#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include <ESP8266mDNS.h> // For OTA with ESP8266

#include <WiFiUdp.h> // For OTA

#include <ArduinoOTA.h> // For OTA

BlynkTimer timer;

void checkPhysicalButton();

int relay0State = HIGH;

int pushButton0State = HIGH;

int relay1State = HIGH;

int pushButton1State = HIGH;

int relay2State = HIGH;

int pushButton2State = HIGH;

int relay3State = HIGH;

int pushButton3State = HIGH;

#define AUTH "SnIEqW9KWkQRbaWEtkyBoXcFO1mR2qs8" // You should get Auth Token in the Blynk App.

#define WIFI\_SSID "realme C25" //Enter Wifi Name

#define WIFI\_PASS "ayuayuyu" //Enter wifi Password

#define SERVER "blynk-cloud.com " // Comment-out if use Blynk hosted cloud service

#define PORT 8442

#define PUSH\_BUTTON\_0 5 //D1

#define PUSH\_BUTTON\_1 4 //D2

#define PUSH\_BUTTON\_2 0 //D3

#define PUSH\_BUTTON\_3 15 //D8

#define RELAY\_PIN\_0 16 //D0

#define RELAY\_PIN\_1 14 //D5

#define RELAY\_PIN\_2 12 //D6

#define RELAY\_PIN\_3 13 //D7

#define LED\_WIFI 2 //D4

#define VPIN\_BUTTON\_0 V12

#define VPIN\_BUTTON\_1 V13

#define VPIN\_BUTTON\_2 V14

#define VPIN\_BUTTON\_3 V15

#define OTA\_HOSTNAME "SwitchIoT 4CH"

BLYNK\_CONNECTED() {

// Request the latest state from the server

Blynk.syncVirtual(VPIN\_BUTTON\_0);

Blynk.syncVirtual(VPIN\_BUTTON\_1);

Blynk.syncVirtual(VPIN\_BUTTON\_2);

Blynk.syncVirtual(VPIN\_BUTTON\_3);

// Alternatively, you could override server state using:

// Blynk.virtualWrite(VPIN\_BUTTON\_0, relay0State);

// Blynk.virtualWrite(VPIN\_BUTTON\_1, relay1State);

// Blynk.virtualWrite(VPIN\_BUTTON\_2, relay2State);

// Blynk.virtualWrite(VPIN\_BUTTON\_3, relay3State);

}

// When App button is pushed - switch the state

BLYNK\_WRITE(VPIN\_BUTTON\_0) {

relay0State = param.asInt();

digitalWrite(RELAY\_PIN\_0, relay0State);

}

BLYNK\_WRITE(VPIN\_BUTTON\_1) {

relay1State = param.asInt();

digitalWrite(RELAY\_PIN\_1, relay1State);

}

BLYNK\_WRITE(VPIN\_BUTTON\_2) {

relay2State = param.asInt();

digitalWrite(RELAY\_PIN\_2, relay2State);

}

BLYNK\_WRITE(VPIN\_BUTTON\_3) {

relay3State = param.asInt();

digitalWrite(RELAY\_PIN\_3, relay3State);

}

void checkPhysicalButton() {

if (digitalRead(PUSH\_BUTTON\_0) == LOW) {

// pushButton0State is used to avoid sequential toggles

if (pushButton0State != LOW) {

// Toggle Relay state

relay0State = !relay0State;

digitalWrite(RELAY\_PIN\_0, relay0State);

// Update Button Widget

Blynk.virtualWrite(VPIN\_BUTTON\_0, relay0State);

}

pushButton0State = LOW;

} else {

pushButton0State = HIGH;

}

if (digitalRead(PUSH\_BUTTON\_1) == LOW) {

// pushButton1State is used to avoid sequential toggles

if (pushButton1State != LOW) {

// Toggle Relay state

relay1State = !relay1State;

digitalWrite(RELAY\_PIN\_1, relay1State);

// Update Button Widget

Blynk.virtualWrite(VPIN\_BUTTON\_1, relay1State);

}

pushButton1State = LOW;

} else {

pushButton1State = HIGH;

}

if (digitalRead(PUSH\_BUTTON\_2) == LOW) {

// pushButton2State is used to avoid sequential toggles

if (pushButton2State != LOW) {

// Toggle Relay state

relay2State = !relay2State;

digitalWrite(RELAY\_PIN\_2, relay2State);

// Update Button Widget

Blynk.virtualWrite(VPIN\_BUTTON\_2, relay2State);

}

pushButton2State = LOW;

} else {

pushButton2State = HIGH;

}

if (digitalRead(PUSH\_BUTTON\_3) == HIGH) {

// pushButton3State is used to avoid sequential toggles

if (pushButton3State != LOW) {

// Toggle Relay state

relay3State = !relay3State;

digitalWrite(RELAY\_PIN\_3, relay3State);

// Update Button Widget

Blynk.virtualWrite(VPIN\_BUTTON\_3, relay3State);

}

pushButton3State = LOW;

} else {

pushButton3State = HIGH;

}

}

void setup() {

Serial.begin(115200);

Blynk.begin(AUTH, WIFI\_SSID, WIFI\_PASS,"blynk-cloud.com", 8442);

ArduinoOTA.setHostname(OTA\_HOSTNAME); // For OTA - Use your own device identifying name

ArduinoOTA.begin(); // For OTA

pinMode(RELAY\_PIN\_0, OUTPUT);

pinMode(PUSH\_BUTTON\_0, INPUT\_PULLUP);

digitalWrite(RELAY\_PIN\_0, relay0State);

pinMode(RELAY\_PIN\_1, OUTPUT);

pinMode(PUSH\_BUTTON\_1, INPUT\_PULLUP);

digitalWrite(RELAY\_PIN\_1, relay1State);

pinMode(RELAY\_PIN\_2, OUTPUT);

pinMode(PUSH\_BUTTON\_2, INPUT\_PULLUP);

digitalWrite(RELAY\_PIN\_2, relay2State);

pinMode(RELAY\_PIN\_3, OUTPUT);

pinMode(PUSH\_BUTTON\_3, INPUT);

digitalWrite(RELAY\_PIN\_3, relay3State);

pinMode(LED\_WIFI, OUTPUT);

// Setup a function to be called every 100 ms

timer.setInterval(500L, checkPhysicalButton);

}

void loop() {

if (Blynk.connected()) digitalWrite(LED\_WIFI, LOW);

else digitalWrite(LED\_WIFI, HIGH);

Blynk.run();

ArduinoOTA.handle(); // For OTA

timer.run();

}