**LISTING PROGRAM**

#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

int pompa1= 16;

int pompa2= 5;

int pompa3= 4;

int sensor =A0;

long int data,data1,data2,data3,data4,data5;

int trigPin = 12;

int echoPin = 14;

//long duration, cm;

long duration, cm,cm2,cm3,cm4,cm5, nilai;

// You should get Auth Token in the Blynk App.

char auth[] = "tKTLBkAC9KhHaCis7g3HbX4FZcv4qKvw";

// SSID and Password WIFI/Hotspot.

char ssid[] = "CPH1701";

char pass[] = "22222222";

BlynkTimer timer;

WidgetLCD lcd2(V1);

WidgetLCD lcd(V0);

void setup(){

 Serial.begin(9600);

 pinMode(sensor, INPUT);

 pinMode(pompa1, OUTPUT);

 pinMode(pompa2, OUTPUT);

 pinMode(pompa3, OUTPUT);

 pinMode(trigPin, OUTPUT);

 pinMode(echoPin, INPUT);

 Blynk.begin(auth, ssid, pass);

 lcd2.clear();

 lcd.clear();

}

void loop(){

 data1=analogRead(sensor);

 data1=data1\*10;

 if(data1>=240){

 data1=240;

 }

 data2=data1/data1;

 data3=data2-data1;

 data4=data3+250;

 ultrasonik();

 Serial.println(cm4);

kondisi();

//==================LEVEL\_AIR==============================

 lcd.clear();

 lcd2.clear();

 lcd.print(0,0, "Level Air=");

 lcd.print(11,0, cm4);

 lcd.print(13,0, "cm");

 lcd2.print(0,0, "Kekeruhan= ");

 lcd2.print(11,0, data4);

 Blynk.run();

 delay(1000);

}

void ultrasonik(){

digitalWrite(trigPin, LOW);

delayMicroseconds(5);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

pinMode(echoPin, INPUT);

duration = pulseIn(echoPin, HIGH);

//cm = (duration/2) / 29.1;

nilai = (duration/2) / 29.1;

if(nilai>20){

 nilai=20;

}

cm=nilai/nilai;

cm2=cm-nilai;

cm3=cm2+10;

cm4=cm3+10;

}

void kondisi(){

 if (cm4<= 4){

 lcd.print(0,1, "Rendah");

 }

 if(cm4>=6 && cm4<=12){

 lcd.print(0,1, "Sedang");

 }

 if(cm4 >= 13){

 lcd.print(0,1, "Tinggi");

 }

//==================KEKERUHAN============================

 if (data4<= 25){

 lcd2.print(0,1, "Jernih");

 }

 if (data4>=26 && data4<=150 ){

 lcd2.print(0,1, "Keruh");

 }

 if (data4>= 151){

 lcd2.print(0,1, "Sangat Keruh");

 }

}