```
#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);
```

```
46      if (brilhoLED < 60) brilhoLED = 0;
47      if (brilhoLED > 200) brilhoLED = 255;
48
49      if(ativoLED){
50       analogWrite(led, brilhoLED);
51       String envio = "{" + String(lumens) + "}";
52
53       if (currentMillis - previousMillis >= interval){
54        previousMillis = currentMillis;
55        SerialBT.println(envio);
56       }
57
58      }else{
59       analogWrite(led, 0);
60      }
61
62      if (SerialBT.available()) {
63       char comandoRecebido = SerialBT.read();
64       delay(50);
65       Serial.print("COMANDO RECEBIDO: ");
66       Serial.println(comandoRecebido);
67
68       switch (comandoRecebido) {
69        case 'B':
70         digitalWrite(blue, HIGH);
71         break;
72        case 'b':
73         digitalWrite(blue, LOW);
74         break;
75
76        case 'R':
77         digitalWrite(red, HIGH);
78         break;
79        case 'r':
80         digitalWrite(red, LOW);
81         break;
82
83        case 'G':
84         digitalWrite(green, HIGH);
85         break;
86        case 'g':
87         digitalWrite(green, LOW);
88         break;
89
90        case 'L':
```

```
91            ativoLED = true;
92            break;
93          case 'l':
94            ativoLED = false;
95            break;
96
97          case 'O':
98            digitalWrite(blue, LOW);
99            digitalWrite(red, LOW);
100           digitalWrite(green, LOW);
101           delay(20);
102           break;
103       }
104     }
105
106   }
107
108
```