CPE 301 Final Project

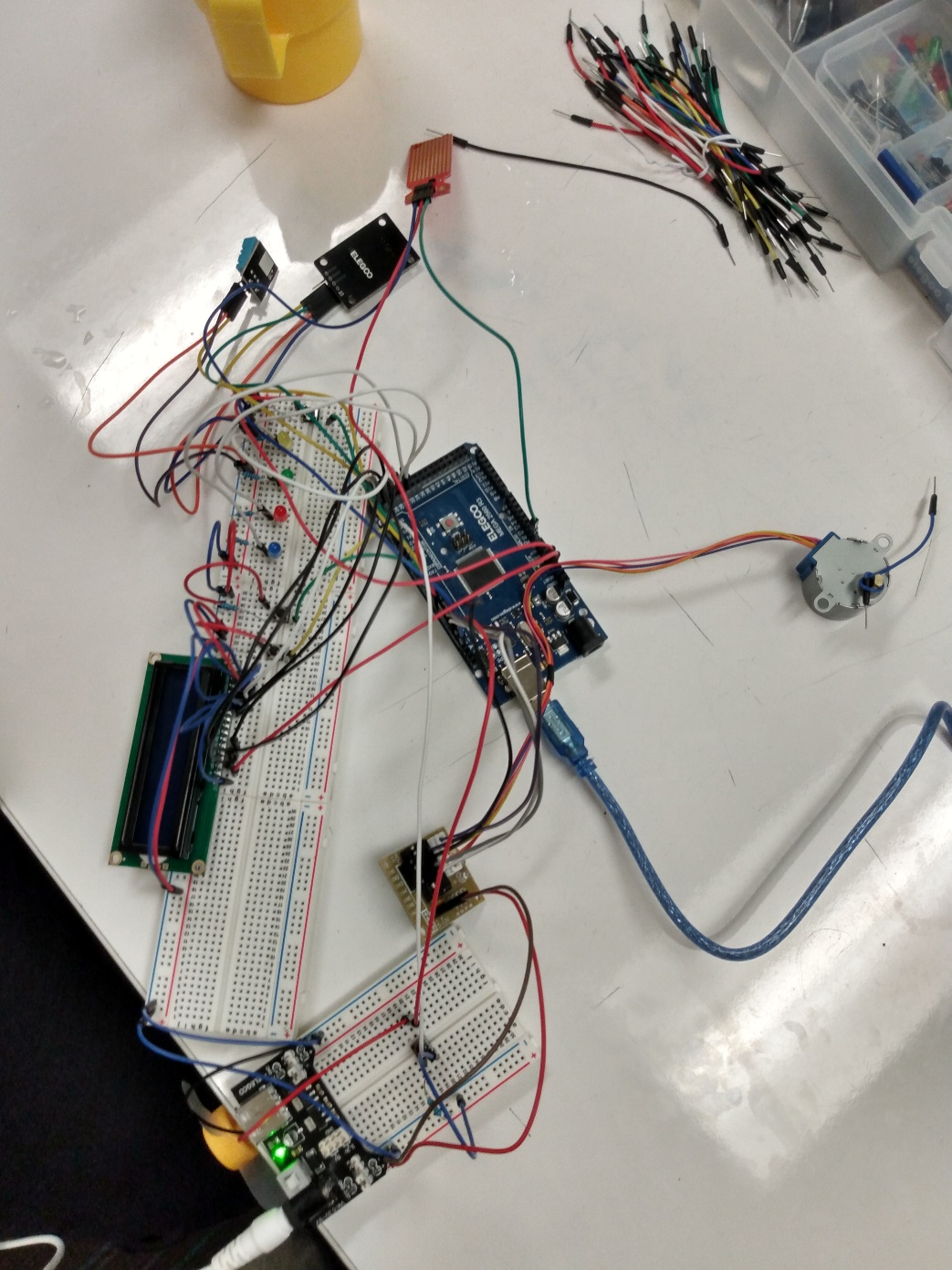
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**GitHub Repository**: [MasterCal/CPE301-Final-Project (github.com)](https://github.com/MasterCal/CPE301-Final-Project)

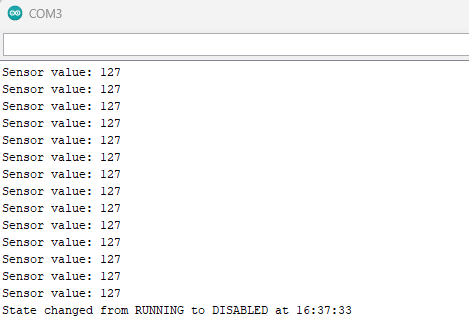
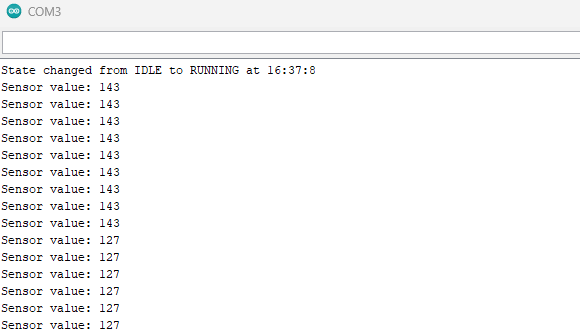
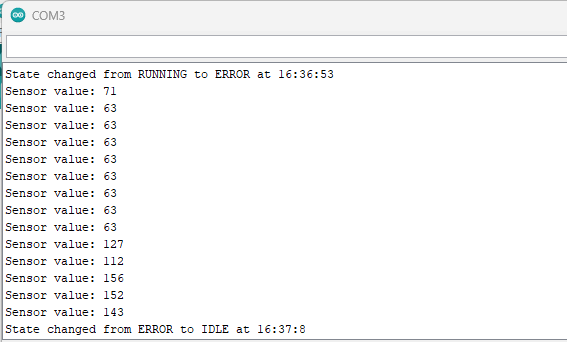
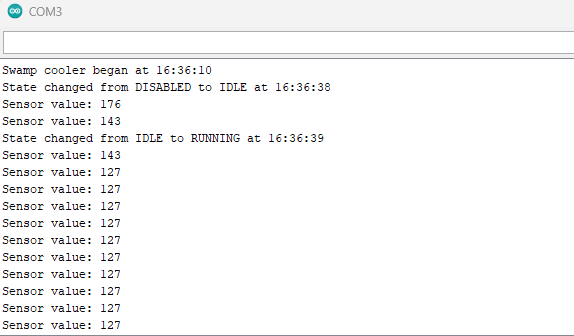
**Technical Constraints**: Works at 20 degrees Celsius or higher. Uses a 5 V power supply (with 9 volt jack). Stepper motor does not work (not enough power driven to it). Fan Motor does not work (unable to control when it starts and stops).

**Picture (Video file included in Submission)**

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**Screenshots**

The following screenshots are of the Serial port showing the sensor readings and time-stamped state changes



**Device Specification**

*DHT11 Temperature & Humidity Sensor*: <https://components101.com/sensors/dht11-temperature-sensor>

*DS1307-Module-V03 Real-Time Clock*: <https://arduinogetstarted.com/tutorials/arduino-ds1307-rtc-module>

*Water Sensor*: <https://curtocircuito.com.br/datasheet/sensor/nivel_de_agua_analogico.pdf>

*LCD1602 Module:* <https://create.arduino.cc/projecthub/najad/interfacing-lcd1602-with-arduino-764ec4>

*28BYJ-48 Stepper Motor with ULN2003 Driver*: <https://www.makerguides.com/28byj-48-stepper-motor-arduino-tutorial/>

*Fan Motor*: <https://create.arduino.cc/projecthub/ingo-lohs/first-test-super-starterkit-from-elegoo-motor-3-6v-dc-5b199d>

*External Power Module*: <https://components101.com/modules/5v-mb102-breadboard-power-supply-module>

**Demo Video**: <https://photos.google.com/u/0/album/AF1QipOG9tOdh0QPmkXltDWo63vC-z5nBHxqoFnFFWYh/photo/AF1QipNSvI33b7pFDJyYKpNyrbVIGPUU-qIklVWZcm_2>

**Schematic**

