**CODE**

#include <ESP8266WiFi.h>

#include <Firebase\_ESP\_Client.h>

#include "addons/TokenHelper.h"

#include "addons/RTDBHelper.h"

#define WIFI\_SSID "123456789"

#define WIFI\_PASSWORD "123456789"

#define API\_KEY "AIzaSyCiQNJOSbMfwFhFyfSq3C6jAz9j7RBvYgs"

#define DATABASE\_URL "https://smart-living-squad-default-rtdb.firebaseio.com/"

FirebaseData fbdo;

FirebaseAuth auth;

FirebaseConfig config;

unsigned long sendDataPrevMillis = 0;

bool signupOK = false;

int r1pin = D1;

int r2pin = D2;

int r3pin = D3;

int pbpin = D5;

int ldrpin = D6;

String intValue;

void setup(){

pinMode(r1pin, OUTPUT);

pinMode(r2pin, OUTPUT);

pinMode(r3pin, OUTPUT);

pinMode(pbpin, INPUT);

pinMode(ldrpin, INPUT);

Serial.begin(115200);

Serial.println();

String thisBoard= ARDUINO\_BOARD;

Serial.println(thisBoard);

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

Serial.print("Connecting to Wi-Fi");

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

Serial.print(".");

delay(300);

}

Serial.println();

Serial.print("Connected with IP: ");

Serial.println(WiFi.localIP());

Serial.println();

config.api\_key = API\_KEY;

config.database\_url = DATABASE\_URL;

if (Firebase.signUp(&config, &auth, "", "")){

Serial.println("Firebase Auth successful");

signupOK = true;

}

else{

Serial.printf("Firebase Auth failed: %s\n", config.signer.signupError.message.c\_str());

}

config.token\_status\_callback = tokenStatusCallback; // see addons/TokenHelper.h

Firebase.begin(&config, &auth);

Firebase.reconnectWiFi(true);

}

void loop(){

int pb = digitalRead(pbpin);

int ldr = digitalRead(ldrpin);

// Firebase Data Sending

if (Firebase.ready() && signupOK && (millis() - sendDataPrevMillis > 1000 || sendDataPrevMillis == 0)){

sendDataPrevMillis = millis();

if (Firebase.RTDB.setInt(&fbdo, "mainbucket/button", pb)){

Serial.println("PATH: " + fbdo.dataPath());

Serial.println("TYPE: " + fbdo.dataType());

}

else {

Serial.println("Failed to send temperature data. Reason: " + fbdo.errorReason());

}

if (Firebase.RTDB.setInt(&fbdo, "mainbucket/ldr", ldr)){

Serial.println("PATH: " + fbdo.dataPath());

Serial.println("TYPE: " + fbdo.dataType());

}

else {

Serial.println("Failed to send humidity data. Reason: " + fbdo.errorReason());

}

}

// LED Control

if (Firebase.ready() && signupOK)

{

if (Firebase.RTDB.getString(&fbdo, "/mainbucket/bulb"))

{

intValue = fbdo.stringData();

String mySubString = intValue.substring(2, 3);

Serial.println(intValue);

Serial.println(mySubString);

if (mySubString == "0")

{

digitalWrite(r1pin, LOW);

Serial.println("LED OFF");

delay(100);

}

else if (mySubString == "1")

{

digitalWrite(r1pin, HIGH);

Serial.println("LED ON");

delay(100);

}

else if (mySubString == "2")

{

digitalWrite(r2pin, LOW);

Serial.println("FAN OFF");

delay(100);

}

else if (mySubString == "3")

{

digitalWrite(r2pin, HIGH);

Serial.println("FAN ON");

delay(100);

}

else if (mySubString == "4")

{

digitalWrite(r3pin, LOW);

Serial.println("DOORLOCK OFF");

delay(100);

}

else if (mySubString == "5")

{

digitalWrite(r3pin, HIGH);

Serial.println("DOORLOCK ON");

delay(100);

}

delay(100);

}

else {

Serial.println("Firebase error: " + fbdo.errorReason());

}

delay(100);

}

}v