#define BLYNK\_TEMPLATE\_ID "TMPL3NHBhSezZ"

#define BLYNK\_TEMPLATE\_NAME "Eye Blink IoT"

#define BLYNK\_AUTH\_TOKEN "CIK0AgmBa1YCH8I4AfIjbXWLSGMyRAun"

/\* Comment this out to disable prints and save space \*/

#define BLYNK\_PRINT Serial

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

// Your WiFi credentials.

// Set password to "" for open networks.

char ssid[] = "embedded";

char pass[] = "embedded123";

int Speed=D2;

//int Ir\_pin = D5;

int alcohol\_pin = D6;

int ignition\_relay = D7;

int ignition\_pin = D8;

int Count=0;

boolean alcohol = false;

unsigned long oldtime;

unsigned long oldtime1;

int buzzer=D5;

#define SENSOR1 D1

String eyeBlink = "Nil!";

String alcohol\_status = "NIL!";

String ignition = "Ignition Off";

String engine = "Stopped";

void ICACHE\_RAM\_ATTR pulseCounter1()

{

// pulseCount1++

Serial.println("Pulse");

// oldtime=millis();

eyeBlink = "Driver Active!";

}

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

Blynk.begin(BLYNK\_AUTH\_TOKEN, ssid, pass);

delay(2000);

pinMode(SENSOR1,INPUT\_PULLUP);

pinMode(alcohol\_pin,INPUT);

pinMode(ignition\_relay,OUTPUT);

pinMode(buzzer,OUTPUT);

pinMode(ignition\_pin,INPUT);

digitalWrite(ignition\_relay,LOW);

pinMode(Speed,OUTPUT);

digitalWrite(buzzer,LOW);

delay(1000);

digitalWrite(buzzer,HIGH);

delay(1000);

digitalWrite(buzzer,LOW);

delay(1000);

digitalWrite(buzzer,HIGH);

delay(2000);

attachInterrupt(digitalPinToInterrupt(SENSOR1), pulseCounter1, FALLING);

}

void loop() {

// put your main code here, to run repeatedly:

Blynk.run();

int ignition\_val = digitalRead(ignition\_pin);

int SENSOR1\_val = digitalRead(SENSOR1);

Serial.print("Sensor\_val= ");

Serial.print(SENSOR1\_val);

Serial.print(" , ");

Serial.print("ignition\_val= ");

Serial.println(ignition\_val);

//int Ir\_val = digitalRead(Ir\_pin);

int alcohol\_val = digitalRead(alcohol\_pin);

if(SENSOR1\_val==LOW)

{

oldtime=millis();

eyeBlink = "Driver Active!";

}

//if(Ir\_val==LOW)

//{

// if(Count==0)

// {

// oldtime=millis();

// }

// Count=1;

//

//

//}

//else{

// Count=0;

// oldtime=millis();

//}

// Serial.print("Ir\_val= ");

// Serial.print(Ir\_val);

Serial.print(" alcohol\_pin= ");

Serial.println(alcohol\_val);

if(ignition\_val==LOW)

{

ignition = "Ignition Off";

analogWrite(Speed,0);

digitalWrite(ignition\_relay,LOW);

digitalWrite(buzzer,HIGH);

engine = "Ignition OFF";

delay(100);

}

else{

ignition = "Ignition ON";

if(alcohol\_val==LOW)

{

digitalWrite(ignition\_relay,LOW);

delay(100);

alcohol = true;

alcohol\_status = "Alcohol Detected!";

analogWrite(Speed,0);

Blynk.logEvent("gas\_alert","Alcohol Detected! ");

}

else{

alcohol = false;

//alcohol = "Normal!";

}

if (((millis()-oldtime)>5000) && ((millis()-oldtime)<10000))

{

digitalWrite(buzzer,LOW);

delay(300);

digitalWrite(buzzer,HIGH);

delay(300);

analogWrite(Speed,100);

}

if ((millis()-oldtime)>10000)

{

digitalWrite(ignition\_relay,LOW);

digitalWrite(buzzer,LOW);

analogWrite(Speed,0);

Blynk.logEvent("eye\_alert","Driver slept! ");

engine = "Stopped";

eyeBlink = "Driver slept";

delay(100);

}

else{

if(alcohol == false)

{

alcohol\_status = "No alcohol";

//digitalWrite(ignition\_relay,HIGH);

digitalWrite(buzzer,HIGH);

digitalWrite(ignition\_relay,HIGH);

engine = "Running";

analogWrite(Speed,250);

delay(100);

}

}

//Serial.println();

}

if((millis()-oldtime1)>1000)

{ // Send the command to get temperatures

Blynk.virtualWrite(V0,alcohol\_status);

Blynk.virtualWrite(V1,eyeBlink);

Blynk.virtualWrite(V2,engine);

Blynk.virtualWrite(V3,ignition);

oldtime1=millis();

}

}