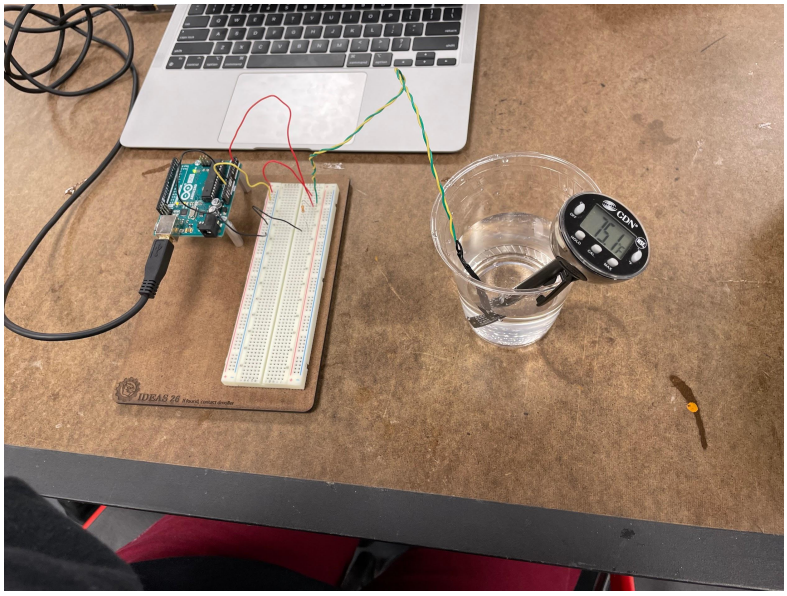
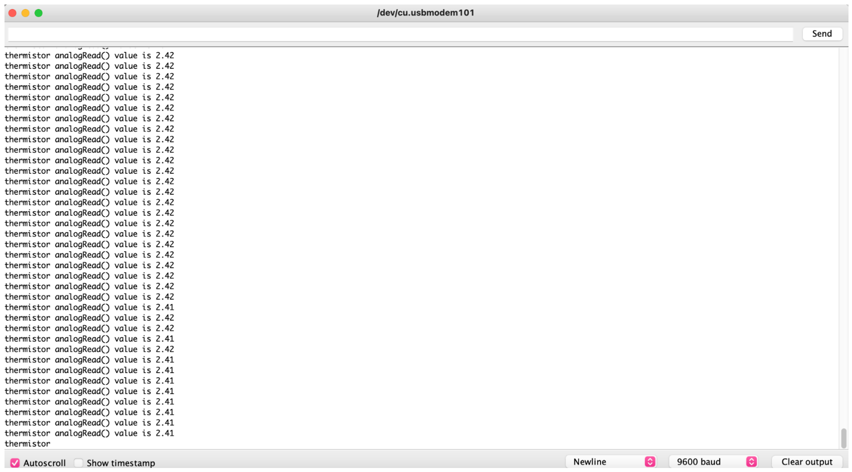


ARDUINO CODE:

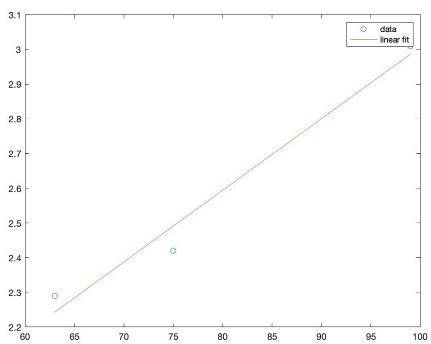
```
int thermistorPin = A4; // select the input pin for the voltage divider input
int thermval; // variable to store the value coming from the sensor
int voltage;
void setup() {
Serial.begin(9600); // set up the communication speed
}
void loop() {
// reads voltage; returns a value from 0-1023
thermval = analogRead(thermistorPin);
// write the information to the serial port (use serial monitor to view)
float voltage = thermval * (5.0 / 1023.0);
Serial.print("thermistor analogRead() value is ");
Serial.println(voltage); // notice the .println vs the .print commands
// make the output readable, slow it down by including a 1/2 second delay
delay(200);
}
```

3. Serial monitor from room temperature water



4. MATLAB CODE FOR DATA ANALYSIS

```
thermometer=[63;75;99];
arduino=[2.29;2.42;3.01];
p = polyfit(thermometer,arduino,1);
f=polyval(p, thermometer)
plot(thermometer,arduino,'o',thermometer,f,'-')
legend('data','linear fit')
```



Equation: y= 0.020655x+0.941585
Slope - 0.020655
Y Intercept - 0.941585