**Project Development Phase**

**Sprint-4**

| Date | 23 October 2022 |
| --- | --- |
| Team ID | PNT2022TMID54096 |
| Project Name | Industry Specific-Intelligent Fire Management System |
| Maximum Marks | 2 |

#include<SoftwareSerial.h>

#include<TinyGPS.h>

SoftwareSerial gsm(7,8);

#define BLYNK\_TEMPLATE\_ID "TMPL-uhc59\_T"

#define BLYNK\_DEVICE\_NAME "Fire alert"

#define BLYNK\_AUTH\_TOKEN "jkfkhu5fzDC9\_PBdtssloT9OmXq3THwb"

#define BLYNK\_FIRMWARE\_VERSION "0.1.0"

#define BLYNK\_PRINT Serial

//#define BLYNK\_DEBUG

#define APP\_DEBUG

#include <ESP8266WiFi.h>

#include <BlynkSimpleEsp8266.h>

#include "DHT.h"

#define DHTPIN 5

#define DHTTYPE DHT22

DHT dht(DHTPIN, DHTTYPE);

char auth[]=BLYNK\_AUTH\_TOKEN;

char ssid[]="OPPO A52";

char pass[]="6380604277";

int Gas=A0;

int Flame=4;

int buzz=2;

int redLight=3;

int greenLight=4;

float sensorvalue;

int flamevalue;

void setup() {

pinMode(Gas, INPUT);

pinMode(Flame, INPUT);

pinMode(buzz,OUTPUT);

pinMode(redLight,OUTPUT);

pinMode(greenLight,OUTPUT);

Serial.begin(115200);

Blynk.begin(auth,ssid,pass);

dht.begin();

gsm.begin(9600);

}

void loop() {

sensorvalue = analogRead(Gas);

flamevalue= digitalRead(Flame);

Blynk.run();

Blynk.virtualWrite(V0,sensorvalue);

Blynk.virtualWrite(V1,!(flamevalue));

Serial.print("Gas value:");

Serial.println(sensorvalue);

Serial.print("flame state:");

Serial.println(!(flamevalue));

float h = dht.readHumidity();

float t = dht.readTemperature();

if (isnan(h) || isnan(t)) {

Serial.println("Failed to read from DHT sensor!");

return;

}

Serial.print("Humidity: ");

Serial.print(h);

Serial.print(" %\t");

Serial.print("Temperature: ");

Serial.print(t);

if(flamevalue==0){

tone(buzz,1000,200);

digitalWrite(redLight,HIGH);

digitalWrite(greenLight,LOW);

gsm.println("AT+CMGF=1\r");

delay(1000);

gsm.print("AT+CSMP=17,167,0,0\r");

delay(1000);

gsm.println("AT+CMGS=\"+916380604277\"\r");//replace x by your number

delay(1000);

gsm.write("Fire alert\n");

delay(100);

gsm.write("location:Latitude:13.0663,Longitude:80.1112 currentlocation:http://maps.google.com/maps?&z=15&mrt=yp&t=k&q=13.0663,80.1112");

delay(100);

gsm.println((char)26);

delay(1000);

}

else{

noTone(buzz);

digitalWrite(redLight,LOW);

digitalWrite(greenLight,HIGH);

}

if(sensorvalue>500){

tone(buzz,1000,200);

digitalWrite(redLight,HIGH);

digitalWrite(greenLight,LOW);

gsm.println("AT+CMGF=1\r");

delay(1000);

gsm.print("AT+CSMP=17,167,0,0\r");

delay(1000);

gsm.println("AT+CMGS=\"+916380604277\"\r");//replace x by your number

delay(1000);

gsm.write("Gas has Leakead\n");

delay(100);

gsm.write("location:Latitude:13.0663,Longitude:80.1112 currentlocation:http://maps.google.com/maps?&z=15&mrt=yp&t=k&q=13.0663,80.1112");

delay(100);

gsm.println((char)26);

delay(1000);

}

else{

noTone(buzz);

digitalWrite(redLight,LOW);

digitalWrite(greenLight,HIGH);

}

}