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| --- |
| #include <OneWire.h> |
|  | #include <DallasTemperature.h> |
|  | #define ONE\_WIRE\_BUS 5 |
|  | OneWire oneWire(ONE\_WIRE\_BUS); |
|  | DallasTemperature sensors(&oneWire); |
|  | float Celcius=0; |
|  | float Fahrenheit=0; |
|  | float voltage=0; |
|  | const int analogInPin = A0; |
|  | int sensorValue = 0; |
|  | unsigned long int avgValue; |
|  | float b; |
|  | int buf[10],temp; |
|  | void setup(void) |
|  | { |
|  |  |
|  | Serial.begin(9600); |
|  | sensors.begin(); |
|  | int sensorValue = analogRead(A1); |
|  | voltage = sensorValue \* (5.0 / 1024.0); |
|  | } |
|  | void loop(void) |
|  | { |
|  | sensors.requestTemperatures(); |
|  | Celcius=sensors.getTempCByIndex(0); |
|  | Fahrenheit=sensors.toFahrenheit(Celcius); |
|  | for(int i=0;i<10;i++) |
|  | { |
|  | buf[i]=analogRead(analogInPin); |
|  | delay(10); |
|  | } |
|  | for(int i=0;i<9;i++) |
|  | { |
|  | for(int j=i+1;j<10;j++) |
|  | { |
|  | if(buf[i]>buf[j]) |
|  | { |
|  | temp=buf[i]; |
|  | buf[i]=buf[j]; |
|  | buf[j]=temp; |
|  | } |
|  | } |
|  | } |
|  | for(int i=2;i<8;i++) |
|  | avgValue+=buf[i]; |
|  | float pHVol=(float)avgValue\*5.0/1024/6; |
|  | float phValue = -5.70 \* pHVol + 21.34; |
|  | Serial.println(phValue); |
|  | Serial.print("pH"); |
|  |  |
|  |  |
|  | Serial.print(" C "); |
|  | Serial.print(Celcius); |
|  |  |
|  | Serial.print(voltage); |
|  | Serial.print("V"); |
|  | delay(10000); |
|  | } |