EE/CprE/SE 491 WEEKLY REPORT 7
3/21/2022 - 3/27/2022
Group number: SDDEC22-01
Project title: Plastic Machine Embedded IOT Controller
Client &/Advisor: Mark Hansen & Dr. Jones

Team Members/Role:
Stone Widder - Technical Lead
Joshua Baringer - Software Lead
Rachel Teberg - Historian/Reporter
Evan Pasero - Project Manager
Charles Sang - Controls Lead

- **Weekly Summary**

    This week we made a lot of progress in all of our fields. We began research on the safe power down circuit by finding out the average time it takes our BeagleBone Black to power down while running 50 -60 processes at a time. Rachel also began looking into what the gentle shutdown circuit needs to have in order to work. Charles finished the thermocouple circuit and it should be ready to be put onto the PCB when the time comes. Josh and Stone figured out the issues with installing python libraries on the BBB.

- **Past week accomplishments**

    - PCB schematic -
        - Researched gentle shutdown circuits -Rachel
        - Created relay controls - Evan
        - Finished breadboarding thermocouple circuit - Charles
    - UI screens - Rachel
        - Started drawing some
    - Shutdown times - Josh
        - Found time it takes with pin 9
        - Found time to shutdown with CL
    - Got python library installer working on BBB

- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*
    - *NDA*

o **Individual contributions**

NAME	Individual Contributions *(Quick list of contributions. This should be short.)*	Hours this week	HOURS cumulative
Stone Widder	Got pip installed the BBB, Helped josh test power down time, Helped with gentle shutdown circuit.	5	40
Rachel Teberg	Researched gentle shutdown circuit, created a couple UI screen sketches	5	37
Joshua Baringer	Helped Stone get pip installed, Tested power down time for safe shutdown, Researched python command line stuff.	6	38
Evan Pasero	Began work on circuit board schematic, parts research	8	40
Charles Sang	Debugging Thermocouple Circuit	10	42

o **Plans for the upcoming week**

Joshua: Work on the python command line, help others with their tasks.

Stone: Work with with python simple - pid library

Rachel: UI sketches, possibly implement UI.

Charles: Finish debugging and start designing PCB for the thermocouple circuit.

Evan: Continue work on circuit board schematic, retake oscilloscope traces from relay.

o **Summary of weekly advisor meeting**

In our advisor meeting we discussed the demo we did for our client. We were given some advice on why our beaglebone is not allowing us to download PID libraries and suggestions on where to start with creating the PCB. Specifically we were given a few websites that have schematics for Beaglebone capes.