Weekly Progress Report: #6

01 March, 2023

Project: C.E.L.P. Gardens

Team: Cole Moore, Eric Messer, Luke Barber, Philip Entrekin

Work Completed

The team has completed the Project Proposal Report and Presentation. These proved to show that some more research and testing is needed for our systems requirements. Testing specifications are being recorded for the upcoming design review. All of our hardware except for the enclosure has been delivered.

Current Completed Deliverables:
- Team Bio's - 1/15/23
- Project Summary - 1/24/23
- Weekly Progress Report #5 - 2/23/23
- Proposal Presentation - 2/10/23
- Proposal Written Report - 2/10/23

Work in Progress

The software and hardware leads are still working on module assembly. This is taking a team effort to coordinate all of the systems of the module to work seamlessly. Research is still being conducted to figure out all of the ways our components can be tested. Our battery/power situation is looking hopeful as our expected source of power, (2) 9V batteries, is working better than we anticipated - better, as in lifespan of the module. CAD models for the solenoid valve adapters are almost finished and ready to print. We have also found a new enclosure for the module that will accommodate all of our hardware and power sources.

Milestones We are Working Towards
- CAD designs for solenoid valve adapters.
- Transmitting data to GUI going as expected/developing GUI
- Testing entire system to meet power expectations
- Finishing the design review report and presentation

Challenges and Changes

The 3D printed solenoid valve adapters will take some ingenious design to be able to accommodate water sealing and be attachable to the new enclosure.

Project Cost

Bill of Materials

C.E.L.P. Gardens	Part Number	Part Description	Retail Price	Vendor
Hardware	ESP32-C3-DEVKITC-02U	Microcontroller	$9.80	digikey.com
	DHT11	Temp./Humidity Sensor	$3.15	amazon.com
	B07SYBSHGX	Moisture Sensor	$2.00	amazon.com
	Adafruit-997	Solenoid Valve	$6.95	adafruit.com
	COM-08589	Diode	$0.25	mouser.com
	L7805CV	Voltage Regulator	$0.69	digikey.com
	BS170	MOSFET	$0.44	newark.com
	3D-Printed	Threading Adapter/Spout	$1.70	coreprototyping.xyz
	B07W9H8M3Z	Device Case	$8.49	amazon.com
	Alkaline	2x 9V Batteries	$4.84	amazon.com
Total			**$38.31 (current)**	

These components are mostly the final choice for this project. Any small and inexpensive components of the circuit design are not included. Any software used for the project will be free.

Team Member Hours

As of 3/01/23, the team has worked 11 hours on this project this week. This is a cumulative of 165.5 total hours invested in the C.E.L.P. Gardens project.

		Mon, Feb 27	Tue, Feb 28	Wed, Mar 01	Thu, Mar 02	Fri, Mar 03	Sat, Mar 04	Sun, Mar 05	Total	Year Total
Week 8	Cole Moore			3					3	39
	Eric Messer	1		2	1				4	40.5
	Luke Barber			0.5	0.5				1	46
	Philip Entrekin			3					3	40

Group Yearly Total	
	165.5