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Topic	Signs With smart connectivity for better road safety
Assignment 2	Built a python code , assume you get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect a alarm in case of high temperature

CODING :

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#define ADC_RESOLUTION 1024.0
#define PIN_LM35      A0
const int TRIG_PIN    = 6; // Arduino pin connected to Ultrasonic Sensor's
TRIG pin
const int ECHO_PIN    = 7; // Arduino pin connected to Ultrasonic Sensor's
ECHO pin
const int BUZZER_PIN = 3; // Arduino pin connected to Piezo Buzzer's pin
const int DISTANCE_THRESHOLD = 50; // centimeters
float duration_us, distance_cm;
void setup() {
    Serial.begin(9600);
    // switch to Internal 1.1V Reference
    pinMode(TRIG_PIN, OUTPUT); // set arduino pin to output mode
    pinMode(ECHO_PIN, INPUT);  // set arduino pin to input mode
    pinMode(BUZZER_PIN, OUTPUT); // set arduino pin to output mode
    analogReference(INTERNAL);
    pinMode(LED_BUILTIN, OUTPUT);
}
void loop() {
    // get the ADC value from the temperature sensor

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    int adcVal = analogRead(PIN_LM35);
    // convert the ADC value to voltage in millivolt
    float milliVolt = adcVal * (ADC_VREF_mV / ADC_RESOLUTION); //
ADC_VREF_mV = 1100 mV
    // convert the voltage to the temperature in Celsius
    float tempC = milliVolt / 10;
    // convert the Celsius to Fahrenheit
    float tempF = tempC * 9 / 5 + 32;
    // print the temperature in the Serial Monitor:
    Serial.print("Temperature: ");
    Serial.print(tempC); // print the temperature in Celsius
    Serial.print("°C");
    Serial.print(" ~ "); // separator between Celsius and Fahrenheit
    Serial.print(tempF); // print the temperature in Fahrenheit
    Serial.println("°F");
    digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the
voltage level)
    delay(1000); // wait for a second
    digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the
voltage LOW
    delay(1000);
    delay(1000);
    digitalWrite(TRIG_PIN, HIGH);
    delayMicroseconds(10);
    digitalWrite(TRIG_PIN, LOW);
    // measure duration of pulse from ECHO pin
    duration_us = pulseIn(ECHO_PIN, HIGH);
    // calculate the distance
    distance_cm = 0.017 * duration_us;
    if(distance_cm < DISTANCE_THRESHOLD)
        digitalWrite(BUZZER_PIN, HIGH); // turn on Piezo Buzzer
    else
        digitalWrite(BUZZER_PIN, LOW); // turn off Piezo Buzzer
    // print the value to Serial Monitor
    Serial.print("distance: ");
    Serial.print(distance_cm);
    Serial.println(" cm");

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delay(500);
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}
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