**PUBLIC TRANSPORT OPTIMIZATION**

**#define BLYNK\_TEMPLATE\_ID "TMPL26V4fGv5q"**

**#define BLYNK\_TEMPLATE\_NAME "Test"**

**#define BLYNK\_AUTH\_TOKEN "XEHxNF\_Ur1Nt2p7wB5B20dNI1ZUwj34P"**

**#include <WiFi.h>**

**#include <WiFiClient.h>**

**#include <BlynkSimpleEsp32.h>**

**int duration1 = 0;**

**int distance1 = 0;**

**int duration2 = 0;**

**int distance2 = 0;**

**int dis1 = 0;**

**int dis2 = 0;**

**int dis\_new1 = 0;**

**int dis\_new2 = 0;**

**int entered = 0;**

**int left = 0;**

**int inside = 0;**

**#define LED 2**

**#define PIN\_TRIG1 15**

**#define PIN\_ECHO1 14**

**#define PIN\_TRIG2 13**

**#define PIN\_ECHO2 12**

**BlynkTimer timer;**

**char auth[] = BLYNK\_AUTH\_TOKEN;**

**char ssid[] = "Wokwi-GUEST"; // your network SSID (name)**

**char pass[] = "";**

**#define BLYNK\_PRINT Serial**

**long get\_distance1() {**

**// Start a new measurement:**

**digitalWrite(PIN\_TRIG1, HIGH);**

**delayMicroseconds(10);**

**digitalWrite(PIN\_TRIG1, LOW);**

**// Read the result:**

**duration1 = pulseIn(PIN\_ECHO1, HIGH);**

**distance1 = duration1 / 58;**

**return distance1;**

**}**

**long get\_distance2() {**

**// Start a new measurement:**

**digitalWrite(PIN\_TRIG2, HIGH);**

**delayMicroseconds(10);**

**digitalWrite(PIN\_TRIG2, LOW);**

**// Read the result:**

**duration2 = pulseIn(PIN\_ECHO2, HIGH);**

**distance2 = duration2 / 58;**

**return distance2;**

**}**

**void myTimer() {**

**Serial.println("100");**

**dis\_new1 = get\_distance1();**

**dis\_new2 = get\_distance2();**

**if (dis1 != dis\_new1 || dis2 != dis\_new2){**

**Serial.println("200");**

**if (dis1 < dis2){**

**Serial.println("Enter loop");**

**entered = entered + 1;**

**inside = inside + 1;**

**digitalWrite(LED, HIGH);**

**Blynk.virtualWrite(V0, entered);**

**Blynk.virtualWrite(V2, inside);**

**dis1 = dis\_new1;**

**delay(1000);**

**digitalWrite(LED, LOW);**

**}**

**if (dis1 > dis2){**

**Serial.println("Leave loop");**

**left = left + 1;**

**inside = inside - 1;**

**Blynk.virtualWrite(V1, left);**

**Blynk.virtualWrite(V2, inside);**

**dis2 = dis\_new2;**

**delay(1000);**

**}**

**}**

**}**

**void setup() {**

**Serial.begin(115200);**

**pinMode(LED, OUTPUT);**

**pinMode(PIN\_TRIG1, OUTPUT);**

**pinMode(PIN\_ECHO1, INPUT);**

**pinMode(PIN\_TRIG2, OUTPUT);**

**pinMode(PIN\_ECHO2, INPUT);**

**Blynk.begin(auth, ssid, pass, "blynk.cloud", 8080);**

**timer.setInterval(1000L, myTimer);**

**}**

**void loop() {**

**Blynk.run();**

**timer.run();**

**}**