

LAMPIRAN

1. DAFTAR RIWAYAT HIDUP

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 TEMPAT/TGL LAHIR : TEBING TINGGI / 27
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RIWAYAT PENDIDIKAN FORMAL

| PENDIDIKAN | NAMA SEKOLAH | TAMAT TAHUN |
|------------|----------------------------------|----------------|
| SD | SDN 163084 KOTA TEBING TINGGI | 2013 |
| SMP | SMPN 9 KOTA TEBING TINGGI | 2016 |
| SMA | SMAN 3 KOTA TEBING TINGGI | 2019 |

PENGHARGAAN DAN PENCAPAIAN

| No. | PENGHARGAAN | TAHUN |
|-----|---|-------|
| 1. | JUARA HARAPAN 1 TRYOUT Tk. SD SE-KOTA TEBING TINGGI | 2013 |
| 2. | TERPILIH MENJADI KOMANDAN PASUKAN | 2017 |

| | | |
|---|--|------|
| | PENGIBAR BENDERA TERBAIK Tk. SMA SE-KOTA TEBING TINGGI | |
| 3 | TERPILIH MENJADI KOMANDAN PASUKAN PENGIBAR BENDERA Tk. PEMERINTAHAN KOTA di UPACARA HUT RI 72 PADA TANGGAL 17 AGUSTUS 2017 | 2017 |

PENGALAMAN BERORGANISASI

| No. | NAMA ORGANISASI | TAHUN |
|-----|------------------|-------|
| 1 | PURNA PASKIBRAKA | 2017 |
| 2 | BEM KM POLSRI | 2021 |
| 3 | MPM KM POLSRI | 2022 |

Semua data yang saya tulis dan isi riwayat hidup ini benar dan dapat dipertanggung jawabkan.

Palembang Januari 2023

(Horas Sitorus)

2. ESTIMASI BIAAYA

| No | Nama Barang | Kuant. | Satuan | Harga Satuan (Rupiah) | Jumlah |
|--------------------------|--------------|--------|--------|--------------------------|-----------|
| 1 | Kandang Ayam | 1 | Buah | Rp100.000 | Rp100.000 |
| 2 | Arduino Nano | 1 | Buah | Rp250.000 | Rp250.000 |
| 3 | ESP8266 | 1 | Buah | Rp50.000 | Rp50.000 |
| 4 | Power Supply | 2 | Buah | Rp50.000 | Rp100.000 |
| 5 | RTC | 1 | Buah | Rp40.000 | Rp40.000 |
| 6 | DHT22 | 1 | Buah | Rp20.000 | Rp20.000 |
| 9 | Motor Servo | 1 | Buah | Rp30.000 | Rp30.000 |
| 10 | Motor Pump | 2 | Buah | Rp50.000 | Rp100.000 |
| 11 | Diffuser | 1 | Buah | Rp20.000 | Rp20.000 |
| 12 | Fan | 4 | Buah | Rp5.000 | Rp20.000 |
| 13 | Lampu Pijar | 2 | Buah | Rp10.000 | Rp20.000 |
| Total : Rp750.000 | | | | | |

PROGRAM

```

#define BLYNK_TEMPLATE_ID "TMPL6op_2ckFY"
#define BLYNK_TEMPLATE_NAME "Kandang Ayam IoT"
#define BLYNK_AUTH_TOKEN "He1G005tkiyVnSM56sLUj2ECB-NPkrD3"
#define BLYNK_PRINT Serial

#include <Wire.h>
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
#include <NTPClient.h>
#include <WiFiUDP.h>
// #include "RTClib.h"
#include "SoftwareSerial.h"
SoftwareSerial serial1(D6, D5);
SoftwareSerial serial2(D8, D7);
WiFiUDP ntpUDP;
NTPClient timeClient(ntpUDP, "pool.ntp.org");

#define poop D4
#define pakan D3
//int jam, menit, detik;
String data1, suhu, data2, humid;
char c, d;
int Humid, Suhu;

//const char *ssid = "Kyra Alesha";
//const char *password = "mamacantik18";

char auth[] = BLYNK_AUTH_TOKEN;
char ssid[] = "Kyra Alesha";
char pass[] = "mamacantik18";
BlynkTimer timer;

void sendSensor() {
  Blynk.virtualWrite(V0, Suhu);
  Blynk.virtualWrite(V1, Humid);
  delay(500);
}

void setup() {
  // put your setup code here, to run once:
  Serial.begin(115200);
  serial1.begin(115200);

```

```

    serial2.begin(115200);
    Serial.print("Connecting to ");
    Serial.println(ssid);
    WiFi.begin(ssid, pass);
    while (WiFi.status() != WL_CONNECTED) {
        delay(500);
        Serial.print(".");
    }
    timeClient.begin();
    // GMT +1 = 3600
    // GMT +8 = 28800
    // GMT -1 = -3600
    // GMT 0 = 0
    timeClient.setTimeOffset(25200);
    Blynk.begin(auth, ssid, pass);
    timer.setInterval(100L, sendSensor);
    pinMode(pakan, OUTPUT); digitalWrite(pakan, HIGH);
    pinMode(poop, OUTPUT); digitalWrite(poop, HIGH);
}

void loop() {
    // put your main code here, to run repeatedly:
    SUHU();
    HUMID();
    sendSensor();

    timeClient.update();

    String formattedTime = timeClient.getFormattedTime();
    int currentHour = timeClient.getHours();
    int currentMinute = timeClient.getMinutes();
    int currentSecond = timeClient.getSeconds();

    // Serial.print(currentHour); Serial.print(" || ");
    // Serial.print(currentMinute); Serial.print(" || ");
    // Serial.println(currentSecond);

    if (currentHour == 6 && currentMinute == 01 && currentSecond ==
00) {
        Blynk.logEvent("notif", String("Ayam telah diberi pakan &
minum"));
        Serial.println(" 2 ");
        delay(5000);
        digitalWrite(pakan, LOW);
        delay(500);
    }
}

```

```

    //    digitalWrite(pakan, HIGH);
  }
  if (currentHour == 13 && currentMinute == 29 && currentSecond ==
00) {
    Blynk.logEvent("notif", String("Ayam telah diberi pakan &
minum"));
    Serial.println(" 2 ");
    delay(5000);
    digitalWrite(pakan, LOW);
    delay(500);
    //    digitalWrite(pakan, HIGH);
  }

  if ( currentMinute == 35 && currentSecond == 00 ) {
    Blynk.logEvent("notif", String("Kandang Dibersihkan"));
    Serial.println(" 1 ");
    delay(5000);
    digitalWrite(poop, LOW);
    //digitalWrite(pakan, HIGH);
    delay(500);
    //    digitalWrite(poop, HIGH);
  }

  if ( currentMinute == 05 && currentSecond == 00 ) {
    Blynk.logEvent("notif", String("Kandang Dibersihkan"));
    Serial.println(" 1 ");
    delay(5000);
    digitalWrite(poop, LOW);
    //digitalWrite(pakan, HIGH);
    delay(1000);
    //    digitalWrite(poop, HIGH);
  }

  else {
    digitalWrite(pakan, HIGH);
    digitalWrite(poop, HIGH);
  }

  // else if ( now.second() == 00 ){
  //    Serial.println(" 3 ");
  //    digitalWrite(poop, LOW);
  //    //digitalWrite(pakan, LOW);
  //    delay(1000);
  // }

```

```

// if ( Suhu >= 35 ) {
//   Blynk.logEvent("suhu_naik", String("Suhu Kandang Naik!"));
//   delay(5000);
// }
//
// if ( Humid >= 80 ) {
//   Blynk.logEvent("Humid_naik", String("Kelembapan Kandang
Naik!"));
//   delay(5000);
// }

Serial.print(pakan); Serial.print(" || ");
Serial.print(poop); Serial.print(" || ");
Serial.print(currentHour); Serial.print(" || ");
Serial.print(currentMinute); Serial.print(" || ");
Serial.print(currentSecond); Serial.print(" || ");
Serial.print(Suhu); Serial.print(" || ");
Serial.println(Humid);

}

void SUHU() {
  while (serial1.available() > 0) {
    delay(10);
    c = serial1.read();
    data1 += c;
  }
  if (data1.length() > 0) {
    suhu = data1;
    //Serial.println(data1);
    data1 = "";
  }
  Suhu = suhu.toInt();
}

void HUMID() {
  while (serial2.available() > 0) {
    delay(10);
    d = serial2.read();
    data2 += d;
  }
  if (data2.length() > 0) {
    humid = data2;
    //Serial.println(data2);
    data2 = "";
  }
}

```

```

    }
    Humid = humid.toInt();
}

//now.hour() == 7 && now.minute() == 00 && now.second() == 00 or
now.hour() == 8 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 9 && now.minute() == 00 && now.second() ==
00 or now.hour() == 10 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 11 && now.minute() == 00 && now.second() ==
00 or now.hour() == 12 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 13 && now.minute() == 00 && now.second() ==
00 or now.hour() == 14 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 15 && now.minute() == 00 && now.second() ==
00 or now.hour() == 16 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 17 && now.minute() == 00 && now.second() ==
00 or now.hour() == 18 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 19 && now.minute() == 00 && now.second() ==
00 or now.hour() == 20 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 21 && now.minute() == 00 && now.second() ==
00 or now.hour() == 22 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 23 && now.minute() == 00 && now.second() ==
00 or now.hour() == 24 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 1 && now.minute() == 00 && now.second() == 00
or now.hour() == 2 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 3 && now.minute() == 00 && now.second() == 00
or now.hour() == 4 && now.minute() == 00 && now.second() == 00
//    or now.hour() == 5 && now.minute() == 00 && now.second() == 00
or now.hour() == 6 && now.minute() == 00 && now.second() == 0

#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <Servo.h>
#include "DHT.h"
#include "SoftwareSerial.h"
SoftwareSerial serial1(5, 6);
SoftwareSerial serial2(8, 9);

#define DHTPIN 2
#define DHTTYPE DHT22
//#define Loff digitalWrite(A2, LOW)           //lamp
//#define Lon digitalWrite(A2, HIGH)
//#define PHoff digitalWrite(A3, LOW)         //pump humid
//#define PHon digitalWrite(A3, HIGH)

```



```

//#define PDoff digitalWrite(12, LOW)           //pump poop
//#define PDon digitalWrite(12, HIGH)
//#define Foff digitalWrite(3, LOW)            //fan
//#define Fon digitalWrite(3, HIGH)
//#define PMoff digitalWrite(7, LOW)           //pump minum
//#define PMon digitalWrite(7, HIGH)
#define lamp A2
#define PH A3
#define PD 12
#define fan 3
#define PM 7
#define Sopen servo.write(90)                 //servo
#define Sclose servo.write(0)
#define Pakan 10
#define Poop 11
int pakan = 0; int logpoop = 0;
int poop = 0; int logpakan = 0;
boolean lock1 = 0;
boolean lock2 = 0;
float suhu, humid;
int i = 0;
int j = 0;
DHT dht(DHTPIN, DHTTYPE);
LiquidCrystal_I2C lcd(0x27, 16, 2);
Servo servo;

void setup() {
  // put your setup code here, to run once:
  Serial.begin(115200);
  serial1.begin(115200);
  serial2.begin(115200);
  lcd.init();
  lcd.backlight();
  dht.begin();
  lcd.setCursor(0, 0); lcd.print("Standby...");
  servo.attach(4);
  pinMode(lamp, OUTPUT);
  pinMode(PH, OUTPUT);
  pinMode(PD, OUTPUT);
  pinMode(fan, OUTPUT);
  pinMode(PM, OUTPUT);
  pinMode(Pakan, INPUT_PULLUP);
  pinMode(Poop, INPUT_PULLUP);
}

```

```

digitalWrite(lamp, LOW);
digitalWrite(PH, LOW);
digitalWrite(PD, LOW);
digitalWrite(fan, LOW);
digitalWrite(PM, LOW);
servo.write(0);
//Loff; PHoff; Foff; Sclose; PDoff; PMoff;
//Lon; PHon; Fon; Sclose; PDon; PMon;
}

```

```

void loop() {
  suhu = dht.readTemperature();
  humid = dht.readHumidity();

  pakan = digitalRead(Pakan);
  poop = digitalRead(Poop);

  if (suhu >= 34) {
    //Fon;
    //Foff;
    digitalWrite(fan, HIGH);
    Serial.print(" fan on ");
  }

  else if ( suhu <= 23) {
    digitalWrite(lamp, HIGH);
    Serial.print(" lamp on ");
  }

  else if ( humid >= 90 ) {
    digitalWrite(fan, HIGH); //lamp
    Serial.print(" fan on humid ");
  }

  else if ( humid <= 60 ) {
    digitalWrite(PH, HIGH);
    Serial.print(" humid on ");
  }
  else {
    digitalWrite(fan, LOW);
    digitalWrite(PH, LOW);
    digitalWrite(PD, LOW);
    digitalWrite(PM, LOW);
    digitalWrite(lamp, LOW);
    //    poop = 1;
  }
}

```

```

    //    pakan = 1;
}

if ( pakan == 0 ) {
    lock1 = 1;
}
if ( lock1 == 1 ) {
    j++;
    if ( j >= 300 && j <= 310 ) {
        digitalWrite(PM, HIGH);
        servo.write(90);
//    delay(1000);
//    servo.write(0);
//    delay(1000);
//    servo.write(90);
//    delay(1000);
//    servo.write(0);
//    delay(1000);
//    servo.write(90);
//    delay(1000);
//    servo.write(0);
    }
    else if ( j > 310 && j <= 320){
        servo.write(0);
    }
    else if ( j > 320 && j <= 330){
        servo.write(180);
        digitalWrite(PM, LOW);
    }
    else if ( j > 330 && j <= 340){
        servo.write(0);
    }
    else if ( j > 340 ) {
//    digitalWrite(PM, LOW);
        lock1 = 0;
        j = 0;
        Serial.print(" servo PM ");
    }
    else {
        digitalWrite(PM, LOW);
    }
}

if ( poop == 0 ) {
    lock2 = 1;
}

```

```

}
if (lock2 == 1) {
  i++;
  if ( i >= 10 && i <= 399) {
    digitalWrite(PD, HIGH);
  }
  else if ( i >= 400 ) {
    digitalWrite(PD, LOW);
    lock2 = 0;
    i = 0;
    Serial.print(" pump poop ");
  }
  else {
    digitalWrite(PD, LOW);
  }
}

  lcd.setCursor(0, 0); lcd.print("T: "); lcd.print(suhu);
lcd.print(" C");
  lcd.setCursor(0, 1); lcd.print("H: "); lcd.print(humid);
lcd.print(" % ");

  serial1.print(suhu);
  delay(100);
  serial2.print(humid);
  delay(100);

  Serial.print(j); Serial.print(" || ");
  Serial.print(i); Serial.print(" || ");
  Serial.print(pakan); Serial.print(" || ");
  Serial.print(poop); Serial.print(" || ");
  Serial.print(lock1); Serial.print(" || ");
  Serial.print(lock2); Serial.print(" || ");
  Serial.print(suhu); Serial.print(" || ");
  Serial.println(humid);
}

```

DOKUMENTASI PEKERJAAN





