CPE 301 PROJECT

Vaishnavi Desai
Raphael Luy
Nicole Siron

Overview:

A swamp cooler works by drawing in hot air from outside. This air passes through water and the water is heated through the hot air. When the water evaporates it cools the air around it and this cold air gets blown into the house. We simulated this process using components from the arduino kit.

System Constraints:

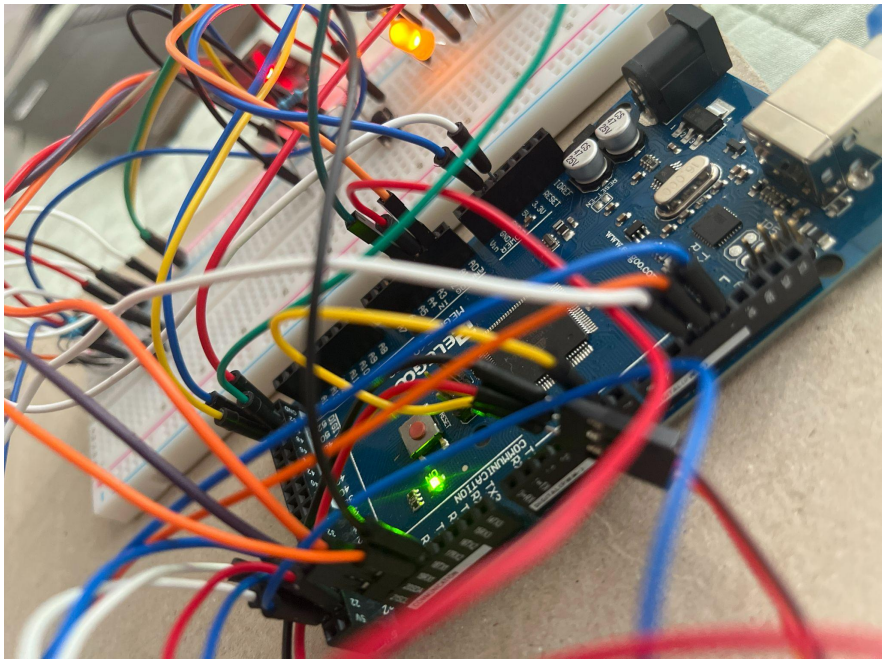
- Water Temperature: 75℃
- Power Parameters: 6.5-9V
- Water Level Threshold: 250

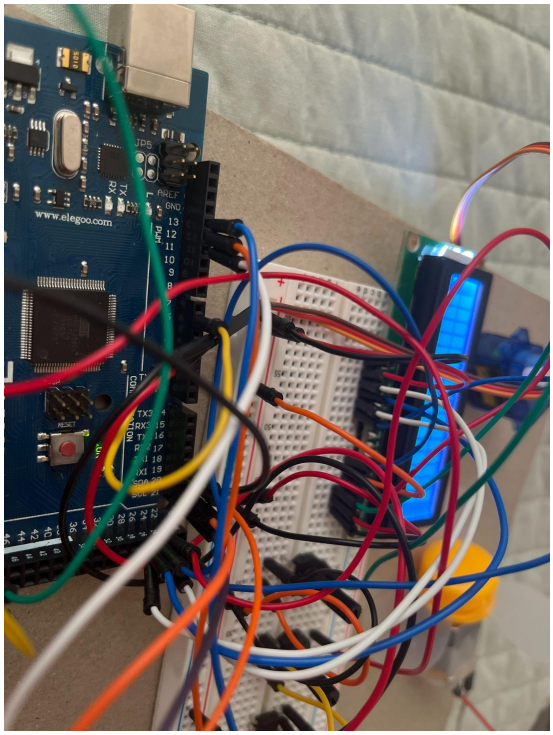
Parts:

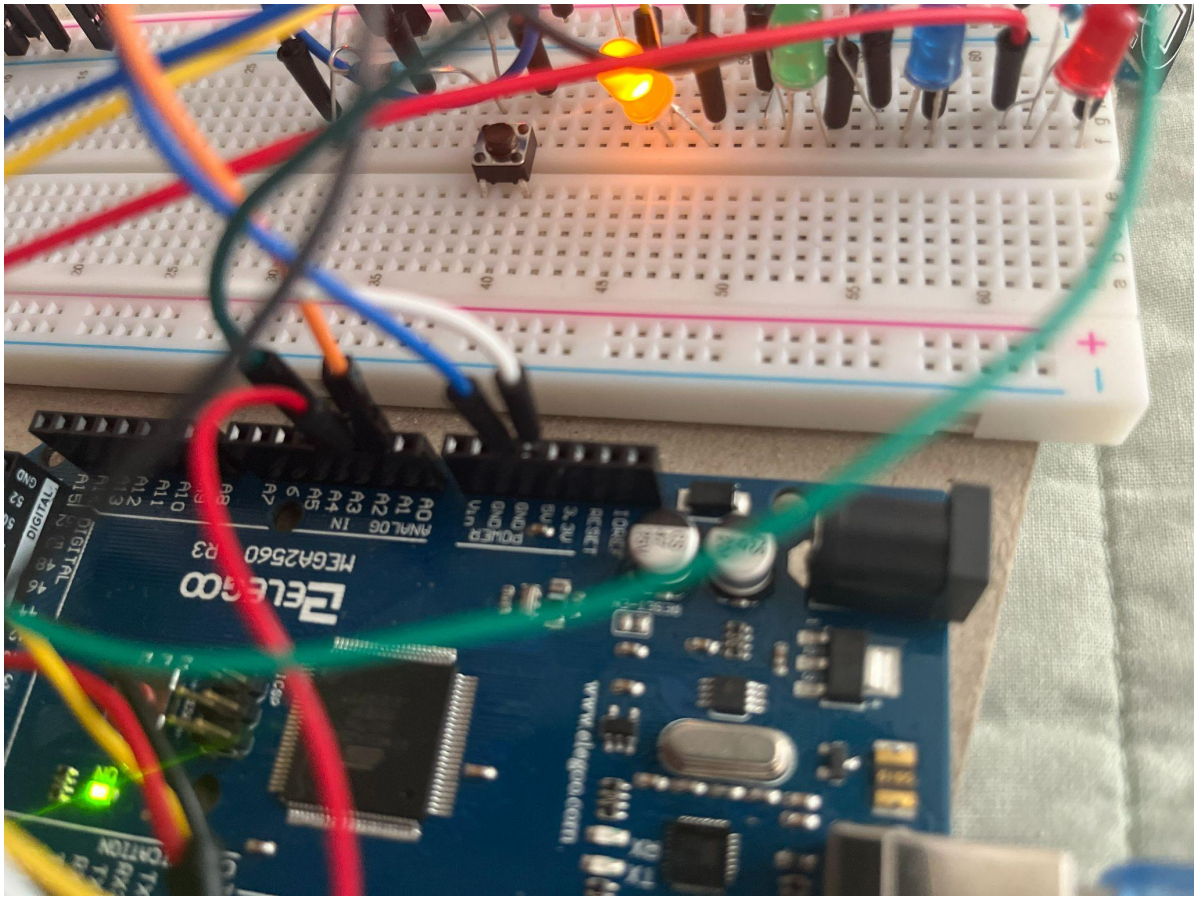
- Water Sensor
- RTC Module
- DHT 11 Sensor
    - Temperature
    - Humidity
- 4 LEDs
    - Individual states
- On/off button
- Reset button
    - Error state
- Power supply
    - Fan
- Fan Motor
- 2 Potentiometers
    - LCD brightness
    - Servo Motor angle

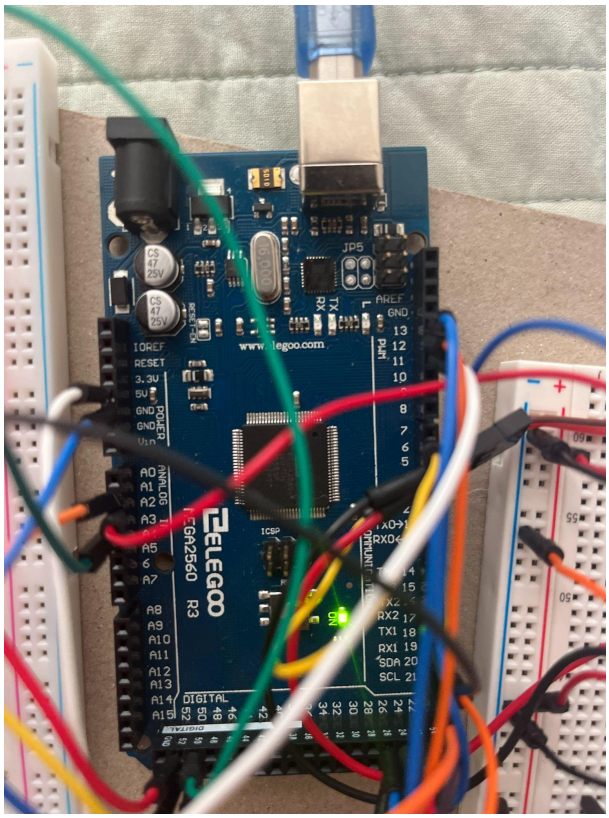
- Arduino Mega 2560
- Breadboard

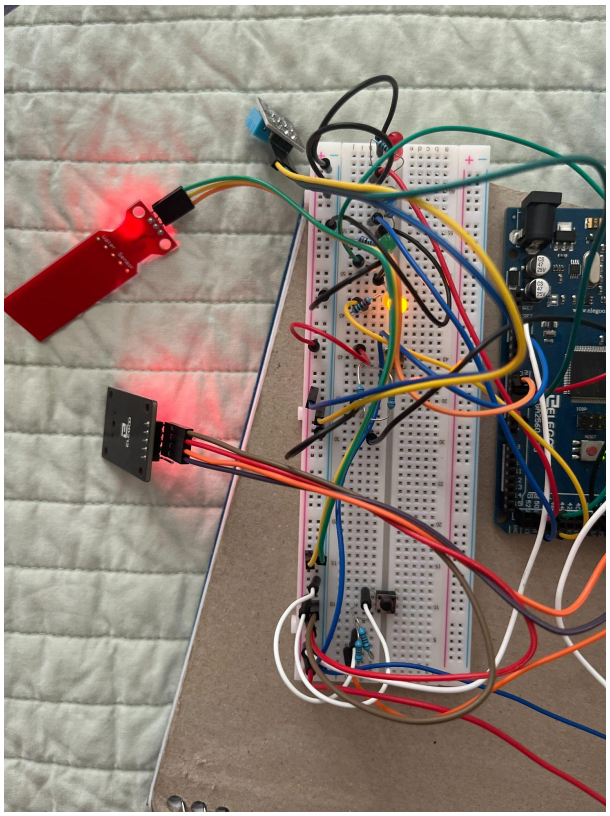
Final Circuit Pictures:

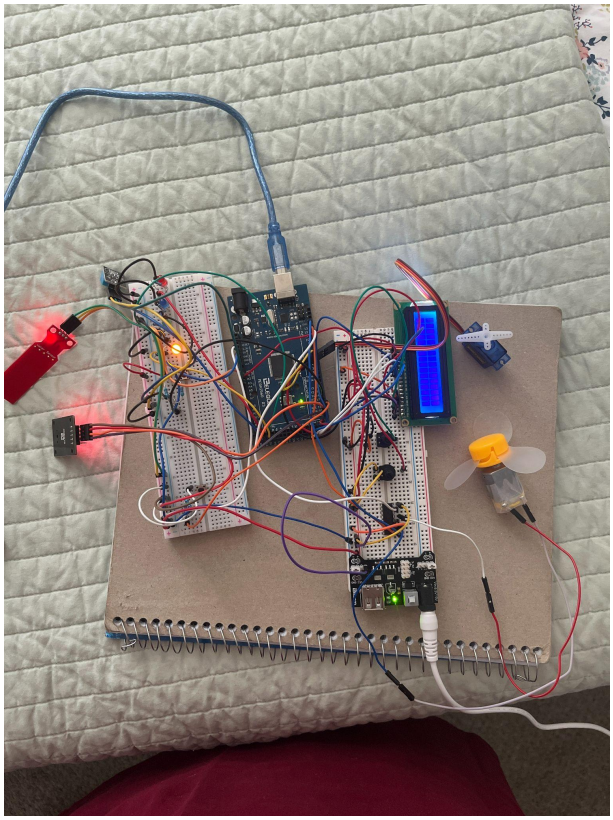


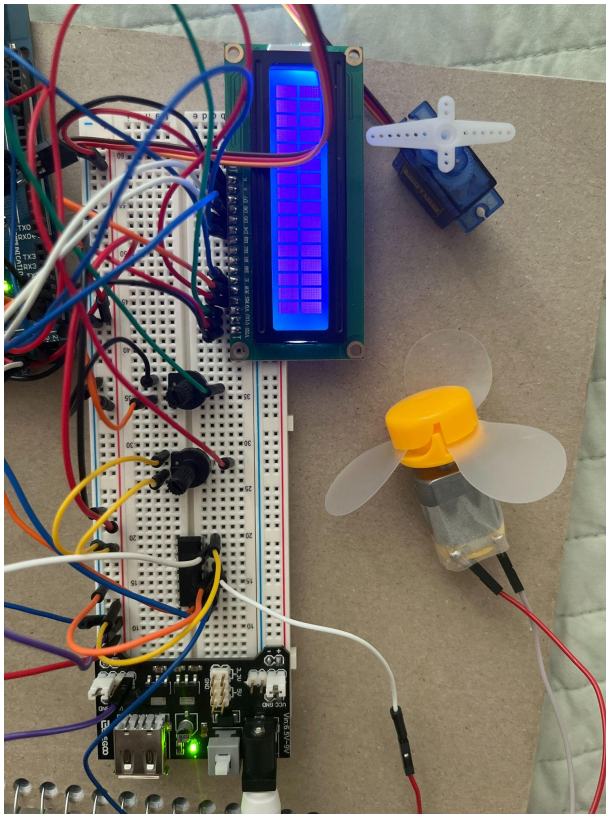


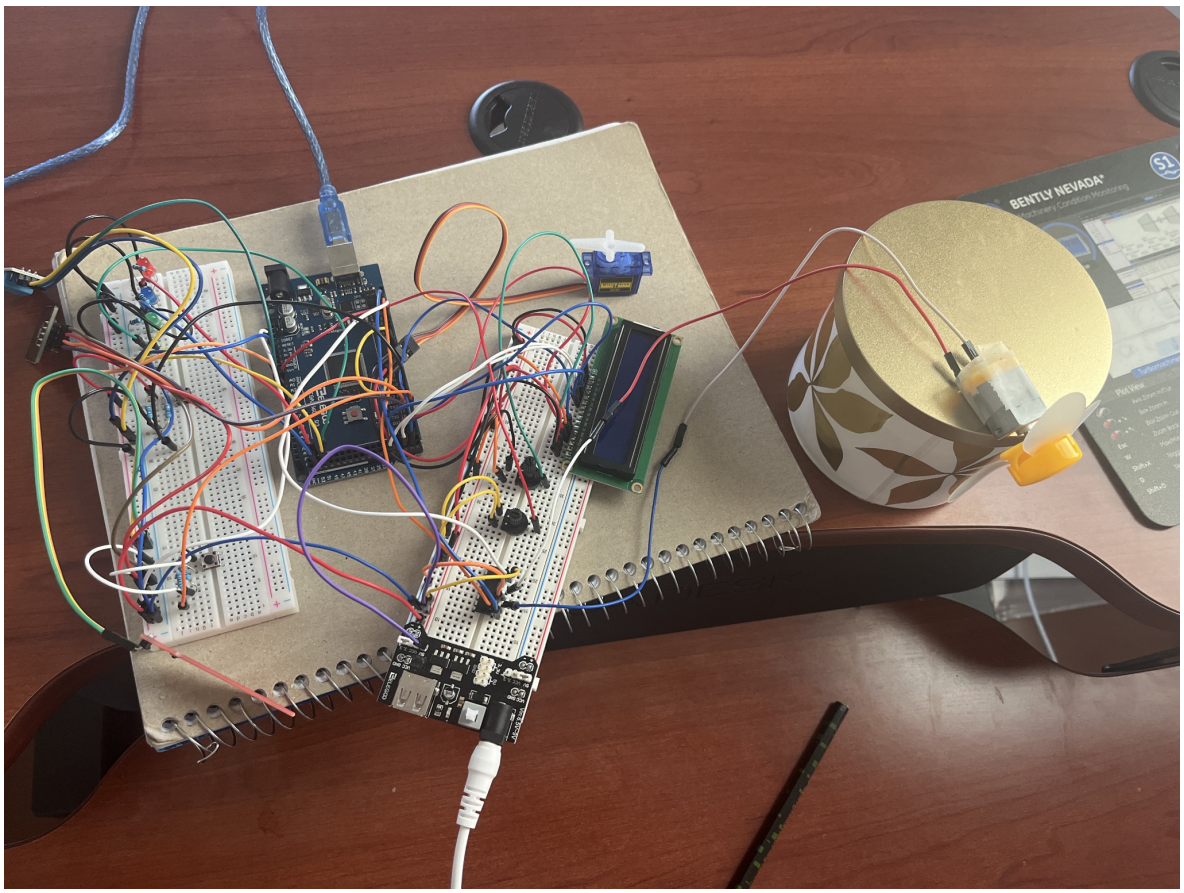




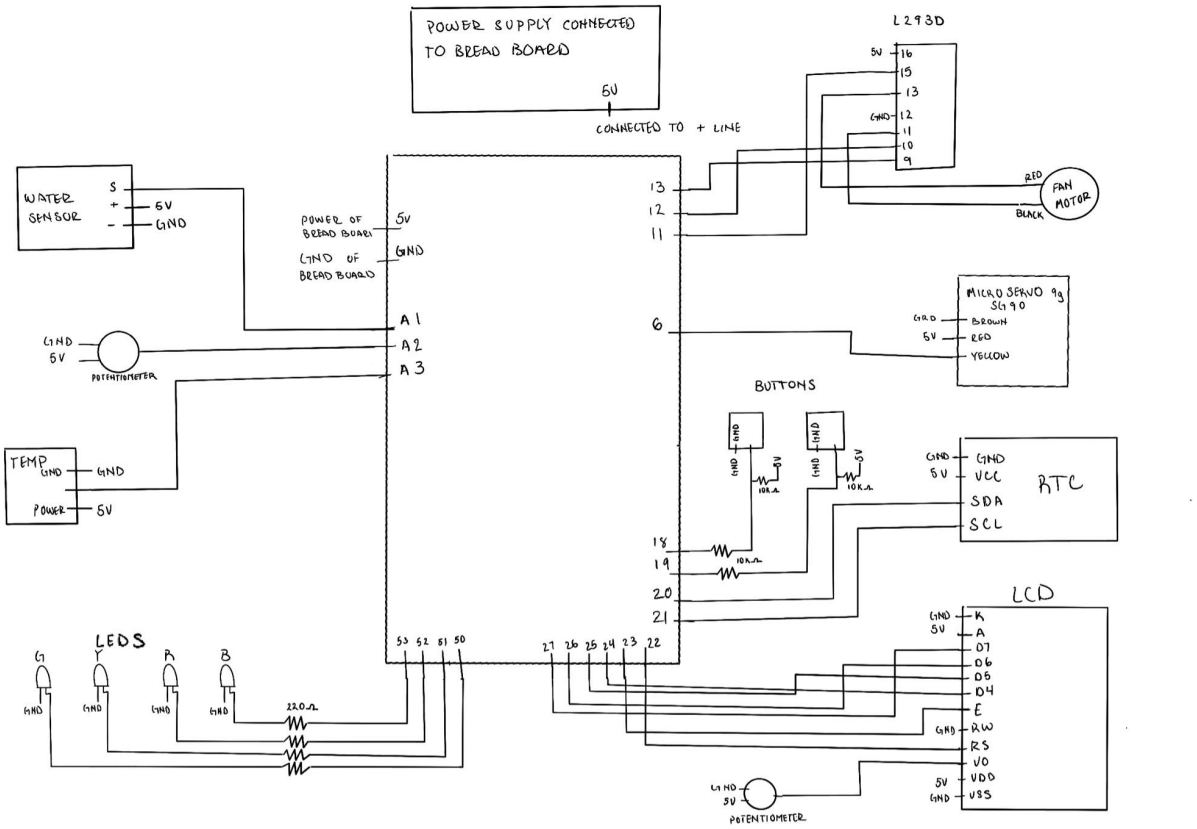







BENTLY NEVADA

Schematic:



Video:

https://youtu.be/Qvs_uEvH8ZQ

Github Link:

unr-s22/semester-project-asiron1: semester-project-asiron1 created by GitHub Classroom

Component Data Sheets:

L293D IC
DHT11 Temp and Humidity Sensor
DS1307 RTC
Servo Motor SG90
LCD1602
Water Level Detection Sensor
Power Supply
Potentiometer