

Ryan Rimal

Shawn Ray

CPE 301

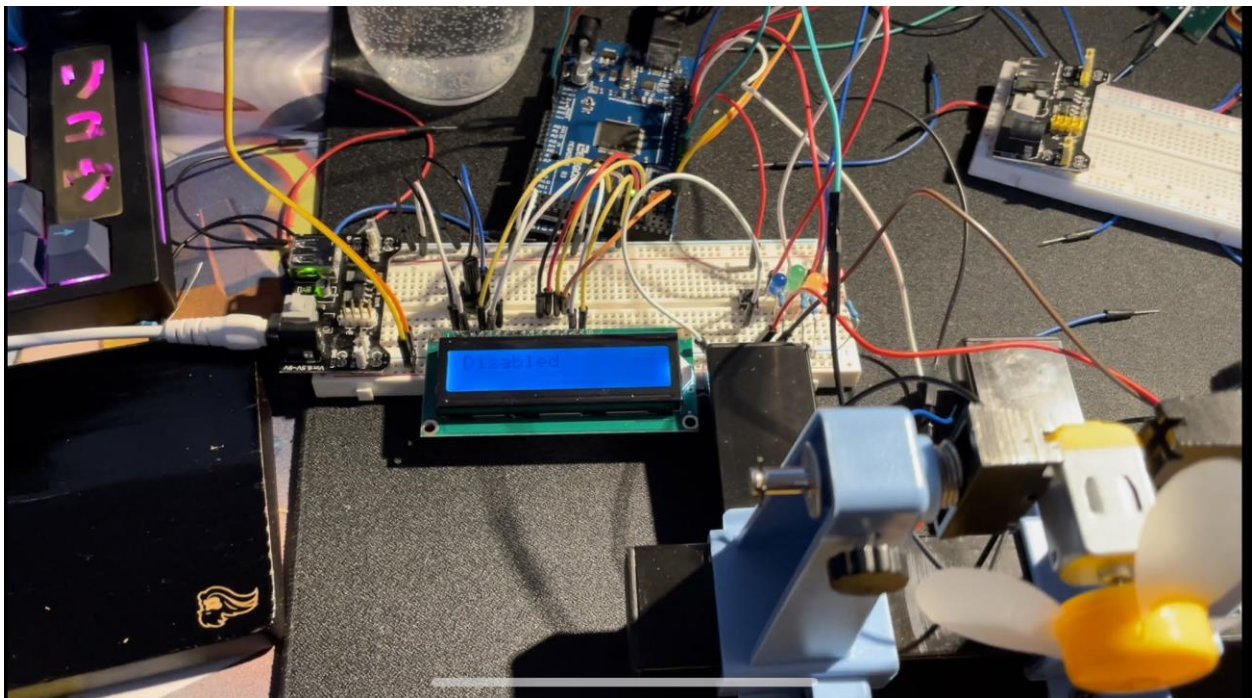
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Swamp Cooler Project

The swamp cooler switches between four states, each of which is denoted by a colored led that becomes active as the state is changed. When the water level is too low, a water sensor detects it and switches to error mode. The system shifts to the idle state from the disabled state, when everything is off with a red light.

When a particular temperature is reached, the system switches from the idle state to the running state and activates the fan motor.

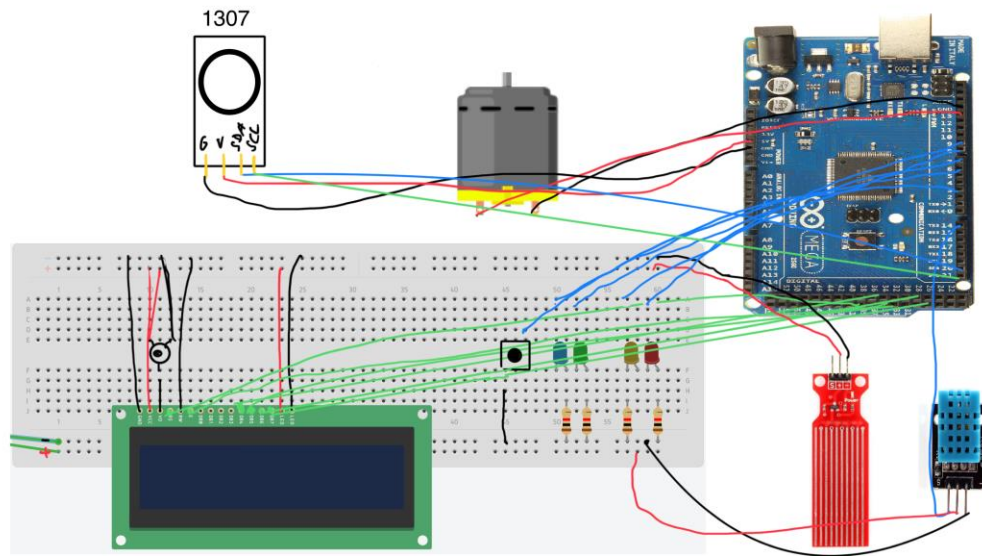
The power supply must receive a 9-volt input to function properly. A wall adapter is preferred because utilizing a battery is risky due to the components' power consumption.



Video Link of Demonstration: <https://www.youtube.com/watch?v=St8B86qPqeI>

GitHub Repository Link: <https://github.com/rrimal2000/CPE-301-Final-Project>

Schematic:



Parts Used:

- [Arduino Mega 2560](https://ww1.microchip.com/downloads/en/devicedoc/atmel-2549-8-bit-avr-microcontroller-atmega640-1280-1281-2560-2561_datasheet.pdf) (https://ww1.microchip.com/downloads/en/devicedoc/atmel-2549-8-bit-avr-microcontroller-atmega640-1280-1281-2560-2561_datasheet.pdf)
- [RTC1307](https://www.analog.com/media/en/technical-documentation/data-sheets/ds1307.pdf) (<https://www.analog.com/media/en/technical-documentation/data-sheets/ds1307.pdf>)
- [DHT11](https://www.mouser.com/datasheet/2/758/DHT11-Technical-Data-Sheet-Translated-Version-1143054.pdf) (<https://www.mouser.com/datasheet/2/758/DHT11-Technical-Data-Sheet-Translated-Version-1143054.pdf>)
- [1602 LCD](https://www.openhacks.com/uploadsproductos/eone-1602a1.pdf) (<https://www.openhacks.com/uploadsproductos/eone-1602a1.pdf>)
- [WaterSensor](https://curtocircuito.com.br/datasheet/sensor/nivel_de_agua_analogico.pdf) (https://curtocircuito.com.br/datasheet/sensor/nivel_de_agua_analogico.pdf)
- [PowerSupply](https://drive.google.com/file/d/1a--J9MjO9K09r0vhEHZ_V0nVIFQ0XyNJ/view) (https://drive.google.com/file/d/1a--J9MjO9K09r0vhEHZ_V0nVIFQ0XyNJ/view)
- [Potentiometer](https://www.farnell.com/datasheets/2661580.pdf) (<https://www.farnell.com/datasheets/2661580.pdf>)
- [Fan Motor](#)