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// ECE 44X

// Temperature Sensor Program

#include <OneWire.h>

#include <DallasTemperature.h>

#define TEMPERATURE\_BUS 2 // Digital pin where the DS18B20 is connected

OneWire Temperature(TEMPERATURE\_BUS);

DallasTemperature sensors(&Temperature);

void setup() {

Serial.begin(9600);

sensors.begin();

}

void loop() {

sensors.requestTemperatures();

float temperatureC = sensors.getTempCByIndex(0);

if (temperatureC != DEVICE\_DISCONNECTED\_C) {

// Celsius

Serial.print("Temperature: ");

Serial.print(temperatureC);

Serial.println("°C");

// Fahrenheit

Serial.print("Temperature: ");

Serial.print((temperatureC \* 9/5) + 32);

Serial.println("°F");

}

else {

Serial.println("Error reading temperature!");

}

delay(3000); // Delay for 3 seconds

}