
Weekly Progress Report: #4

16 February, 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. All of the components for the project have arrived as of 2/16/23 except for the solenoid valve. This should arrive by Friday of this week. Software and hardware have begun to take place in the assembly of the module.

Current Completed Deliverables:

- Team Bio's - 1/15/23
- Project Summary - 1/24/23
- Weekly Progress Report #3 - 2/09/23
- Proposal Presentation - 2/10/23
- Proposal Written Report - 2/10/23

Work in Progress

The software and hardware leads have started on the module assembly. Software and algorithm development is beginning so we can have a micromanaged plan of how the system will function. The team is researching and documenting how each function of the module will be tested. This includes specific details of what is expected and how and where the module will be tested.

Milestones We are Working Towards

- All sensors reading properly
- Transmitting data to GUI going as expected
- Getting the final pieces of hardware delivered

Challenges and Changes

The container for the hardware originally planned (90x70x28mm) is slightly too small to contain our entire hardware. We have proposed to swap the case for something larger by about 1mm for the width. This will be decided once all hardware is assembled so we have a more exact measurement.

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	$2.20	amazon.com
	Alkaline	2x 9V Batteries	$4.84	amazon.com
Total			**$33.76 (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 2/16/23, the team has worked 13 hours on this project this week. This is a cumulative of 135 total hours invested in the C.E.L.P. Gardens project.

		Mon, Feb 13	Tue, Feb 14	Wed, Feb 15	Thu, Feb 16	Fri, Feb 17	Sat, Feb 18	Sun, Feb 19	Total	Year Total
Week 6	Cole Moore			3					3	30.5
	Eric Messer	0.5		3					3.5	33
	Luke Barber			3	0.5				3.5	39
	Philip Entrekin			3					3	32.5

Group Yearly Total	135