#include "BluetoothSerial.h"

#define led 23

#define ldr 15

#define blue 5

#define green 18

#define red 19

unsigned long previousMillis = 0;

const long interval = 5000;

int lumens = 0, brilhoLED = 0;

bool ativoLED = false;

#if !defined(CONFIG\_BT\_ENABLED) || !defined(CONFIG\_BLUEDROID\_ENABLED)

#error Bluetooth is not enabled! Please run `make menuconfig` to and enable it

#endif

BluetoothSerial SerialBT;

void setup() {

  pinMode(ldr, INPUT);     // LDR

  pinMode(led, OUTPUT);    // LED PWM

  pinMode(blue, OUTPUT);   // LED AZUL

  pinMode(red, OUTPUT);    // LED VERMELHO

  pinMode(green, OUTPUT);  // LED VERDE

  digitalWrite(blue, LOW);

  digitalWrite(red, LOW);

  digitalWrite(green, LOW);

  analogWrite(led, 0);

  Serial.begin(115200);

  SerialBT.begin("Casa Inteligente");  //Bluetooth device name

  Serial.println("The device started, now you can pair it with bluetooth!");

}

void loop() {

  unsigned long currentMillis = millis();

  /// LDR

  lumens = analogRead(ldr);

  /// LED PWM

  brilhoLED = map(lumens, 200, 1650, 254, 0);

  if (brilhoLED < 60) brilhoLED = 0;

  if (brilhoLED > 200) brilhoLED = 255;

  if(ativoLED){

    analogWrite(led, brilhoLED);

    String envio = "{" + String(lumens) + "}";

    if (currentMillis - previousMillis >= interval){

      previousMillis = currentMillis;

      SerialBT.println(envio);

    }

  }else{

    analogWrite(led, 0);

  }

  if (SerialBT.available()) {

    char comandoRecebido = SerialBT.read();

    delay(50);

    Serial.print("COMANDO RECEBIDO: ");

    Serial.println(comandoRecebido);

    switch (comandoRecebido) {

      case 'B':

        digitalWrite(blue, HIGH);

        break;

      case 'b':

        digitalWrite(blue, LOW);

        break;

      case 'R':

        digitalWrite(red, HIGH);

        break;

      case 'r':

        digitalWrite(red, LOW);

        break;

      case 'G':

        digitalWrite(green, HIGH);

        break;

      case 'g':

        digitalWrite(green, LOW);

        break;

      case 'L':

        ativoLED = true;

        break;

      case 'l':

        ativoLED = false;

        break;

      case 'O':

        digitalWrite(blue, LOW);

        digitalWrite(red, LOW);

        digitalWrite(green, LOW);

        delay(20);

        break;

    }

  }

}