#define BLYNK\_TEMPLATE\_ID "TMPL3IMXxlbEc"

#define BLYNK\_TEMPLATE\_NAME "Garbage Management"

#define BLYNK\_AUTH\_TOKEN "CmaocZV0XpUO5v4v-Q0camlo3hLtV9qB"

#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include <Servo.h>

char auth[] = BLYNK\_AUTH\_TOKEN;

char ssid[] = "PROJECT";

char pass[] = "12341234";

// Define pins

#define trig D2 // Ultrasonic trigger pin

#define echo D1 // Ultrasonic echo pin

#define gas A0 // Gas sensor input

#define servoPin D3

Servo myServo;

int duration;

int distance;

int state = 0;

void setup() {

Serial.begin(9600);

Blynk.begin(auth, ssid, pass);

pinMode(trig, OUTPUT);

pinMode(echo, INPUT);

pinMode(gas, INPUT);

pinMode(servoPin, OUTPUT);

myServo.attach(servoPin);

myServo.write(180);

}

void loop() {

Blynk.run();

int gasValue = analogRead(gas);

digitalWrite(trig, LOW);

delay(10);

digitalWrite(trig, HIGH);

delay(10);

digitalWrite(trig, LOW);

duration = pulseIn(echo, HIGH);

distance = duration \* 0.030 / 2;

Serial.print("Gas Value: ");

Serial.print(gasValue);

Serial.print(" || ");

Serial.print("Distance: ");

Serial.print(distance);

Serial.println(" cm");

Blynk.virtualWrite(V0, distance);

Blynk.virtualWrite(V1, gasValue);

if (state == 10)

{

if (distance > 0 && distance <= 3) {

for (int i = 180; i >= 0; i--) {

myServo.write(0);

delay(15);

}

delay(1000);

for (int i = 0; i <= 180; i++) {

myServo.write(i);

delay(15);

}

Serial.println("Bin is closed");

Blynk.logEvent("alert", " Bin is closed");

}

else if (gasValue > 90) {

Serial.println("Smell detected!");

myServo.write(0);

Blynk.logEvent("alert", "Smell detected!");

}

else {

myServo.write(180);

}

}

delay(1000);

}

BLYNK\_WRITE(V2) {

if (param.asInt() == 1) {

state = 10;

}

else {

state = 0;

}

}