LAMPIRAN

Kode Program

```
//https://www.ardutech.com/kontrol-lampu-wifi-dengan-blynk-dan-arduino/
//https://srituhobby.com/how-to-make-a-wifi-control-car-with-the-new-blynk-app-step-by-step/
#define BLYNK_PRINT Serial
#define BLYNK_TEMPLATE_ID "TMPL6HKA18y9-"
#define BLYNK_TEMPLATE_NAME "Mobil"
#defineBLYNK_AUTH_TOKEN"UVADOaSXYHL7wzKTULVr1PNTrL_w9vqy"
char auth[] = "UVADOaSXYHL7wzKTULVr1PNTrL_w9vqy";
/*
 *
 * #define BLYNK_TEMPLATE_ID "TMPL6vXu_XBEa"
#define BLYNK_TEMPLATE_NAME "mobilku"
#define BLYNK_AUTH_TOKEN "gX7R0r8PD1enbvQTZi_6oo72bPIHtna1"
 */
#include <WiFi.h>
#include <BlynkSimpleEsp32.h>
#include <Servo.h>
Servo servo;
// Jaringan WiFi
char ssid[] = "Mobil";
char pass[] = "12345678";
int pinValue1; //pompa1
int pinValue2; //pompa2
int pinValue3; //servo
int pinValue4; //kanan
int pinValue5; //kiri
int pinValue6;  //maju
int pinValue7;//mundur
int relay1=14;
```

```
int relay2=12;
#define echoPin1 27
#define trigPin1 26
#define echoPin2 25
#define trigPin2 33
#define kananA  19
#define kananB  18
#define kiriA  5
#define kiriB  4
int X = 50;
int Y = 50;
long duration, distance,FrontSensor,LeftSensor;
#define kelembaban_tanah 32
/*
BLYNK_WRITE(V0)
{
  pinValue1 = param.asInt(); // assigning incoming value from pin V1 to a variable
 if (pinValue1==HIGH){
  digitalWrite(relay1,LOW);
  }
  else
  {
 digitalWrite(relay1,HIGH);
  }
 }
BLYNK_WRITE(V7)
{
  pinValue2 = param.asInt(); // assigning incoming value from pin V1 to a variable
 if (pinValue2==HIGH){
  digitalWrite(relay2,LOW);
  }
```

```
  else
  {
 digitalWrite(relay2,HIGH);
  }
 }
*/
BLYNK_WRITE(V8)
{
  pinValue3 = param.asInt(); // assigning incoming value from pin V1 to a variable
 if (pinValue3==HIGH){
 servo.write(25);
  }
  else
  {
 servo.write(90);
  }
 }
 BLYNK_WRITE(V5)//kanan
{
 pinValue4 = param.asInt(); // assigning incoming value from pin V1 to a variable
 // process received value
}
BLYNK_WRITE(V1)//kiri
{
 pinValue5 = param.asInt(); // assigning incoming value from pin V1 to a variable
 // process received value
}
BLYNK_WRITE(V2)//maju
{
 pinValue6 = param.asInt(); // assigning incoming value from pin V1 to a variable
 // process received value
```

```
}
BLYNK_WRITE(V3) //mundur
{
  pinValue7 = param.asInt(); // assigning incoming value from pin V1 to a variable
  // process received value
}
// Get the joystick values
BLYNK_WRITE(V10) {
  X = param.asInt();
}
// Get the joystick values
BLYNK_WRITE(V11) {
  Y = param.asInt();
}
void setup() {
  // put your setup code here, to run once:
Serial.begin (9600);
Blynk.begin(auth, ssid, pass);
servo.attach(13);
//servo.write(0);
pinMode(trigPin1, OUTPUT);
pinMode(echoPin1, INPUT);
pinMode(trigPin2, OUTPUT);
pinMode(echoPin2, INPUT);
pinMode(relay1,OUTPUT);
pinMode(relay2,OUTPUT);
pinMode(kananA,OUTPUT);
pinMode(kananB,OUTPUT);
pinMode(kiriA,OUTPUT);
pinMode(kiriB,OUTPUT);
digitalWrite(relay1,HIGH);
```

```
digitalWrite(relay2,HIGH);
pinMode(kelembaban_tanah, INPUT);
}
void smartcar() {
  if (Y > 70) {
    maju();
    Serial.println("carForward");
  } else if (Y < 30) {
    mundur();
    Serial.println("carBackward");
  } else if (X < 30) {
    kiri();
    Serial.println("carLeft");
  } else if (X > 70) {
    kanan();
    Serial.println("carRight");
  } else if (X < 70 && X > 30 && Y < 70 && Y > 30) {
   mati();
    Serial.println("carstop");
  }
}
void kadar_air(){
  int moisture;
  int nilaiADC = analogRead(kelembaban_tanah);
  moisture= map(nilaiADC,4095,1980,0,100);
  Blynk.virtualWrite(V6,moisture);
  if (moisture  <100 && moisture  >1 ){

  Serial.print ("kadar air = ");
  Serial.println (moisture);
```

```
}
 if (moisture  >1 && moisture  <40){
  Serial.print ("kadar air = ");
  Serial.println (moisture);
  digitalWrite(relay1,LOW);
 digitalWrite(relay2,LOW);
}
 if (moisture  >40){
  Serial.print ("kadar air = ");
  Serial.println (moisture);
  digitalWrite(relay1,HIGH);
  digitalWrite(relay2,HIGH);
}
  else if (moisture  >100 ){
    Serial.print ("kadar air = ");
    Serial.println(" 100.00");
}
  else if (moisture  < 1 ){
    Serial.print ("kadar air = ");
Serial.println(" 00.00");
}
}
void loop() {
  // put your main code here, to run repeatedly:
Blynk.run();
smartcar();
Serial.print("X=");
Serial.print(X);
Serial.print("Y=");
Serial.print(Y);
kadar_air();
```

```
SonarSensor(trigPin1, echoPin1);
FrontSensor = distance;
SonarSensor(trigPin2, echoPin2);
LeftSensor = distance;
 Serial.print("LEFT= ");
Blynk.virtualWrite(V14,LeftSensor);
Serial.print(LeftSensor);
Serial.print(" - ");
Serial.print("FRONT= ");
Serial.print(FrontSensor);
Blynk.virtualWrite(V9,FrontSensor);
Serial.println();
}
void SonarSensor(int trigPin,int echoPin)
{
digitalWrite(trigPin, LOW);
delayMicroseconds(2);
digitalWrite(trigPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin, HIGH);
distance = (duration/2) / 29.1;
}
void maju(){
 digitalWrite(kananA, LOW); //maju
  digitalWrite(kananB, HIGH);
  digitalWrite(kiriA, HIGH);
  digitalWrite(kiriB, LOW);
}
void mundur(){
 digitalWrite(kananA, HIGH); //mundur
```

```
  digitalWrite(kananB, LOW);
  digitalWrite(kiriA, LOW);
  digitalWrite(kiriB, HIGH);
}
void kanan() {
  digitalWrite(kananA, LOW); //kanan
  digitalWrite(kananB, HIGH);
  digitalWrite(kiriA, LOW);
  digitalWrite(kiriB, HIGH);
}
void kiri() {
  digitalWrite(kananA, HIGH); //kiri
  digitalWrite(kananB, LOW);
  digitalWrite(kiriA, HIGH);
  digitalWrite(kiriB, LOW);
}
void mati() {
  digitalWrite(kananA, LOW);//STOP
  digitalWrite(kananB, LOW);
  digitalWrite(kiriA, LOW);
  digitalWrite(kiriB, LOW);
}
```