#include <SoftwareSerial.h>

#include <DHT.h>

#define SOUND\_SENSOR\_PIN 2

#define PIR\_SENSOR\_PIN 3

#define DHT\_PIN 4

#define DHT\_TYPE DHT11

SoftwareSerial sim900(7, 8); // RX, TX for SIM900 module

DHT dht(DHT\_PIN, DHT\_TYPE);

bool soundDetected = false;

bool motionDetected = false;

void setup() {

pinMode(SOUND\_SENSOR\_PIN, INPUT);

pinMode(PIR\_SENSOR\_PIN, INPUT);

Serial.begin(9600);

sim900.begin(9600);

dht.begin();

Serial.println("Initializing SIM900A...");

delay(10000); // Wait for GSM module to initialize

sim900.println("AT+CMGF=1"); // Set SMS to text mode

delay(100);

}

void loop() {

soundDetected = digitalRead(SOUND\_SENSOR\_PIN);

motionDetected = digitalRead(PIR\_SENSOR\_PIN);

Serial.print("Sound Detected: ");

Serial.println(soundDetected);

Serial.print("Motion Detected: ");

Serial.println(motionDetected);

if (soundDetected && motionDetected) {

float temperature = dht.readTemperature();

float humidity = dht.readHumidity();

if (isnan(temperature) || isnan(humidity)) {

Serial.println("Failed to read from DHT sensor!");

return;

}

String msg = "Alert! Baby movement and sound is detected. Temp: " + String(temperature) + " C, Humidity: " + String(humidity) + "%";

SendMessage(msg);

delay(5000); // Shorter delay before making the call to avoid rapid successive calls

makeCall("+919019845647"); // Replace with your phone number

}

delay(1000); // Main loop delay

}

void SendMessage(String msg) {

sim900.println("AT+CMGF=1"); // Set the GSM module to text mode

delay(500); // Shorter delay for SMS settings

sim900.print("AT+CMGS=\"+919019845647\"\r"); // Replace with recipient's mobile number

delay(500);

sim900.println(msg); // The SMS text you want to send

delay(100);

sim900.write(26); // ASCII code of CTRL+Z to send the SMS

delay(2000); // Wait longer to ensure SMS is sent

}

void makeCall(const char\* phoneNumber) {

Serial.print("Dialing: ");

Serial.println(phoneNumber);

sim900.print("ATD");

sim900.print(phoneNumber);

sim900.println(";");

delay(1000); // Delay to allow the call to initiate

unsigned long startTime = millis();

while (millis() - startTime < 10000) { // Wait up to 10 seconds for a response

if (sim900.available()) {

String response = sim900.readString();

Serial.println(response);

if (response.indexOf("OK") != -1) {

Serial.println("Call initiated successfully.");

return;

}

if (response.indexOf("ERROR") != -1) {

Serial.println("Error in making call.");

return;

}

}

}

Serial.println("No response or unknown response from SIM900A.");

}