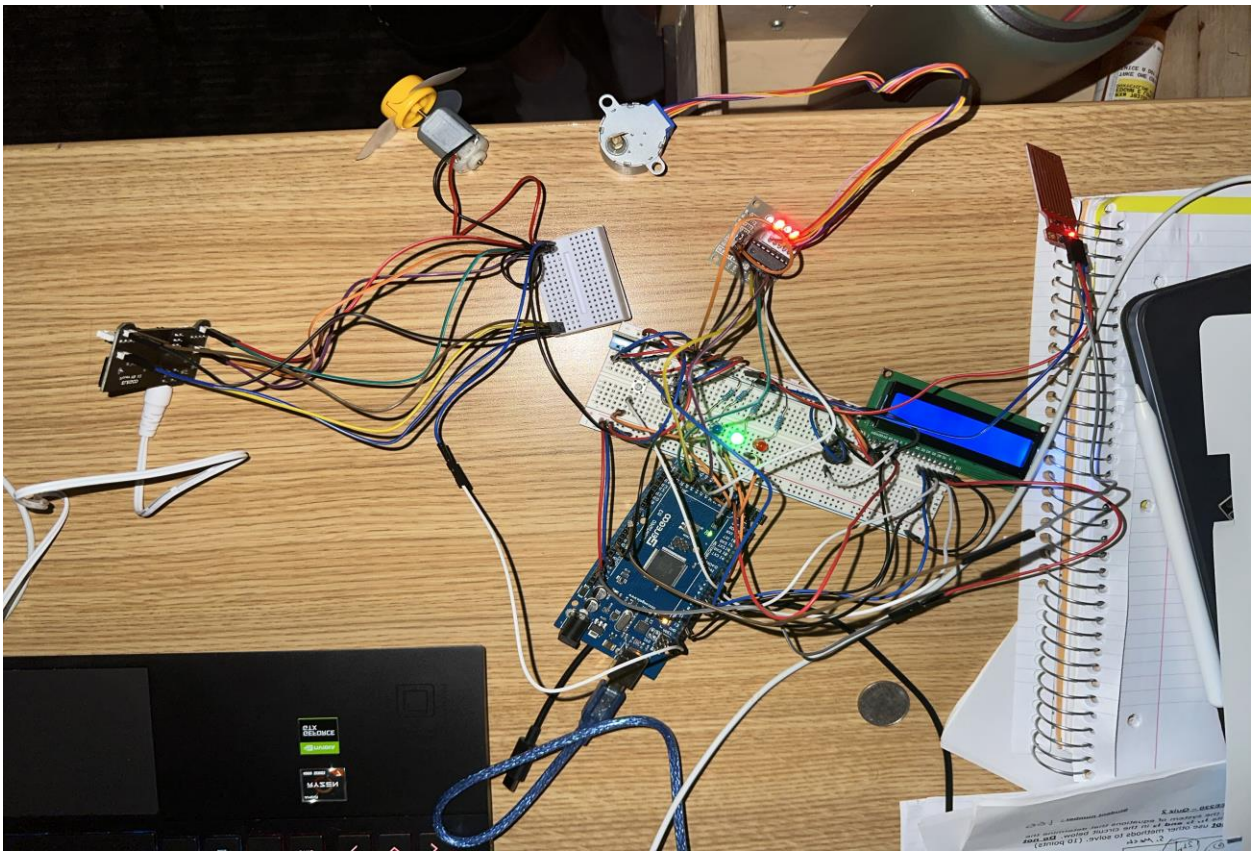
Edgar Lopez

CPE 301

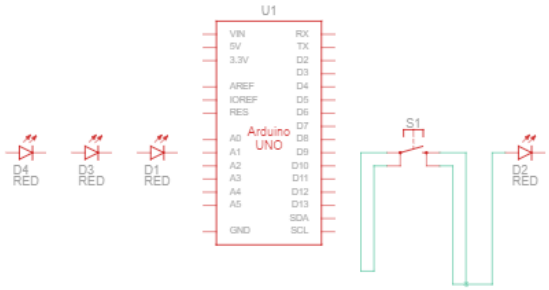
05/09/2023

Project Overview

Circuit:



Schematics:



Items Used:

Arduino Mega 2560

Stepper Motor

Kit Motor

Fan Blade

DHT Sensor

Water Sensor

Power Supply

Breadboard

Mini Breadboard

Button

2X Potentiometer

4 LEDS (Blue, Green, Red, Yellow)

Wires of various lengths (female to male & male to male)

4X 1k OHMS Resistor

330 OHMS Resistor

C++/C Prog Language

Arduino IDE

Documentation used for build:

https://ww1.microchip.com/downloads/en/devicedoc/atmel-2549-8-bit-avr-microcontroller-atmega640-1280-1281-2560-2561_datasheet.pdf (ATMEGA 2560 DATA SHEET)

https://github.com/adafruit/DHT-sensor-library (DHT library)

https://github.com/arduino-libraries/LiquidCrystal (LCD library)

https://github.com/arduino-libraries/Stepper (Stepper Library)

http://www.pgccphy.net/1020/datasheets/ELEGOO%20Breadboard%20Power%20Supply%20Module.pd

Constraints:

Temperature can differ depending of the outside temperature

Separate power supply is needed for fan kit and fan.

Items are not waterproof.

Items probably cannot handle lots of pressure or extreme climates.

Video:

https://youtu.be/rOPijYhLQUU