DAFTAR LAMPIRAN

Lampiran - 1 Source code ESP32 menggunakan Arduino IDE

```
#include "DHT.h"
#include <LiquidCrystal_I2C.h>
#include <WiFi.h>
#include <FirebaseESP32.h>
#include <NTPClient.h>
#include <WiFiUdp.h>
#include <TimeLib.h>

#define FIREBASE_HOST "https://ayam-
broi-default-rtdb.firebaseio.com/"
#define FIREBASE_AUTH
"WBOBHarnW7Od4fSAdP4U76T7NF6TH
DvPpsOwc7Gr"
#define WIFI_SSID "bismillah"
#define WIFI_PASSWORD "12345678"

WiFiUDP ntpUDP;
NTPClient timeClient(ntpUDP);

FirebaseData firebaseData;
FirebaseJson json;

int LCDColumns = 16;
int LCDRows = 2;
int bos = 0;

String formattedDate;
String dayStamp;
String timeStamp;
String s_hari, s_tahun, s_bulan, s_jam,
s_menit, s_detik, l_hari, l_tahun, l_bulan,
s_tanggal;
int hari, tahun, bulan, jam, menit, detik,
i_tahun, i_hari, i_bulan;
int bis;
LiquidCrystal_I2C LCD(0x27,
LCDColumns, LCDRows);

#define DHTPIN 4
#define DHTTYPE DHT22
DHT dht(DHTPIN, DHTTYPE);

unsigned long previousMillis4 = 0;
unsigned long previousMillis5 = 0;

int intervalLED4 = 1000;
int intervalLED5 = 10000;

const int Relay1 = 19;
const int Relay2 = 18;
const int Relay3 = 23;
const int Relay4 = 34;

#define pintriger 13
#define pinecho 12

String pompa, kipas, pemanas;

long durasi;
float cm;
int wl, wl2, umur;


void setup() {
  Serial.begin(115200);
  dht.begin();
  LCD.init();
  LCD.backlight();
  WiFi.begin(WIFI_SSID,
WIFI_PASSWORD);
  Serial.print("Connecting to Wi-Fi");

  while (WiFi.status() !=
WL_CONNECTED)
  {
   Serial.print(".");
   delay(300);
   LCD.setCursor(0, 0);
   LCD.print(".");
  }

  Serial.println();
  Serial.print("Connected with IP: ");
  Serial.println(WiFi.localIP());
  Serial.println();
  LCD.setCursor(0, 0);
  LCD.print("tersambung");
  LCD.setCursor(0, 1);
  LCD.print(WiFi.localIP());
  timeClient.begin();
  timeClient.setTimeOffset(28800);
  pinMode (pintriger, OUTPUT);
  pinMode (pinecho, INPUT);
  Firebase.begin(FIREBASE_HOST,
FIREBASE_AUTH);
  Firebase.reconnectWiFi(true);
  Firebase.setReadTimeout(firebaseData,
1000 * 60);
```

```
  Firebase.setwriteSizeLimit(firebaseData,
"tiny");

  Serial.println("----------------------------------
--");
  Serial.println("Connected...");
  Serial.println(F("DHTxx test!"));

  pinMode(Relay1, OUTPUT);
  pinMode(Relay2, OUTPUT);
  pinMode(Relay3, OUTPUT);
  pinMode(Relay4, OUTPUT);

  digitalWrite(Relay1, HIGH);
  digitalWrite(Relay2, HIGH);
  digitalWrite(Relay3, HIGH);
  digitalWrite(Relay4, HIGH);
  if (Firebase.getString(firebaseData,
"/DHT/tanggal")) {
    s_tanggal = firebaseData.stringData();
    //    s_tanggal = String(bis);
    Serial.println(s_tanggal);
  } else {

Serial.println(firebaseData.errorReason());
  }

  l_tahun = s_tanggal.substring(0, 4);
  l_bulan = s_tanggal.substring(5, 7);
  l_hari = s_tanggal.substring(8, 10);
  i_hari = l_hari.toInt();
  i_bulan = l_bulan.toInt();
  i_tahun = l_tahun.toInt();

  Serial.println(s_tanggal);
  Serial.println(i_bulan);
  Serial.println(i_tahun);

}

void loop() {
  delay(500);
  while (!timeClient.update()) {
    timeClient.forceUpdate();
  }
  formattedDate =
timeClient.getFormattedDate();
  Serial.println(formattedDate);
  // Extract date
  int splitT = formattedDate.indexOf("T");
  dayStamp = formattedDate.substring(0,
splitT);
  s_tahun = dayStamp.substring(0, 4);
  s_bulan = dayStamp.substring(5, 7);
  s_hari = dayStamp.substring(8, 10);
  hari = s_hari.toInt();
  bulan = s_bulan.toInt();
  tahun = s_tahun.toInt();
  // Extract time
  timeStamp =
formattedDate.substring(splitT + 1,
formattedDate.length() - 1);
  //  Serial.print("HOUR: ");
  //  Serial.println(timeStamp);
  String okok = timeStamp;
  s_jam = okok.substring(0, 2);
  s_menit = okok.substring(3, 5);
  s_detik = okok.substring(6, 8);
  jam = s_jam.toInt();
  menit = s_menit.toInt();
  detik = s_detik.toInt();

  tmElements_t T1;
  tmElements_t T2;

  T1.Hour = 1;
  T1.Minute = 56;
  T1.Second = 0;
  T1.Day = i_hari;
  T1.Month = i_bulan;
  T1.Year = i_tahun - 1970; // because Year
is offset from 1970
  T2.Hour = jam;
  T2.Minute = menit;
  T2.Second = detik;
  T2.Day = hari;
  T2.Month = bulan;
  T2.Year = tahun - 1970; // because Year is
offset from 1970
  time_t T1sec = makeTime( T1 );
  time_t T2sec = makeTime( T2 );
  int selisih = T2sec - T1sec;
  umur = selisih / 3600 / 24;
  int jam2 = umur * 24;
  int jam3 = selisih / 3600 - jam2;

  uint8_t minutes = (selisih / 60) % 60;
  uint8_t seconds = selisih % 60;
  Serial.print( "umur ayam = " );
  Serial.print( umur );
  Serial.print( " hari, " );
  Serial.print( jam3 );
  Serial.println( " jam " );
  Serial.println("----------------------------------
----------------");

  unsigned long currentMillis = millis();
  if ((unsigned long)(currentMillis -
previousMillis4) >= intervalLED4) {
    previousMillis4 = currentMillis;
```

```
  }

  // Wait a few seconds between
measurements.
  //ultrasonik
  digitalWrite (pintriger, 0);
  delayMicroseconds(2);
  digitalWrite (pintriger, 1);
  delayMicroseconds(10);
  digitalWrite (pintriger, 0);
  delayMicroseconds(2);
  durasi = pulseIn(pinecho, HIGH);

  float h = dht.readHumidity();
  double t = dht.readTemperature();
  float f = dht.readTemperature(true);

  // cek pembacaan sensor DHT22
  if (isnan(h) || isnan(t) || isnan(f)) {
    Serial.println(F("gagal membaca nilai
sensor DHT22"));
    return;
  }

  float hif = dht.computeHeatIndex(f, h);
  float hic = dht.computeHeatIndex(t, h,
false);

  cm = (durasi * 0.0343) / 2;
  wl = 16 - cm; // 74.57 didapat dari
pembacaan antara jarak sensor dengan dasar
air

  Serial.print("Jarak Sensor : ");
  Serial.print(cm);
  Serial.print(" Cm");
  Serial.print("\t");
  Serial.print("Ketinggian Air : ");
  Serial.print(wl);
  Serial.println(" Cm");


  Serial.print(F("Humidity: "));
  Serial.print(h);
  Serial.print(F("%  Temperature: "));
  Serial.print(t);
  Serial.println(F("°C "));

  String h2 = String(h, 2);
  String t2 = String(t, 2);
  String LCDd = "T:" + t2 + " H:" + h2;
  LCD.setCursor(0, 0);
  LCD.print(LCDd);

  if (wl <= 3) {
   digitalWrite(Relay2, LOW);
   pompa = "on";
   wl2 = wl;
  } else if (wl >= 12.5) {
   digitalWrite(Relay2, HIGH);
   pompa = "off";
   wl2 = wl;
  } else if (wl < 0) {
   wl2 = 0;
   digitalWrite(Relay2, LOW);
   pompa = "on";
  } else {
   //    digitalWrite(Relay2, LOW);
   //    pompa = "on";
   wl2 = wl;
  }

 if (umur >= 0 && umur <= 2 ) {
   if (t <= 29) {
    digitalWrite(Relay3, LOW);
    pemanas = "on";
   } else {
    digitalWrite(Relay3, HIGH);
    pemanas = "off";
   }
   if (t >= 33) {
    digitalWrite(Relay1, LOW);
    kipas = "on";
   } else {
    digitalWrite(Relay1, HIGH);
    kipas = "off";
   }
 } else if (umur >= 3 && umur <= 5 ) {
   if (t <= 27) {
    digitalWrite(Relay3, LOW);
    pemanas = "on";
   } else {
    digitalWrite(Relay3, HIGH);
    pemanas = "off";
   }
   if (t >= 30) {
    digitalWrite(Relay1, LOW);
    kipas = "on";
   } else {
    digitalWrite(Relay1, HIGH);
    kipas = "off";
   }
 } else if (umur >= 6 && umur <= 8) {
   if (t <= 28) {
    digitalWrite(Relay3, LOW);
    pemanas = "on";
   } else {
    digitalWrite(Relay3, HIGH);
    pemanas = "off";
   }
```

```
 if (t >= 25) {
  digitalWrite(Relay1, LOW);
  kipas = "on";
 } else {
  digitalWrite(Relay1, HIGH);
  kipas = "off";
 }

} else if (umur >= 9 && umur <= 11) {
 if (t <= 27) {
  digitalWrite(Relay3, LOW);
  pemanas = "on";
 } else {
  digitalWrite(Relay3, HIGH);
  pemanas = "off";
 }
 if (t >= 25) {
  digitalWrite(Relay1, LOW);
  kipas = "on";
 } else {
  digitalWrite(Relay1, HIGH);
  kipas = "off";
 }
} else if (umur >= 12) {
 if (t <= 26) {
  digitalWrite(Relay3, LOW);
  pemanas = "on";
 } else {
  digitalWrite(Relay3, HIGH);
  pemanas = "off";
 }
 if (t >= 25) {
  digitalWrite(Relay1, LOW);
  kipas = "on";
 } else {
  digitalWrite(Relay1, HIGH);
  kipas = "off";
 }
}
String wl3 = String(wl2);

Serial.print("Status Pemanas: ");
Serial.println(pemanas);
Serial.print("Status Kipas: ");
Serial.println(kipas);
Serial.print("Status Pompa: ");
Serial.println(pompa);
String LCD2 = "Tandon Air:" + wl3 + " cm
";
LCD.setCursor(0, 1);
LCD.print(LCD2);

if ((unsigned long)(currentMillis -
previousMillis5) >= intervalLED5) {
  json.set("/suhu", t2);
  json.set("/kelembapan", h2);
  json.set("/jarak", wl3);
  json.set("/kipas", kipas);
  json.set("/pemanas", pemanas);
  json.set("/pompa", pompa);
  json.set("/umur", umur);
  Firebase.updateNode(firebaseData,
"/DHT", json);
  previousMillis5 = currentMillis;
```

Lampiran - 2 *Source code* halaman monitoring sensor

```
import 'package:Flutter/material.dart';
import
'package:firebase_database/firebase_databas
e.dart';
import 'package:smartfarm/fontstyle.dart';
import
'package:liquid_progress_indicator/liquid_pr
ogress_indicator.dart';
import
'package:percent_indicator/percent_indicator
.dart';
import 'package:vibration/vibration.dart';

class SceneMonitor extends StatefulWidget
{
  const SceneMonitor({Key key}) :
super(key: key);

  @override
  _SceneMonitorState createState() =>
_SceneMonitorState();
}

class _SceneMonitorState extends
State<SceneMonitor> {
  final dbRef =
FirebaseDatabase.instance.reference();

  Widget walert(String alert, pesan) {
    if (alert == "bahaya") {
      return Container(
        decoration: BoxDecoration(
          color: Colors.white,
          boxShadow: [
            BoxShadow(
              color: Colors.grey[350],
              offset: Offset(0.0, 0.0),
              blurRadius: 3.0,
              spreadRadius: 3.0,
            ),
          ],
        ),
        padding: EdgeInsets.all(20),
        child: Container(
          decoration: BoxDecoration(
            color: Colors.white,
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 2.0,
                spreadRadius: 2.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                20) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
          // margin: EdgeInsets.all(10),
          padding: EdgeInsets.all(20),
          child: Column(
            children: [
              Row(
                mainAxisAlignment:
MainAxisAlignment.center,
                children: [
                  Icon(
                    Icons.warning_rounded,
                    size: 17,
                    color: Colors.red,
                  ),
                  Text(
                    "PERINGATAN!!!",
                    style: TextStyle(
                        fontFamily: "Poppins",
                        fontSize: 15,
                        color: Colors.red,
                        fontWeight:
FontWeight.w900),
                  ),
                ],
              ),
              Row(
                mainAxisAlignment:
MainAxisAlignment.center,
                children: [
                  Text(
                    pesan,
                    style: TextStyle(
                        fontFamily: "Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                  ),
                ],
              ),
            ],
          ),
        ),
      );
    } else {
      return Padding(
        padding: EdgeInsets.all(5),
      );
```

```
  }
 }

 @override
 Widget build(BuildContext context) {
  return Scaffold(
   body: StreamBuilder(
       stream: dbRef.child("DHT").onValue,
       builder: (context, snapshot) {
        if (snapshot.hasData &&
           !snapshot.has*Error* &&
           snapshot.data.snapshot.value !=
null) {
          String pompaa =
snapshot.data.snapshot.value['pompa'];
          String pemanass =
snapshot.data.snapshot.value['pemanas'];
          String kipass =
snapshot.data.snapshot.value['kipas'];
          int umur =
snapshot.data.snapshot.value['umur'];
          double suhu =
double.parse(snapshot.data.snapshot.value['s
uhu']);

          String alert = "";
          String pesan = "";
          int s1 = 0;
          int s2 = 0;
          int h1 = 0;
          int h2 = 0;
          if (umur >= 0 && umur <= 2) {
           s1 = 29;
           s2 = 33;
           if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500,1000, 500, 1000, 500, 1000,
500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
           } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
           } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
           }
           h1 = 60;
           h2 = 70;
          } else if (umur >= 3 && umur <=
5) {
           s1 = 27;
           s2 = 30;
           if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
           } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
           } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
           }
           h1 = 60;
           h2 = 70;
          } else if (umur >= 6 && umur <=
8) {
           s1 = 25;
           s2 = 28;
           if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
           } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
             500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
           }
           h1 = 60;
           Vibration.cancel();
           h2 = 80;
          } else if (umur >= 9 && umur <=
11) {
```

```
            s1 = 25;
            s2 = 27;
            if (suhu < s1) {
              alert = "bahaya";
              Vibration.vibrate(pattern: [
                500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
              ]);
              pesan = "Bahaya suhu terlalu
rendah";
            } else if (suhu > s2) {
              alert = "bahaya";
              Vibration.vibrate(pattern: [
                500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
              ]);
              pesan = "Bahaya suhu terlalu
tinggi";
            } else {
              alert = "";
              Vibration.cancel();
              pesan = "";
            }
            h1 = 60;
            h2 = 80;
          } else if (umur >= 12) {
            s1 = 25;
            s2 = 26;
            if (suhu < s1) {
              alert = "bahaya";
              Vibration.vibrate(pattern: [
                500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
              ]);
              pesan = "Bahaya suhu terlalu
rendah";
            } else if (suhu > s2) {
              alert = "bahaya";
              Vibration.vibrate(pattern: [
                500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
              ]);
              pesan = "Bahaya suhu terlalu
tinggi";
            } else {
              alert = "";
              Vibration.cancel();
              pesan = "";
            }
            h1 = 60;
            h2 = 80;
          }
          if (pompaa == "on") {
            // pompa2 = "menyala";
          } else {
            // pompa2 = "mati";
            // alert = "bahaya";
            // pesan = "Bahaya suhu terlalu
panas";
          }
          if (pemanass == "on") {
            // pemanas2 = "menyala";
          } else {
            // pemanas2 = "mati";
          }
          if (kipass == "on") {
            // kipas2 = "menyala";
          } else {
            // kipas2 = "mati";
          }
          return Container(
            child: ListView(
              children: [
                Container(
                  decoration: BoxDecoration(
                    image: DecorationImage(
                      image:
AssetImage('assets/images/head_kuning.png
'),
                      fit: BoxFit.cover),
                    color: Colors.yellow[600],
                    boxShadow: [
                      BoxShadow(
                        color: Colors.grey[350],
                        offset: Offset(0.0, 0.0),
                        blurRadius: 3.0,
                        spreadRadius: 3.0,
                      ),
                    ],
                  ),
                  // padding: EdgeInsets.all(20),
                  child: Container(
                    // margin: EdgeInsets.all(10),
                    padding: EdgeInsets.all(10),
                    child: Column(
                      mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                      children: <Widget>[
                        Row(
                          mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                          children: [
                            Text(
                              "SMARTFARM",
                              style: splash,
                            ),
                            Text(
                              "TAUFIQ",
                              style: splash,
                            ),
```

```
                    ],
                  ),
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                      Row(
                        children: [
                          Icon(
                            Icons.dashboard,
                            size: 15,
                          ),
                          Text(
                            "MONITORING
SENSOR",
                            style: TextStyle(
                              fontFamily:
"Poppins",
                              fontSize: 13,
                              color: Colors.black,
                            ),
                          ),
                        ],
                      ),
                      Text(
                        "+6285225741271",
                        style: TextStyle(
                          fontFamily:
"Poppins",
                          fontSize: 13,
                          color: Colors.black,
                          fontWeight:
FontWeight.normal),
                      ),
                    ],
                  ),
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.end,
                    children: [
                      Row(
                        children: [
                          Text(
                            "Umur Ayam ",
                            style: TextStyle(
                              fontFamily:
"Poppins",
                              fontSize: 13,
                              color: Colors.black,
                            ),
                          ),
                          Text(

snapshot.data.snapshot.value['umur']
                                .toString() +
                                    " hari",
                                style: TextStyle(
                                  fontFamily:
"Poppins",
                                  fontSize: 13,
                                  color:
Colors.black,
                                  fontWeight:
FontWeight.bold),
                              ),
                            ],
                          ),
                        ],
                      ),
                    ],
                  ),
                ),
                walert(alert, pesan),
                Padding(
                  padding: EdgeInsets.all(5),
                ),

                //suhu
                Container(
                  decoration: BoxDecoration(
                    color: Colors.white,
                    boxShadow: [
                      BoxShadow(
                        color: Colors.grey[350],
                        offset: Offset(0.0, 0.0),
                        blurRadius: 3.0,
                        spreadRadius: 3.0,
                      ),
                    ],
                  ),
                  padding: EdgeInsets.all(20),
                  child: Container(
                    decoration: BoxDecoration(
                      color: Colors.white,
                      boxShadow: [
                        BoxShadow(
                          color: Colors.grey[350],
                          offset: Offset(0.0, 0.0),
                          blurRadius: 2.0,
                          spreadRadius: 2.0,
                        ),
                      ],
                      borderRadius:
BorderRadius.circular(
                          20) // use instead of
BorderRadius.all(Radius.circular(20))
                      ),
                    // margin: EdgeInsets.all(10),
                    padding: EdgeInsets.all(20),
```

```
                child: Column(
                  mainAxisAlignment:
MainAxisAlignment.center,
                 children: [
                   Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                     Text(
                      "SUHU",
                      style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                      ),
                     Icon(

Icons.thermostat_outlined,
                      ),
                    ],
                   ),
                   Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                     Text(
                      "(temperature)",
                      style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 10,
                        color: Colors.black,
                        fontStyle:
FontStyle.italic,
                        fontWeight:
FontWeight.normal),
                      ),
                    ],
                   ),
                   Padding(padding:
EdgeInsets.only(bottom: 10)),
                   Container(
                    child: Container(
                     margin:
EdgeInsets.only(right: 20, left: 20),
                     child:
LinearPercentIndicator(
                      animation: true,
                      lineHeight: 50.0,
                      animationDuration:
1000,
                      percent:
double.tryParse(snapshot

.data.snapshot.value['suhu']) /
                        100,
                      center: Text(

snapshot.data.snapshot.value['suhu'] + "°C",
                       style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                      ),
                      linearStrokeCap:
LinearStrokeCap.roundAll,
                      backgroundColor:
Colors.grey[100],
                      progressColor:
Colors.yellow[700],
                     ),
                    ),
                   ),
                   Padding(padding:
EdgeInsets.only(bottom: 10)),
                   Row(
                    mainAxisAlignment:
MainAxisAlignment.center,
                    children: <Widget>[
                     Text(
                      "suhu acuan (",
                      style: isi,
                     ),
                     Text(s1.toString() + " - "
+ s2.toString(),
                       style: TextStyle(
                        fontWeight:
FontWeight.w900,
                        color:
Colors.yellow[900])),
                     Text(
                      ")",
                      style: isi,
                     ),
                    ],
                   ),
                  ],
                 ),
                ),
                Padding(
                 padding: EdgeInsets.all(5),
                ),
```

```
                //kelelmbapan
                Container(
                  decoration: BoxDecoration(
                    color: Colors.white,
                    boxShadow: [
                      BoxShadow(
                        color: Colors.grey[350],
                        offset: Offset(0.0, 0.0),
                        blurRadius: 3.0,
                        spreadRadius: 3.0,
                      ),
                    ],
                  ),
                  padding: EdgeInsets.all(20),
                  child: Container(
                    decoration: BoxDecoration(
                      color: Colors.white,
                      boxShadow: [
                        BoxShadow(
                          color: Colors.grey[350],
                          offset: Offset(0.0, 0.0),
                          blurRadius: 2.0,
                          spreadRadius: 2.0,
                        ),
                      ],
                      borderRadius:
BorderRadius.circular(
                          20) // use instead of
BorderRadius.all(Radius.circular(20))
                      ),
                    // margin: EdgeInsets.all(10),
                    padding: EdgeInsets.all(20),
                    child: Column(
                      children: [
                        Row(
                          mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                          children: [
                            Text(
                              "KELEMBAPAN",
                              style: TextStyle(
                                  fontFamily:
"Poppins",
                                  fontSize: 20,
                                  color: Colors.black,
                                  fontWeight:
FontWeight.w900),
                            ),
                            Icon(

Icons.blur_on_outlined,
                            ),
                          ],
                        ),
                        Row(
                          mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                          children: [
                            Text(
                              "(humidity)",
                              style: TextStyle(
                                  fontFamily:
"Poppins",
                                  fontSize: 10,
                                  color: Colors.black,
                                  fontStyle:
FontStyle.italic,
                                  fontWeight:
FontWeight.normal),
                            ),
                          ],
                        ),
                        Padding(padding:
EdgeInsets.only(bottom: 10)),
                        Container(
                          child:
CircularPercentIndicator(
                            radius: 250.0,
                            lineWidth: 40.0,
                            animation: true,
                            animationDuration:
1000,
                            percent:
double.tryParse(snapshot

.data.snapshot.value['kelembapan']) /
                                100,
                            center: Text(

snapshot.data.snapshot.value['kelembapan']
+
                                "%",
                              style: TextStyle(
                                  fontFamily:
"Poppins",
                                  fontSize: 20,
                                  color: Colors.black,
                                  fontWeight:
FontWeight.w900),
                            ),
                            circularStrokeCap:
CircularStrokeCap.round,
                            backgroundColor:
Colors.grey[200],
                            progressColor:
Colors.yellow[700],
                          ),
                        ),
```

```
                    Padding(padding:
EdgeInsets.only(bottom: 10)),
                    Row(
                     mainAxisAlignment:
MainAxisAlignment.center,
                     children: <Widget>[
                      Text(
                       "kelembapan acuan (",
                       style: isi,
                      ),
                      Text(h1.toString() + " - "
+ h2.toString(),
                          style: TextStyle(
                            fontWeight:
FontWeight.w900,
                            color:
Colors.yellow[900])),
                      Text(
                       ")",
                       style: isi,
                      ),
                     ],
                    ),
                   ],
                  ),
                 ),
                ),

                Padding(
                 padding: EdgeInsets.all(5),
                ),

                //ketinggian air
                Container(
                 decoration: BoxDecoration(
                  color: Colors.white,
                  boxShadow: [
                   BoxShadow(
                    color: Colors.grey[350],
                    offset: Offset(0.0, 0.0),
                    blurRadius: 3.0,
                    spreadRadius: 3.0,
                   ),
                  ],
                 ),
                 padding: EdgeInsets.all(20),
                 child: Container(
                  decoration: BoxDecoration(
                   color: Colors.white,
                   boxShadow: [
                    BoxShadow(
                     color: Colors.grey[350],
                     offset: Offset(0.0, 0.0),
                     blurRadius: 2.0,
                     spreadRadius: 2.0,
                    ),
                   ],
                   borderRadius:
BorderRadius.circular(
                     20) // use instead of
BorderRadius.all(Radius.circular(20))
                   ),
                  // margin: EdgeInsets.all(10),
                  padding: EdgeInsets.only(
                   top: 20, left: 20, right: 20,
bottom: 20),
                  child: Column(
                   children: [
                    Row(
                     mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                     children: [
                      Text(
                       "KETINGGIAN AIR",
                       style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                      ),
                      Icon(

Icons.insert_chart_outlined,
                       color: Colors.black,
                      ),
                     ],
                    ),
                    Row(
                     mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                     children: [
                      Text(
                       "(water level)",
                       style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 10,
                        color: Colors.black,
                        fontStyle:
FontStyle.italic,
                        fontWeight:
FontWeight.normal),
                      ),
                     ],
                    ),
                    Padding(padding:
EdgeInsets.only(bottom: 10)),
                    Container(
```

```
                    child: Container(
                      margin:
EdgeInsets.only(right: 20, left: 20),
                      child:
LinearPercentIndicator(
                        animation: true,
                        lineHeight: 50.0,
                        animationDuration:
1000,
                        percent:
double.parse(snapshot
.data.snapshot.value['jarak']) /
                            15,
                        center: Text(
snapshot.data.snapshot.value['jarak'] +
                            " cm",
                          style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 20,
                            color: Colors.black,
                            fontWeight:
FontWeight.w900),
                        ),
                        linearStrokeCap:
LinearStrokeCap.roundAll,
                        backgroundColor:
Colors.grey[100],
                        progressColor:
Colors.yellow[700],
                      ),
                    ),
                  ),
                ],
              ),
            ),
          ),
        ),
      );
    } else {
      return Column(
        children: [
          Padding(padding:
EdgeInsets.all(30)),
          Center(
            child: Container(
              decoration: BoxDecoration(
                color: Colors.white,
                // border: Border.all(color:
Colors.black),
                boxShadow: [
                  BoxShadow(
                    color: Colors.grey[350],
                    offset: Offset(0.0, 0.0),
                    blurRadius: 3.0,
                    spreadRadius: 3.0,
                  ),
                ],
                borderRadius:
BorderRadius.circular(
                    20) // use instead of
BorderRadius.all(Radius.circular(20))
                ),
              child: SizedBox(
                height: 50,
                width: 200,
                child:
LiquidLinearProgressIndicator(
                  value: 0.5, // Defaults to 0.5.
                  valueColor:
AlwaysStoppedAnimation(Colors.yellow[
                      700]), // Defaults to the
current Theme's accentColor.
                  backgroundColor: Colors
                      .white, // Defaults to the
current Theme's backgroundColor.
                  borderColor: Colors.black,
                  borderWidth: 2.0,
                  borderRadius: 20.0,
                  direction: Axis
                      .horizontal, // The
direction the liquid moves (Axis.vertical =
bottom to top, Axis.horizontal = left to
right). Defaults to Axis.horizontal.
                  center: Text(
                    "Loading...",
                    style: isi2,
                  ),
                ),
              ),
            ),
          ),
        ],
      );
    }
  }),
  );
 }

 void updateData() {
  dbRef.child('DHT').update({
   'tanggal': '19-10-1999',
   // 'name': 'taufiq hidayat',
  });
 }
}
```

Lampiran - 3 Source code halaman monitoring Alat

```
import 'package:Flutter/material.dart';
import
'package:firebase_database/firebase_databas
e.dart';
import 'package:smartfarm/fontstyle.dart';
import
'package:liquid_progress_indicator/liquid_pr
ogress_indicator.dart';
import 'package:vibration/vibration.dart';

class SceneMonitorAlat extends
StatefulWidget {
  const SceneMonitorAlat({Key key}) :
super(key: key);

  @override
  _SceneMonitorAlatState createState() =>
_SceneMonitorAlatState();
}

class _SceneMonitorAlatState extends
State<SceneMonitorAlat> {
  final dbRef =
FirebaseDatabase.instance.reference();
  Widget wpemanas(String pemanass) {
    if (pemanass == "on") {
      return Container(
        decoration: BoxDecoration(
            color: Colors.yellow[600],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/pemanas.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    } else {
      return Container(
        decoration: BoxDecoration(
            color: Colors.grey[100],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/pemanas.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    }
  }

  Widget wkipas(String kipass) {
    if (kipass == "on") {
      return Container(
        decoration: BoxDecoration(
            color: Colors.yellow[600],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
```

```
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/kipas.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    } else {
      return Container(
        decoration: BoxDecoration(
            color: Colors.grey[100],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/kipas.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    }
  }

  Widget wpompa(String pompaa) {
    if (pompaa == "on") {
      return Container(
        decoration: BoxDecoration(
            color: Colors.yellow[600],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/pompa.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    } else {
      return Container(
        decoration: BoxDecoration(
            color: Colors.grey[100],
            // border: Border.all(color:
Colors.black, width: 5),
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
            borderRadius:
BorderRadius.circular(
                100) // use instead of
BorderRadius.all(Radius.circular(20))
            ),
        child: SizedBox(
          height: 150,
          width: 150,
          child: Image.asset(
            "assets/images/pompa.png",
            width: 100.0,
            height: 100.0,
          ),
        ),
      );
    }
  }

  Widget walert(String alert, pesan) {
    if (alert == "bahaya") {
      return Container(
        decoration: BoxDecoration(
          color: Colors.white,
          boxShadow: [
```

```
          BoxShadow(
            color: Colors.grey[350],
            offset: Offset(0.0, 0.0),
            blurRadius: 3.0,
            spreadRadius: 3.0,
          ),
        ],
      ),
      padding: EdgeInsets.all(20),
      child: Container(
        decoration: BoxDecoration(
          color: Colors.white,
          boxShadow: [
            BoxShadow(
              color: Colors.grey[350],
              offset: Offset(0.0, 0.0),
              blurRadius: 2.0,
              spreadRadius: 2.0,
            ),
          ],
          borderRadius:
BorderRadius.circular(
              20) // use instead of
BorderRadius.all(Radius.circular(20))
          ),
        // margin: EdgeInsets.all(10),
        padding: EdgeInsets.all(20),
        child: Column(
          children: [
            Row(
              mainAxisAlignment:
MainAxisAlignment.center,
              children: [
                Icon(
                  Icons.warning_rounded,
                  size: 17,
                  color: Colors.red,
                ),
                Text(
                  " PERINGATAN!!!",
                  style: TextStyle(
                      fontFamily: "Poppins",
                      fontSize: 15,
                      color: Colors.red,
                      fontWeight:
FontWeight.w900),
                ),
              ],
            ),
            Row(
              mainAxisAlignment:
MainAxisAlignment.center,
              children: [
                Text(
                  pesan,
                  style: TextStyle(
                      fontFamily: "Poppins",
                      fontSize: 20,
                      color: Colors.black,
                      fontWeight:
FontWeight.w900),
                ),
              ],
            ),
          ],
        ),
      );
    } else {
      return Padding(
        padding: EdgeInsets.all(5),
      );
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: StreamBuilder(
          stream: dbRef.child("DHT").onValue,
          builder: (context, snapshot) {
            if (snapshot.hasData &&
                !snapshot.has*Error* &&
                snapshot.data.snapshot.value !=
null) {
              String pompaa =
snapshot.data.snapshot.value['pompa'];
              String pemanass =
snapshot.data.snapshot.value['pemanas'];
              String kipass =
snapshot.data.snapshot.value['kipas'];
              int umur =
snapshot.data.snapshot.value['umur'];

              String pompa2 = "";
              String kipas2 = "";
              String pemanas2 = "";
              String alert = "";
              String pesan = "";
              double suhu =
double.parse(snapshot.data.snapshot.value['s
uhu']);
              int s1 = 0;
              int s2 = 0;
              // int h1 = 0;
              // int h2 = 0;
              if (umur >= 0 && umur <= 2) {
                s1 = 29;
                s2 = 33;
                if (suhu < s1) {
```

```
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500,1000, 500, 1000, 500, 1000,
500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 70;
        } else if (umur >= 3 && umur <=
5) {
          s1 = 27;
          s2 = 30;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 70;
        } else if (umur >= 6 && umur <=
8) {
          s1 = 25;
          s2 = 28;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          }
          h1 = 60;
          Vibration.cancel();
          h2 = 80;
        } else if (umur >= 9 && umur <=
11) {
          s1 = 25;
          s2 = 27;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 80;
        } else if (umur >= 12) {
          s1 = 25;
          s2 = 26;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
```

```
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }

          // h1 = 60;
          // h2 = 80;
        }

        if (pompaa == "on") {
          pompa2 = "menyala";
        } else {
          pompa2 = "mati";
          // alert = "bahaya";
          // pesan = "Bahaya suhu terlalu
panas";
        }
        if (pemanass == "on") {
          pemanas2 = "menyala";
        } else {
          pemanas2 = "mati";
        }
        if (kipass == "on") {
          kipas2 = "menyala";
        } else {
          kipas2 = "mati";
        }
        return Container(
          child: ListView(
            children: [
              Container(
                decoration: BoxDecoration(
                  image: DecorationImage(
                    image:
AssetImage('assets/images/head_kuning.png
'),
                    fit: BoxFit.cover),
                  color: Colors.yellow[600],
                  boxShadow: [
                    BoxShadow(
                      color: Colors.grey[350],
                      offset: Offset(0.0, 0.0),
                      blurRadius: 3.0,
                      spreadRadius: 3.0,
                    ),
                  ],
                ),
                // padding: EdgeInsets.all(20),
                child: Container(
                  // margin: EdgeInsets.all(10),
                  padding: EdgeInsets.all(10),
                  child: Column(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: <Widget>[
                      Row(
                        mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                        children: [
                          Text(
                            "SMARTFARM",
                            style: splash,
                          ),
                          Text(
                            "TAUFIQ",
                            style: splash,
                          ),
                        ],
                      ),
                      Row(
                        mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                        children: [
                          Row(
                            children: [
                              Icon(
                                Icons.monitor,
                                size: 15,
                              ),
                              Text(
                                "MONITORING
ALAT",
                                style: TextStyle(
                                  fontFamily:
"Poppins",
                                  fontSize: 13,
                                  color: Colors.black,
                                ),
                              ),
                            ],
                          ),
                          Text(
                            "+6285225741271",
                            style: TextStyle(
                              fontFamily:
"Poppins",
                              fontSize: 13,
                              color: Colors.black,
```

```
                                fontWeight:
FontWeight.normal),
                              ),
                            ],
                          ),
                          Row(
                            mainAxisAlignment:
MainAxisAlignment.end,
                           children: [
                            Row(
                             children: [
                              Text(
                               "Umur Ayam ",
                               style: TextStyle(
                                fontFamily:
"Poppins",
                                fontSize: 13,
                                color: Colors.black,
                               ),
                              ),
                              Text(

snapshot.data.snapshot.value['umur']
                                    .toString() +
                                " hari",
                               style: TextStyle(
                                fontFamily:
"Poppins",
                                fontSize: 13,
                                color:
Colors.black,
                                fontWeight:
FontWeight.bold),
                              ),
                             ],
                            ),
                           ],
                          ),
                         ],
                        ),
                       ),
                      ),

                      walert(alert, pesan),
                      Padding(
                       padding: EdgeInsets.all(5),
                      ),
                      //pemanas
                      Container(
                       decoration: BoxDecoration(
                        color: Colors.white,
                        boxShadow: [
                         BoxShadow(
                          color: Colors.grey[350],
                          offset: Offset(0.0, 0.0),
                          blurRadius: 3.0,
                          spreadRadius: 3.0,
                         ),
                        ],
                       ),
                       padding: EdgeInsets.all(20),
                       child: Container(
                        decoration: BoxDecoration(
                         color: Colors.white,
                         boxShadow: [
                          BoxShadow(
                           color: Colors.grey[350],
                           offset: Offset(0.0, 0.0),
                           blurRadius: 2.0,
                           spreadRadius: 2.0,
                          ),
                         ],
                         borderRadius:
BorderRadius.circular(
                             20) // use instead of
BorderRadius.all(Radius.circular(20))
                         ),
                        // margin: EdgeInsets.all(10),
                        padding: EdgeInsets.all(20),
                        child: Column(
                         children: [
                          Row(
                           mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                           children: [
                            Text(
                             "PEMANAS",
                             style: TextStyle(
                              fontFamily:
"Poppins",
                              fontSize: 20,
                              color: Colors.black,
                              fontWeight:
FontWeight.w900),
                            ),
                            Text(
                             pemanass,
                             style: TextStyle(
                              fontFamily:
"Poppins",
                              fontSize: 20,
                              color: Colors.black,
                              fontWeight:
FontWeight.w900),
                            ),
                           ],
                          ),
                          Row(
                           mainAxisAlignment:
MainAxisAlignment.spaceBetween,
```

```
                    children: [
                      Text(
                        "(status)",
                        style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 10,
                            color: Colors.black,
                            fontWeight:
FontWeight.normal),
                      ),
                      Text(
                        "(" + pemanas2 + ")",
                        style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 10,
                            color: Colors.black,
                            fontWeight:
FontWeight.normal),
                      ),
                    ],
                  ),
                  Padding(padding:
EdgeInsets.only(bottom: 10)),
                  // FlatButton(
                  //   child: Text(
                  //     'Show Pop-up',
                  //     style: TextStyle(
                  //       color: Colors.white,
                  //     ),
                  //   ),
                  //   color: Colors.black,
                  //   onPressed: () {
                  //     showDialog(
                  //       context: context,
                  //       builder:
(BuildContext context) =>
                  //
_buildPopupDialog(context),
                  //     );
                  //   },
                  // ),
                  wpemanas(pemanass),
                ],
              ),
            ),
          ),
          Padding(
            padding: EdgeInsets.all(5),
          ),

          //kipas
          Container(
            decoration: BoxDecoration(
              color: Colors.white,
              boxShadow: [
                BoxShadow(
                  color: Colors.grey[350],
                  offset: Offset(0.0, 0.0),
                  blurRadius: 3.0,
                  spreadRadius: 3.0,
                ),
              ],
            ),
            padding: EdgeInsets.all(20),
            child: Container(
              decoration: BoxDecoration(
                  color: Colors.white,
                  boxShadow: [
                    BoxShadow(
                      color: Colors.grey[350],
                      offset: Offset(0.0, 0.0),
                      blurRadius: 2.0,
                      spreadRadius: 2.0,
                    ),
                  ],
                  borderRadius:
BorderRadius.circular(
                      20) // use instead of
BorderRadius.all(Radius.circular(20))
                  ),
              // margin: EdgeInsets.all(10),
              padding: EdgeInsets.all(20),
              child: Column(
                children: [
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                      Text(
                        "KIPAS",
                        style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 20,
                            color: Colors.black,
                            fontWeight:
FontWeight.w900),
                      ),
                      Text(
                        kipass,
                        style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 20,
                            color: Colors.black,
                            fontWeight:
FontWeight.w900),
                      ),
```

```
                    ],
                  ),
                  Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                   children: [
                    Text(
                     "(status)",
                     style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 10,
                        color: Colors.black,
                        fontWeight:
FontWeight.normal),
                    ),
                    Text(
                     "(" + kipas2 + ")",
                     style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 10,
                        color: Colors.black,
                        fontWeight:
FontWeight.normal),
                    ),
                   ],
                  ),
                  Padding(padding:
EdgeInsets.only(bottom: 10)),
                   wkipas(kipass),
                  ],
                 ),
                ),
               ),

               Padding(
                padding: EdgeInsets.all(5),
               ),

               //pompa
               Container(
                decoration: BoxDecoration(
                 color: Colors.white,
                 boxShadow: [
                  BoxShadow(
                   color: Colors.grey[350],
                   offset: Offset(0.0, 0.0),
                   blurRadius: 3.0,
                   spreadRadius: 3.0,
                  ),
                 ],
                ),
                padding: EdgeInsets.all(20),
                child: Container(
                 decoration: BoxDecoration(
                  color: Colors.white,
                  boxShadow: [
                   BoxShadow(
                    color: Colors.grey[350],
                    offset: Offset(0.0, 0.0),
                    blurRadius: 2.0,
                    spreadRadius: 2.0,
                   ),
                  ],
                  borderRadius:
BorderRadius.circular(
                    20) // use instead of
BorderRadius.all(Radius.circular(20))
                  ),
                 // margin: EdgeInsets.all(10),
                 padding: EdgeInsets.only(
                  top: 20, left: 20, right: 20,
bottom: 20),
                 child: Column(
                  children: [
                   Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                     Text(
                      "POMPA AIR",
                      style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                     ),
                     Text(
                      pompaa,
                      style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 20,
                        color: Colors.black,
                        fontWeight:
FontWeight.w900),
                     ),
                     // onPressed: null,
                    ],
                   ),
                   Row(
                    mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                    children: [
                     Text(
                      "(status)",
                      style: TextStyle(
```

```
                            fontFamily:
"Poppins",
                            fontSize: 10,
                            color: Colors.black,
                            fontWeight:
FontWeight.normal),
                        ),
                        Text(
                          "(" + pompa2 + ")",
                          style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 10,
                            color: Colors.black,
                            fontWeight:
FontWeight.normal),
                        ),
                      ],
                    ),
                    Padding(padding:
EdgeInsets.only(bottom: 10)),
                    wpompa(pompaa),
                  ],
                ),
              ),
            ),
          ],
        ),
      );
    } else {
      return new Column(
        children: [
          Padding(padding:
EdgeInsets.all(30)),
          Center(
            child: Container(
              decoration: BoxDecoration(
                color: Colors.white,
                // border: Border.all(color:
Colors.black),
                boxShadow: [
                  BoxShadow(
                    color: Colors.grey[350],
                    offset: Offset(0.0, 0.0),
                    blurRadius: 3.0,
                    spreadRadius: 3.0,
                  ),
                ],
                borderRadius:
BorderRadius.circular(
                    20) // use instead of
BorderRadius.all(Radius.circular(20))
                ),
              child: SizedBox(
                height: 50,
                width: 200,
                child:
LiquidLinearProgressIndicator(
                  value: 0.5, // Defaults to 0.5.
                  valueColor:
AlwaysStoppedAnimation(Colors.yellow[
                      700]), // Defaults to the
current Theme's accentColor.
                  backgroundColor: Colors
                      .white, // Defaults to the
current Theme's backgroundColor.
                  borderColor: Colors.black,
                  borderWidth: 2.0,
                  borderRadius: 20.0,
                  direction: Axis
                      .horizontal, // The
direction the liquid moves (Axis.vertical =
bottom to top, Axis.horizontal = left to
right). Defaults to Axis.horizontal.
                  center: Text(
                    "Loading...",
                    style: isi2,
                  ),
                ),
              ),
            ),
          ],
        );
      }
    }),
  );
 }
}
```

Lampiran - 4 *Source code* halaman pengaturan tanggal

```
import 'dart:async';
import 'package:Flutter/material.dart';
import
        'package:firebase_database/firebase_
        database.dart';
import 'package:smartfarm/fontstyle.dart';
import
        'package:liquid_progress_indicator/li
        quid_progress_indicator.dart';
import 'package:vibration/vibration.dart';

class MyApp extends StatefulWidget {
  const MyApp({Key key}) : super(key: key);

  @override
  _MyAppState          createState()          =>
        _MyAppState();
}

class _MyAppState extends State<MyApp>
        {
  final                  dbRef                =
        FirebaseDatabase.instance.reference(
        );
  final                 dbRef2                =
        FirebaseDatabase.instance.reference(
        ).child("DHT");
  String name = "";
  DateTime selectedDate = DateTime.now();

//  Initial SelectDate Flutter
  Future<Null>     _selectDate(BuildContext
        context) async {
    // Initial DateTime FIinal Picked
    final     DateTime     picked     =     await
        showDatePicker(
      context: context,
      initialDate: selectedDate,
      firstDate: DateTime(2015, 8),
      builder: (BuildContext context, Widget
        child) {
       return Theme(
        data: ThemeData.light().copyWith(
          colorScheme:
        ColorScheme.light(primary:
        Colors.yellow[700]),
          buttonTheme:
        ButtonThemeData(textTheme:
        ButtonTextTheme.primary),
        ),
        child: child,
       );
      },
      lastDate: DateTime(2101));
   if   (picked   !=   null   &&   picked   !=
       selectedDate)
    setState(() {
     selectedDate = picked;
    });
}

Widget walert(String alert, pesan) {
  if (alert == "bahaya") {
    return Container(
      decoration: BoxDecoration(
        color: Colors.white,
        boxShadow: [
          BoxShadow(
            color: Colors.grey[350],
            offset: Offset(0.0, 0.0),
            blurRadius: 3.0,
            spreadRadius: 3.0,
          ),
        ],
      ),
      padding: EdgeInsets.all(20),
      child: Container(
        decoration: BoxDecoration(
          color: Colors.white,
          boxShadow: [
            BoxShadow(
              color: Colors.grey[350],
              offset: Offset(0.0, 0.0),
              blurRadius: 2.0,
              spreadRadius: 2.0,
            ),
          ],
          borderRadius:
        BorderRadius.circular(
            20)   //   use   instead   of
        BorderRadius.all(Radius.circular(20)
        )
          ),
        // margin: EdgeInsets.all(10),
        padding: EdgeInsets.all(20),
        child: Column(
          children: [
            Row(
              mainAxisAlignment:
        MainAxisAlignment.center,
              children: [
                Icon(
                  Icons.warning_rounded,
                  size: 17,
```

```
                color: Colors.red,
              ),
              Text(
                "PERINGATAN!!!",
                style: TextStyle(
                    fontFamily: "Poppins",
                    fontSize: 15,
                    color: Colors.red,
                    fontWeight:
        FontWeight.w900),
              ),
            ],
          ),
          Row(
            mainAxisAlignment:
        MainAxisAlignment.center,
            children: [
              Text(
                pesan,
                style: TextStyle(
                    fontFamily: "Poppins",
                    fontSize: 20,
                    color: Colors.black,
                    fontWeight:
        FontWeight.w900),
              ),
            ],
          ),
        ],
      ),
    ),
  );
 } else {
  return Padding(
    padding: EdgeInsets.all(5),
  );
 }
}

@override
Widget build(BuildContext context) {
 return Scaffold(
  body: StreamBuilder(
      stream: dbRef.child("DHT").onValue,
      builder: (context, snapshot) {
       if (snapshot.hasData &&
          !snapshot.has*Error* &&
          snapshot.data.snapshot.value      !=
      null) {
        String              pompaa              =
      snapshot.data.snapshot.value['pompa'
      ];
        String              pemanass              =
      snapshot.data.snapshot.value['peman
      as'];
        String              kipass              =
      snapshot.data.snapshot.value['kipas'];
        int              umur              =
      snapshot.data.snapshot.value['umur'];

        String alert = "";
        String pesan = "";
        double              suhu              =
      double.parse(snapshot.data.snapshot.
      value['suhu']);

        int s1 = 0;
        int s2 = 0;
        // int h1 = 0;
        // int h2 = 0;
        if (umur >= 0 && umur <= 2) {
          s1 = 29;
          s2 = 33;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500,1000, 500, 1000, 500, 1000,
500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 70;
        } else if (umur >= 3 && umur <=
5) {
          s1 = 27;
          s2 = 30;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
```

```
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 70;
        } else if (umur >= 6 && umur <=
8) {
          s1 = 25;
          s2 = 28;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          }
          h1 = 60;
          Vibration.cancel();
          h2 = 80;
        } else if (umur >= 9 && umur <=
11) {
          s1 = 25;
          s2 = 27;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          h1 = 60;
          h2 = 80;
        } else if (umur >= 12) {
          s1 = 25;
          s2 = 26;
          if (suhu < s1) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
rendah";
          } else if (suhu > s2) {
            alert = "bahaya";
            Vibration.vibrate(pattern: [
              500, 1000, 500, 1000, 500,
1000, 500, 1000, 500, 1000, 500, 1000
            ]);
            pesan = "Bahaya suhu terlalu
tinggi";
          } else {
            alert = "";
            Vibration.cancel();
            pesan = "";
          }
          // h1 = 60;
          // h2 = 80;
        }
        if (pompaa == "on") {
          // pompa2 = "menyala";
        } else {
          // pompa2 = "mati";
          alert = "bahaya";
          pesan = "Bahaya suhu terlalu
panas";
        }
        if (pemanass == "on") {
          // pemanas2 = "menyala";
        } else {
          // pemanas2 = "mati";
        }
        if (kipass == "on") {
          // kipas2 = "menyala";
        } else {
          // kipas2 = "mati";
        }
```

```
  return Container(
    child: ListView(
      children: [
        Container(
          decoration: BoxDecoration(
            image: DecorationImage(
              image:
AssetImage('assets/images/head_kuni
ng.png'),
              fit: BoxFit.cover),
            color: Colors.yellow[600],
            boxShadow: [
              BoxShadow(
                color: Colors.grey[350],
                offset: Offset(0.0, 0.0),
                blurRadius: 3.0,
                spreadRadius: 3.0,
              ),
            ],
          ),
          // padding: EdgeInsets.all(20),
          child: Container(
            // margin: EdgeInsets.all(10),
            padding: EdgeInsets.all(10),
            child: Column(
              mainAxisAlignment:
MainAxisAlignment.spaceBetween,
              children: <Widget>[
                Row(
                  mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                  children: [
                    Text(
                      "SMARTFARM",
                      style: splash,
                    ),
                    Text(
                      "TAUFIQ",
                      style: splash,
                    ),
                  ],
                ),
                Row(
                  mainAxisAlignment:
MainAxisAlignment.spaceBetween,
                  children: [
                    Row(
                      children: [
                        Icon(
                          Icons.settings,
                          size: 15,
                        ),
                        Text(
                          "PENGATURAN",
                          style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 13,
                            color: Colors.black,
                          ),
                        ),
                      ],
                    ),
                    Text(
                      "+6285225741271",
                      style: TextStyle(
                        fontFamily:
"Poppins",
                        fontSize: 13,
                        color: Colors.black,
                        fontWeight:
FontWeight.normal),
                    ),
                  ],
                ),
                Row(
                  mainAxisAlignment:
MainAxisAlignment.end,
                  children: [
                    Row(
                      children: [
                        Text(
                          "Umur Ayam ",
                          style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 13,
                            color: Colors.black,
                          ),
                        ),
                        Text(

snapshot.data.snapshot.value['umur']
                              .toString() +
                            " hari",
                          style: TextStyle(
                            fontFamily:
"Poppins",
                            fontSize: 13,
                            color:
Colors.black,
                            fontWeight:
FontWeight.bold),
                        ),
                      ],
                    ),
                  ],
                ),
```

```
          ],
        ),
      ),
    ),
    walert(alert, pesan),
    Padding(
      padding: EdgeInsets.all(5),
    ),

    //suhu
    Container(
      decoration: BoxDecoration(
        color: Colors.white,
        boxShadow: [
          BoxShadow(
            color: Colors.grey[350],
            offset: Offset(0.0, 0.0),
            blurRadius: 3.0,
            spreadRadius: 3.0,
          ),
        ],
      ),
      padding: EdgeInsets.all(20),
      child: Container(
        decoration: BoxDecoration(
          color: Colors.white,
          boxShadow: [
            BoxShadow(
              color: Colors.grey[350],
              offset: Offset(0.0, 0.0),
              blurRadius: 2.0,
              spreadRadius: 2.0,
            ),
          ],
          borderRadius:
BorderRadius.circular(
              20) // use instead of
BorderRadius.all(Radius.circular(20)
)
          ),
        // margin: EdgeInsets.all(10),
        padding: EdgeInsets.all(20),
        child: Column(
          mainAxisAlignment:
MainAxisAlignment.center,
          children: [
            Row(
              mainAxisAlignment:
MainAxisAlignment.spaceBetween,
              children: [
                Text(
                  "Tanggal Masuk
Ayam",
                  style: TextStyle(
                    fontFamily:
"Poppins",
                    fontSize: 20,
                    color: Colors.black,
                    fontWeight:
FontWeight.w900),
                ),
                Icon(

Icons.date_range_rounded,
                ),
              ],
            ),
            Row(
              mainAxisAlignment:
MainAxisAlignment.spaceBetween,
              children: [
                Text(
                  "(date)",
                  style: TextStyle(
                    fontFamily:
"Poppins",
                    fontSize: 10,
                    fontStyle:
FontStyle.italic,
                    color: Colors.black,
                    fontWeight:
FontWeight.normal),
                ),
              ],
            ),
            Padding(padding:
EdgeInsets.all(5)),
            Column(
              mainAxisSize:
MainAxisSize.min,
              children: <Widget>[
                Text(

snapshot.data.snapshot.value['tanggal
'],
                  style: TextStyle(
                    fontFamily:
"Poppins",
                    fontSize: 20,
                    color: Colors.black,
                    fontWeight:
FontWeight.bold),
                ),
                Padding(padding:
EdgeInsets.all(5)),
                Text(

"${selectedDate.toLocal()}".split('
```

```
')[0],
                  style: TextStyle(
                    fontFamily:
"Poppins",
                    fontSize: 12,
                    color: Colors.black,
                    fontWeight:
FontWeight.normal),
                ),
                ElevatedButton(
                 onPressed: () => {
                  _selectDate(context),

print(selectedDate.day +
                    selectedDate.month
+
                    selectedDate.year)
                 },
                 child:          Text('Pilih
Tanggal'),
                 style:
ElevatedButton.styleFrom(
                    primary:
Colors.black,
                    padding:
EdgeInsets.symmetric(
                      horizontal:      30,
vertical: 10),
                    textStyle: TextStyle(
                      fontFamily:
"Poppins",
                      fontSize: 20,
                      color:
Colors.yellow[600],
                      fontWeight:
FontWeight.bold)),
                ),
                Padding(padding:
EdgeInsets.all(5)),
              ],
            ),

            ElevatedButton(
              onPressed: () {

dbRef2.child("tanggal").set(

"${selectedDate.toLocal()}".split('
')[0]);
              },
              child: Text("SIMPAN"),
              style:
ElevatedButton.styleFrom(
                primary: Colors.black,
                padding:
EdgeInsets.symmetric(
                  horizontal:          30,
vertical: 10),
                textStyle: TextStyle(
                  fontFamily:
"Poppins",
                  fontSize: 20,
                  color:
Colors.yellow[600],
                  fontWeight:
FontWeight.bold)),
              ),

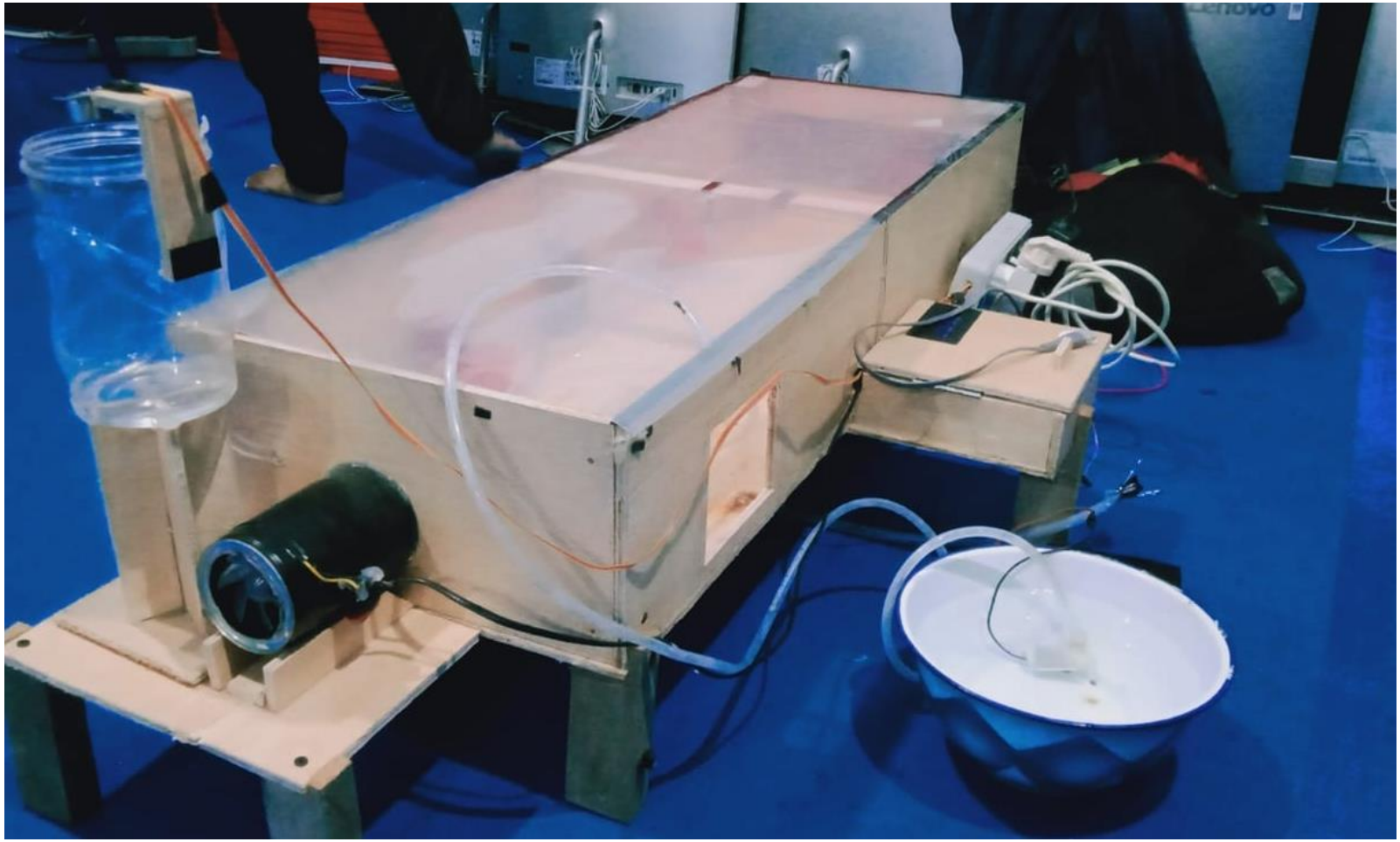
              Padding(padding:
EdgeInsets.only(bottom: 10)),

              //          Padding(padding:
EdgeInsets.only(bottom: 10)),
              // Text(
              //   "Suhu 30",
              //   style: isi,
              // )
            ],
          ),
        ),
      ),
      Padding(
        padding: EdgeInsets.all(5),
      ),
    ],
  ),
 );
} else {
 return Column(
  children: [
   Padding(padding:
EdgeInsets.all(30)),
    Center(
     child: Container(
      decoration: BoxDecoration(
        color: Colors.white,
        //  border:  Border.all(color:
Colors.black),
        boxShadow: [
         BoxShadow(
          color: Colors.grey[350],
          offset: Offset(0.0, 0.0),
          blurRadius: 3.0,
          spreadRadius: 3.0,
         ),
        ],
        borderRadius:
BorderRadius.circular(
```

```
            20) // use instead of BorderRadius.all(Radius.circular(20))
          ),
        child: SizedBox(
          height: 50,
          width: 200,
          child: LiquidLinearProgressIndicator(
            value: 0.5, // Defaults to 0.5.
            valueColor: AlwaysStoppedAnimation(Colors.yellow[
                700]), // Defaults to the current Theme's accentColor.
            backgroundColor: Colors
                .white, // Defaults to the current Theme's backgroundColor.
            borderColor: Colors.black,
            borderWidth: 2.0,
            borderRadius: 20.0,
            direction: Axis
                .horizontal, // The direction the liquid moves (Axis.vertical = bottom to top, Axis.horizontal = left to right). Defaults to Axis.horizontal.
            center: Text(
              "Loading...",
              style: isi2,
            ),
          ),
        ),
      ),
    ],
  );
 }
}

void updateData() {
 dbRef.child('DHT').update({
  'tanggal': '19-10-1999',
  // 'name': 'taufiq hidayat',
 });
}
}
```

Lampiran - 5 Gambar *Prototype* peternakan ayam broiler



Lampiran - 6 Gambar *Prototype* peternakan ayam broiler

