potentiometer
R/W
RS
Vo
LCD display
A
K
GND
VDD
E
D4
D5
D6
D7
Vcc
Bread Board
GND
330 Ω
Water Sensor
GND
Vcc
GND
5V
A0
A1
10K Ω
thermister
Arduino
GND
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
SDA
SCL
SH-CP
ST-CP
DS
MR
5V
GND
74HC595 IC
OE
Va
Temp Sensor
GND
Clock
Power Supply Module (goes on breadboard)
E
In1
In2
Vm+
L293D IC
out1
0V
0V
out2
Motor (fan
+
-
330 Ω

CPE Project Overview Document

In this project we are supposed to implement a swamp cooler. The swamp cooler should have the functionality of reading the water level of the system, while also displaying the humidity and temperature to an LCD display. A button press is supposed to turn the system on and off and different states of the system are supposed to be indicated by the color of the LED that lights up. The readings of the time and date should be put to a computer every time the button is pushed.

The hardest parts to figure out were how to adjust the vent angle while also how to record the time and date of when the motor is toggled on or off. With more time and thought, I feel like we are able to figure out what is happening in the system. If I were to think of how to do it, it would be having numbers represent each angle, and the user is able to decide what angle they want the system to be angled at. For recording the time and the date I would import a library that would keep track of the time it is now. Whenever the button is LOW, the time would be marked and then it would be serialized and printed to the computer via USB.

To better perfect the system, I would clean up which LEDs were being indicated at which point in time. In the code, It could be a little confusing on how each LED is being utilized and each if statement. I would make them into function rather than writing out the code to make it easier for the person reading it.