

LAMPIRAN

1. Program Pengiriman Data Sensor ke Server Database MySQL

```
#include <SoftwareSerial.h>
#include <Wire.h>
#include <Adafruit_Sensor.h>
#include <Adafruit_BME280.h>

SoftwareSerial mySerial(7,8); // tx, rx

#define SEALEVELPRESSURE_HPA (1013.25)

Adafruit_BME280 bme;

float suhu;
float kelembaban;
float tekanan;

void setup()
{
  Serial.begin(38400);
  mySerial.begin(38400);

  if (!bme.begin(0x76)) {
    Serial.println("Could not find a valid BME280 sensor, check wiring!");
    while (1);
  }

  Serial.println("Initializing...");
  delay(1000);

  mySerial.println("AT");
  updateSerial();

  mySerial.println("AT+CSQ"); //cek kualitas sinyal
  delay(100);
  updateSerial();
  mySerial.println("AT+CCID"); //cek nomor kartu sim
  delay(100);
  updateSerial();
  mySerial.println("AT+CGREG?"); //cek jaringan
  delay(100);
  updateSerial();
  mySerial.println("AT+CGREG=1");//mengaktifkan registrasi jaringan
  delay(100);
  updateSerial();
```

```

mySerial.println("AT+CGATT=1");//masuk ke layanan gprs
delay(100);
updateSerial();
mySerial.println("AT+CGATT=1");//masuk ke layanan gprs
delay(100);
updateSerial();
mySerial.println("AT+CIPSHUT");//menonaktifkan gprs
delay(100);
updateSerial();
mySerial.println("AT+CIPMUX=0");//mengaktifkan koneksi single IP
delay(100);
updateSerial();
mySerial.println("AT+CSTT=\"telkomsel\", \"wap\", \"wap123\""); //setting APN kartu
sim
delay(500);
updateSerial();
mySerial.println("AT+CSTT?");//memastikan setting APN benar
delay(1000);
updateSerial();
mySerial.println("AT+CIICR");//memulai koneksi GPRS
delay(3000);
updateSerial();
mySerial.println("AT+CIFSR");//request IP
delay(2000);
updateSerial();
mySerial.println("AT+SAPBR=1,1");//ping ke HTTP
delay(500);
updateSerial();
mySerial.println("AT+HTTIPINIT");//memulai koneksi http
delay(500);
updateSerial();
mySerial.write(26);
}

void updateSerial()
{
  delay(500);
  while (Serial.available())
  {
    mySerial.write(Serial.read());
  }
  while(mySerial.available())
  {
    Serial.write(mySerial.read());
  }
}

```

```
void loop()
{
  mySerial.println("AT+HTTTPARA=\\"CID\\",\\"1\\"); // mengatur identitas pembawa ke
  http
  delay(1000);
  updateSerial();

  mySerial.print("AT+HTTTPARA=\\"URL\\",\\"http://www.dataloggerbme280.com/inputd
  ata4.php?temperature=");
  mySerial.print(suhu);
  Serial.print("temperatur= ");
  Serial.println(suhu);
  mySerial.print("&humidity=");
  mySerial.print(kelembaban);
  Serial.print("kelembaban= ");
  Serial.println(kelembaban);
  mySerial.print("&pressure=");
  mySerial.print(tekanan);
  Serial.print("tekanan= ");
  Serial.println(tekanan);
  mySerial.println("\\");
  delay(1000);
  updateSerial();
  mySerial.println("AT+HTTPACTION=0"); // memulai koneksi GET HTTP
  delay(2000);
  updateSerial();

  suhu = bme.readTemperature();
  kelembaban = bme.readHumidity();
  tekanan = bme.readPressure()/ 100;
}
```

