#include <ESP8266WiFi.h>

#include <FirebaseArduino.h>

#define FIREBASE\_HOST "ultrasonic-4082d.firebaseio.com"

#define FIREBASE\_AUTH "i6PIeWKWLBmPuPT6VHftu8zoTIDeFNLdp83vKpgz"

#define WIFI\_SSID "sonish"

#define WIFI\_PASSWORD "123456789"

int trig=D1;

int Echo=D2;

int bulb[4]={D5,D6,D7,D8};

long duration;

int distance;

void setup() {

Serial.begin(115200);

pinMode(trig,OUTPUT);

pinMode(Echo,INPUT);

pinMode(D5,OUTPUT);

pinMode(D6,OUTPUT);

pinMode(D7,OUTPUT);

pinMode(D8,OUTPUT);

WiFi.begin(WIFI\_SSID, WIFI\_PASSWORD);

Serial.print("connecting");

while(WiFi.status()!=WL\_CONNECTED){

Serial.print(".");

delay(500);

}

Serial.println();

Serial.print("connected: ");

Serial.println(WiFi.localIP());

Firebase.begin(FIREBASE\_HOST, FIREBASE\_AUTH);

Firebase.set("Height",50);

}

void firebasereconnect(){

Serial.println("Trying to reconnect");

Firebase.begin(FIREBASE\_HOST, FIREBASE\_AUTH);

}

int i; int height=50;

int temp=-1;

void loop() {

if (Firebase.failed()) {

Serial.print("setting number failed:");

Serial.println(Firebase.error());

firebasereconnect();

return;

}

int height= Firebase.getInt("Height");

Serial.print("height=");

Serial.println(height);

float arr[4];

percentage(height,arr);

digitalWrite(trig, HIGH);

delayMicroseconds(10);

digitalWrite(trig, LOW);

duration=pulseIn(Echo, HIGH);

distance=duration\*0.034/2;

Serial.print("Distance :");

Serial.println(distance);

if(temp!=distance)

{

for(i=0;i<4;i++)

digitalWrite(bulb[i], LOW);

for(i=0;i<4;i++)

{

Serial.println(arr[i]);

if(distance>arr[i])

digitalWrite(bulb[i], HIGH);

temp=distance;

}

}

delay(1000);

}

void percentage(int a, float b[]){

float p[]={25.0,50.0,75.0,100.0};

for(int i=0;i<4;i++)

b[i]=(p[i]/100)\*a;

}