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#include <SoftwareSerial.h>
#include <Sim800L.h>
#include <SoftwareSerial.h>
#include <TinyGPS++.h> // Include the TinyGPS++ library

Sim800L Sim800L;

SoftwareSerial SIM800L(10, 11);

int PinAlarm = 4;
int PinGetar = 7;

String response;

char *text;

char *number;

bool error;

int lastStringLength = response.length();

String link;

TinyGPSPlus gps; // Declare the TinyGPS++ object

double latitude, longitude;

long nilai();

void setup() {
  Sim800L.begin();

  text = "Lokasi Kecelakaan";
  number = "082184951566";
  error = Sim800L.sendSms(number, text);
  Sim800L.begin();
  Serial.begin(9600);
  Serial.println("GPS Mulai");
  pinMode(PinAlarm, OUTPUT);
  pinMode(PinGetar, INPUT);
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SIM800L.begin(9600);
SIM800L.println("AT+CMGF=1");
Serial.println("SIM800L started at 9600");
delay(1000);
Serial.println("Setup Complete! SIM800L is Ready!");
SIM800L.println("AT+CNMI=2,2,0,0,0");
}

void loop() {
  if (SIM800L.available() > 0) {
    response = SIM800L.readStringUntil('\n');
  }

  long nilaigetar = nilai();
  Serial.print(nilaigetar);
  if (nilaigetar == 0) {
    Serial.println(nilaigetar);
    Serial.println("tidak ada getaran");
    digitalWrite(PinAlarm, LOW);
  } else if (nilaigetar > 200) {
    Serial.println(nilaigetar);
    Serial.println("getaran tinggi");
    digitalWrite(PinAlarm, HIGH);
  }
  delay(10);
  Serial.println("");
  (lastStringLength != response.length());
  GPS(); // Mencari lokasi GPS

  // Mengirimkan pesan SMS dengan titik lokasi GPS
  link = "www.google.com/maps/place/" + String(latitude, 6) + "," + String(longitude, 6);

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    sendSMS("082184951566", link); // Ganti nomor HP sesuai kebutuhan
}

long nilai() {
    delay(100);
    long nilaigetar = pulseIn(PinGetar, HIGH);
    return nilaigetar;
}

void GPS() {
    while (Serial.available()) {
        gps.encode(Serial.read());
    }
    if (gps.location.isUpdated()) {
        latitude = gps.location.lat();
        longitude = gps.location.lng();

        link = "www.google.com/maps/place/" + String(latitude, 6) + "," + String(longitude, 6)
;
        Serial.println(link);
    }
}

void sendSMS(String phoneNumber, String message) {
    SIM800L.println("AT+CMGF=1");
    delay(1000);
    SIM800L.println("AT+CMGS=\"" + phoneNumber + "\"\r");
    delay(1000);
    SIM800L.println(message);
    delay(100);
    SIM800L.println((char)26);
    delay(1000);
}

```