const int numReadings = 10;

float readings[numReadings]; // the readings from the analog input

int readIndex = 0; // the index of the current reading

float total = 0; // the running total

float average = 0; // the average

int value\_2 = 0;

int inputPin = 35;

float current = 0.0;

void setup() {

// initialize serial communication with computer:

Serial.begin(115200);

// initialize all the readings to 0:

for (int thisReading = 0; thisReading < numReadings; thisReading++) {

readings[thisReading] = 0;

}

}

void loop() {

total = 0;

// read from the sensor:

value\_2 = analogRead(inputPin);

int bias = value\_2 - (1850);

current = bias/(165.0);

readings[9] = readings[8];

readings[8] = readings[7];

readings[7] = readings[6];

readings[6] = readings[5];

readings[5] = readings[4];

readings[4] = readings[3];

readings[3] = readings[2];

readings[2] = readings[1];

readings[1] = readings[0];

readings[0] = current;

// add the reading to the total:

for (int i = 0; i < numReadings; i++){

total += readings[i];}

average = total/numReadings;

// send it to the computer as ASCII digits

Serial.println(average);

delay(10); // delay in between reads for stability

}