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SOURCE CODE: https://github.com/glenangelo/UTS_IoT-_trafficLightProject.git

```
#define BLYNK_TEMPLATE_ID "TMPL6JNQh9KcX"
#define BLYNK_TEMPLATE_NAME "ESP8266"
#define BLYNK_AUTH_TOKEN "V0lHH6EPST6d_ZRjZou060zQ1JbUcjuv"

/* Comment this out to disable prints and save space */
#define BLYNK_PRINT Serial

#define BLYNK_GREEN "#23C48E"
#define BLYNK_RED "#D3435C"
#define BLYNK_YELLOW "#FFBF00"
#define BLYNK_WHITE "#FFFFFF"

#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>

// Your WiFi credentials.
// Set password to "" for open networks.
char ssid[] = "1234";
char pass[] = "11223344";

WidgetLCD lcd(V5);

#include "DHT.h"

#define DHTPIN 4 // what pin we're connected to

// Uncomment whatever type you're using!
#define DHTTYPE DHT11 // DHT 11

#define PIN_RED D9
#define PIN_GREEN D10
#define PIN_BLUE D11
#define buttonPin D2
#define buzzerPin D5
#define BLYNK_GREEN "#00FF00"
#define BLYNK_RED "#FF0000"
```

```

int redTime;
int yellowTime;
int greenTime;

int buttonState = 0;
int foul = 0;

WidgetLED led(V7);

DHT dht(DHTPIN, DHTTYPE);

BLYNK_WRITE(V1)
{
    int pinValue = param.asInt(); // assigning incoming value from pin V1 to a
variable
    redTime = pinValue ;
}
BLYNK_WRITE(V2)
{
    int pinValue = param.asInt(); // assigning incoming value from pin V2 to a
variable
    yellowTime = pinValue ;
}
BLYNK_WRITE(V3)
{
    int pinValue = param.asInt(); // assigning incoming value from pin V3 to a
variable
    greenTime = pinValue ;
}
BLYNK_WRITE(V8)
{
    int pinValue = param.asInt(); // assigning incoming value from pin V8 to a
variable
    if (pinValue ==255){
        digitalWrite(buzzerPin, LOW);
        foul++; // Counting foul
    }
}

void setup() {
    Serial.begin(115200);

    Blynk.begin(BLYNK_AUTH_TOKEN, ssid, pass);
    pinMode(PIN_RED, OUTPUT);
}

```

```

pinMode(PIN_GREEN, OUTPUT);
pinMode(PIN_BLUE, OUTPUT);
pinMode(buttonPin, INPUT);
pinMode(buzzerPin, OUTPUT);
dht.begin();
}

void loop() {
  Blynk.run();

  float h = dht.readHumidity();
  float t = dht.readTemperature();

  lcd.print(1,0, "Smart TFlight");

  Blynk.virtualWrite(V4,"Suhu :", t,"C");
  Blynk.virtualWrite(V0,"Humidity :", h);

  Serial.print("Suhu: ");
  Serial.print(t);
  Serial.println();

  led.on();
  led.setColor(BLYNK_GREEN);
  setColor(255, 0, 0); // Red Color
  Blynk.virtualWrite(V9,"MERAH");
  for (int i = redTime; i >= 0; i--) {
    if (digitalRead(buttonPin) == LOW) { // Check if the button is pressed
      digitalWrite(buzzerPin, HIGH);
      led.on();
      led.setColor(BLYNK_RED);
    }

    if (i<10){
      lcd.print(1,1, "R Counter: 0"+String(i));
    } else{
      lcd.print(1,1, "R Counter: "+String(i));}

    if (digitalRead(buzzerPin)== LOW){
      led.setColor(BLYNK_GREEN);
    }
    Blynk.virtualWrite(V6,"Foul :", foul);
    delay(1000);
  }
}

```

```
setColor(255, 0, 120); // Yellow Color
Blynk.virtualWrite(V9,"KUNING");
for (int i = yellowTime; i >= 0; i--) {
    if (i<10){
        lcd.print(1,1, "Y Counter: 0"+String(i));
    } else{
        lcd.print(1,1, "Y Counter: "+String(i));}
    delay(1000);
}

setColor(0, 0, 255); // Green Color
Blynk.virtualWrite(V9,"HIJAU");
for (int i = greenTime; i >= 0; i--) {
    if (i<10){
        lcd.print(1,1, "G Counter: 0"+String(i));
    } else{
        lcd.print(1,1, "G Counter: "+String(i));}
    delay(1000);
}
}

void setColor(int redValue, int greenValue, int blueValue) {
    analogWrite(PIN_RED, redValue);
    analogWrite(PIN_GREEN, greenValue);
    analogWrite(PIN_BLUE, blueValue);
}
```

21:15

4G+ VoLTE 65%

✕ ESP8266No1

⋮

Suhu :32.800C

Humidity :76.000

Smart TFlight
R Counter: 07

Timer Red

25^{sec}



Timer Yellow

2^{sec}



Timer Green

23^{sec}



MERAH

Foul :3



CHECK



21:15

4G+ VoLTE 65%

✕ ESP8266No1

⋮

Suhu :32.800C

Humidity :76.000

Smart TFlight
R Counter: 07

Timer Red

25^{sec}



Timer Yellow

2^{sec}



Timer Green

23^{sec}



MERAH

Foul :3



CHECK

