

```
#include <Arduino.h>
#include <ESP8266WiFi.h>
#include <ESP8266WebServer.h>
#include <Hash.h>
#include <DS3231.h>
#include <Wire.h>
#include <EEPROM.h>
#include <Adafruit_PWMServoDriver.h>
```

```
Adafruit_PWMServoDriver pwm = Adafruit_PWMServoDriver();
//WebSocketsServer webSocket = WebSocketsServer(81);
ESP8266WebServer server(80);
int PWMfrequency = 1000;
```

```
uint16_t g_gpiooutputmask = 0;
const char *ssid = "LangKe";
const char *password = "12345678";
const char* host = "LangKe";
```

```
int EEPROM_begin = 4630;
DS3231 Clock;
```

```
String useTask =
"#000000020000000000000000000000002000#0620003000000000000000001002000#0850008
000000003012014037000#1000014000003009028021054009#1040026000022022
041032062064#1230047000043047055057068083#1430062000057062067068073
093#1630073000058073073073077096#1820071000056071071071071086#19400
59000024059059059059061#2030037000008037037037046035#21300170000040
17017017033017#2200008000004008008008016008#225000300000000030030030
03003";;
```

```
bool Century = false;
bool h12;
bool PM;
int second, minute, hh, temperature, dow;
```

```
uint8_t ledpin[8] = {14, 15, 6, 7, 8, 9, 10, 11};
int cu = 0;
```

```
int selectday = 0;
void ReadDS3231(void)
{
    temperature = Clock.getTemperature();
    minute = Clock.getMinute();
    hh = Clock.getHour(h12, PM);
    dow = Clock.getDoW();
}
/**
*/
void SetClock(int h, int m) {
```

```

    Clock.setSecond(50); //Set the second
    Clock.setMinute(m); //Set the minute
    Clock.setHour(h); //Set the hour
}
/**
*/
void SetClock(int y, int mn, int d, int h, int m, int w) {
    Clock.setDate(d); //Set the date of the month
    Clock.setMonth(mn); //Set the month of the year
    Clock.setYear(y);
    Clock.setSecond(50); //Set the second
    Clock.setMinute(m); //Set the minute
    Clock.setHour(h); //Set the hour
    Clock.setDoW(1);
}
String tasktime(void) {
    String ttime = "";

    if (hh < 10) {
        ttime = "0";
        ttime += hh;
    } else {
        ttime += hh;
    }
    if (minute < 10) {
        ttime += "0";
        ttime += minute;
    } else {
        ttime += minute;
    }
    return ttime;
}
/**
    执行灯光的设置
*/
void doledtask(String Ptaskp) {
    String ttime = "#" + tasktime();
    int l = Ptaskp.indexOf(ttime);
    if (l > -1) {
        for (int t = 0; t < 8; t++) {
            String lvalue = Ptaskp.substring(l + 5 + t * 3, l + 5 + t * 3 + 3);
            int light = lvalue.toInt();
            setPWM(ledpin[t], (unsigned short) (map(light, 0, 100, 0, 4095)));
        }
    }
}
void setPWM(uint8_t pwmnum, uint16_t pwmval) {
#ifdef ESP8266
    yield();
#endif
}

```

```

    pwm.setPWM(pwmnum, 0, pwmval );
}
void handleRoot() {
    server.send(200, "text/html", "<h1>You are connected</h1>");
}
void setup() {
    // put your setup code here, to run once:
    Serial.begin(115200);
    Serial.print("\n");
    WiFi.softAP(ssid, password);
    IPAddress myIP = WiFi.softAPIP();
    Serial.print("AP IP address: ");
    Serial.println(myIP);
    server.on("/", handleRoot);
    server.begin();
    Serial.println("HTTP server started");
    pwm.begin();
    pwm.setPWMFreq(PWMfrequency);
    Wire.begin();
}

void loop() {
    server.handleClient();
    static unsigned long Timer1000ms = millis();    //every 500ms update the
    knob(potentiometer) and the joystick
    if (millis() - Timer1000ms >= 1000) {
        Timer1000ms = millis();
        cu++;
        if (cu > 60 ) {
            cu = 0;
            ReadDS3231();
            doledtask(useTask);
        }
    }
}
}

```