#include<

#define TRIGGER\_PIN 2

SoftwareSerial.h>

#define ECHO\_PIN 3

#define TEMPERATURE\_PIN A0

#define HUMIDITY\_PIN A1

#define GSM\_TX 4

#define GSM\_RX 5

SoftwareSerial gsmSerial(GSM\_TX, GSM\_RX);

void setup() {

Serial.begin(9600);

gsmSerial.begin(9600);

pinMode(TRIGGER\_PIN, OUTPUT);

pinMode(ECHO\_PIN, INPUT);

// Initialize GSM module

delay(1000);

gsmSerial.println("AT");

delay(1000);

gsmSerial.println("AT+CMGF=1");

delay(1000);

gsmSerial.println("AT+CNMI=2,2,0,0,0");

delay(1000);

}

void loop() {

// Measure distance using ultrasonic sensor

float distance = measureDistance();

// Read temperature and humidity

float temperature = readTemperature();

float humidity = readHumidity();

// Check if critical condition is detected (e.g., person trapped)

if (distance < 10.0) {

sendRescueAlert(distance, temperature, humidity);

}

delay(5000); // Adjust the delay based on your application's requirements

}

float measureDistance() {

digitalWrite(TRIGGER\_PIN, LOW);

delayMicroseconds(2);

digitalWrite(TRIGGER\_PIN, HIGH);

delayMicroseconds(10);

digitalWrite(TRIGGER\_PIN, LOW);

float duration = pulseIn(ECHO\_PIN, HIGH);

float distance = duration \* 0.034 / 2; // Speed of sound is approximately 0.034 cm/microsecond

return distance;

}

float readTemperature() {

int sensorValue = analogRead(TEMPERATURE\_PIN);

float voltage = sensorValue \* (5.0 / 1023.0);

float temperature = (voltage - 0.5) \* 100.0; // Assuming a linear relationship

return temperature;

}

float readHumidity() {

int sensorValue = analogRead(HUMIDITY\_PIN);

float voltage = sensorValue \* (5.0 / 1023.0);

float humidity = (voltage - 0.5) \* 100.0; // Assuming a linear relationship

return humidity;

}

void sendRescueAlert(float distance, float temperature, float humidity) {

gsmSerial.println("AT+CMGS=\"+1234567890\""); // Replace with the recipient's phone number

delay(1000);

gsmSerial.print("Emergency at Borewell! Distance: ");

gsmSerial.print(distance);

gsmSerial.print("cm, Temperature: ");

gsmSerial.print(temperature);

gsmSerial.print("C, Humidity: ");

gsmSerial.print(humidity);

gsmSerial.print("%");

gsmSerial.write(26); // CTRL+Z to send SMS

delay(1000);

}