#include <ESP8266WiFi.h>

#include <FirebaseArduino.h>

#include <Servo.h>

#include <String.h> // To convert char to \*char with Arduino

Servo myservo;

// Set these to run example.

#define FIREBASE\_HOST "project004-81c1c.firebaseio.com"

#define FIREBASE\_AUTH "eFOAHcgm78aENHgCiJ4DpdhzIaAn4XXvPzrHyEv7"

#define WIFI\_SSID "ESP-WIFI"

#define WIFI\_PASSWORD "password"

void sendSMS(char \*number,char \*content){

char atcmgs[]="AT+CMGS=";

char numcommand[50];

char cr[] = "\r";

strcpy(numcommand,atcmgs);

strcat(numcommand,number);

strcat(numcommand,cr);

Serial.print("\r");

delay(1000);

Serial.print("AT+CSCS=\"GSM\"\r"); // set GSM charset

delay(1000);

Serial.print("AT+CMGF=1\r"); // set SMS mode to text

delay(1000);

Serial.print(numcommand);

delay(1000);

Serial.print(content); //The text of the message to be sent

delay(1000);

Serial.write(0x1A); // command for send sms, code for CTRL-Z

delay(1000);

}

char x=0,y=0,val=1,pos=0,f[3],alert[2],mstatus[2],temp[5],mois[5],humi[5],str[10];

char phonenumber[] = "\"7019222189\""; // phone number the sms will be send.

char smscontent[] = "Motor ON.";

void setup() {

Serial.begin(9600);

myservo.attach(D6);

// pinMode(D0,INPUT);

// pinMode(D1,INPUT);

// pinMode(D2,INPUT);

pinMode(D4,OUTPUT);

// connect to wifi.

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

Serial.print("connecting");

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

Serial.print(".");

delay(500);

}

Serial.println();

Serial.print("connected: ");

digitalWrite(D4,0);

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

Firebase.set("temperature",0);

Firebase.set("humidity",0);

Firebase.set("moisture",0);

Firebase.set("intruder",0);

Firebase.set("motor",0);

Firebase.set("feed",0);

sendSMS(phonenumber, "module ready...");

}

void firebasereconnect(){

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

}

void loop() {

// set value

// handle error

if (Firebase.failed()) {

firebasereconnect();

return;

}

if(Serial.available())

{

if(Serial.read()=='<')

{

for(y=0;y<8;y++)

{

str[y]=Serial.read();

}

str[y]='\0';

for(x=0;x<8;x++)

{

if(x==0)

temp[0]=str[x];

if(x==1)

temp[1]=str[x];

if(x==2)

humi[0]=str[x];

if(x==3)

humi[1]=str[x];

if(x==4)

mois[0]=str[x];

if(x==5)

mois[1]=str[x];

if(x==6)

alert[0]=str[x];

if(x==7)

mstatus[0]=str[x];

}

temp[2]=humi[2]=mois[2]=alert[1]=mstatus[1]='\0';

}

Serial.println("----------");

Serial.println(temp);Serial.println(humi);

Serial.println(mois);Serial.println(alert);

Serial.println(mstatus);

Firebase.set("temperature",temp);

Firebase.set("humidity",humi);

Firebase.set("moisture",mois);

Firebase.set("intruder",alert);

Firebase.set("motor",mstatus);

if(mstatus[0]=='1' && val==1)

{

sendSMS(phonenumber, smscontent);

val=0;

}

Firebase.getString("feed").toCharArray(f,sizeof(f));

int f1 = atoi(f);

if(f1==1)

{

Serial.println("feed");

for(pos=0;pos<=180;pos+=1)

{

myservo.write(pos);

delay(15);

}

Firebase.set("feed","0");

delay(5000);

for(pos=180;pos>=0;pos-=1)

{

myservo.write(pos);

delay(15);

}

f1=0;

}

}

}