend to be out of one of their two sizes of solder. Additionally, many of the benches do not have wire strippers or diagonal cutters. Buying more of these tools would help us to be more productive in the future when we will be using the lab for our project.