PROJECT DEVELOPMENT PHASE

DELIVERY OF SPRINT-1

Date	7 November 2022
Team ID	PNT2022TMID48564
Project Name	Industry Specific Intelligence Fire Management System

```
#include <WiFi.h>
#include <Wire.h>
#include <SPI.h>
#include "ThingSpeak.h"  #include
<WiFiClient.h>

unsigned long myChannelNumber = 2;  const char *  myWriteAPIKey
= "25V40ZAPI6KIZFGY";  int
LED_PIN = 32; // the current reading from the input pin   int
BUZZER_PIN= 12; const int  mq2
= 4;
int value = 0;

//Flame  int flame_sensor_pin = 10 ;// initializing pin 10 as the sensor digital output
pin int   flame_pin = HIGH ; // current state of sensor

char ssid[] = "Dhinesh";   char  pass[]
= "Dhineshkumar";     WiFiClient
client;
#define PIN_LM35 39
#define ADC_VREF_mV 3300.0
#define ADC_RESOLUTION 4096.0


void setup()
{
   Serial.begin(115200);
   Serial.print("Connecting to ");
  Serial.println(ssid);
WiFi.begin(ssid, pass);    int
wifi_ctr = 0;
  while (WiFi.status() != WL_CONNECTED)
  {
  delay(1000);
```

```
  Serial.print(".");
  }
  Serial.println("WiFi connected");


  ThingSpeak.begin(client);
pinMode(LED_PIN, OUTPUT);    pinMode(mq2, INPUT);
pinMode (
flame_sensor_pin , INPUT ); // declaring sensor pin as
input pin for Arduino
pinMode(BUZZER_PIN, OUTPUT);
}


void temperature()
{
  int adcVal = analogRead(PIN_LM35);    float milliVolt = adcVal *
(ADC_VREF_mV / ADC_RESOLUTION);   float tempC = milliVolt /
10;   Serial.print("Temperature: ");
  Serial.print(tempC);
Serial.print("°C");    if(tempC
> 60)
  {
    Serial.println("Alert");
    digitalWrite(BUZZER_PIN, HIGH); // turn on
  }   else
  {
     digitalWrite(BUZZER_PIN, LOW); // turn on
  }
   int x = ThingSpeak.writeField(myChannelNumber,1, tempC, myWriteAPIKey);

}


void GasSensors()
{
  //mq2

  int gassensorAnalogmq2 = analogRead(mq2);
  Serial.print("mq2 Gas Sensor: ");
  Serial.print(gassensorAnalogmq2);
  Serial.print("\t");
  Serial.print("\t");
  Serial.print("\t");

  if (gassensorAnalogmq2 > 1500)
```

```
  {
    Serial.println("mq2Gas");
    Serial.println("Alert");
  }   else
  {
    Serial.println("No mq2Gas");
  }

  int a = ThingSpeak.writeField(myChannelNumber,4, gassensorAnalogmq2, myWriteAPIKey); }
void flamesensor()
{  flame_pin = digitalRead ( flame_sensor_pin ) ; // reading from the sensor
if (flame_pin == LOW ) // applying condition
{
Serial.println ( " ALERT: FLAME DETECTED" ) ;  digitalWrite ( buz_pin , HIGH
) ;// if state is high, then turn high the BUZZER }
     else
{
Serial.println ( " NO FLAME DETECTED " ) ; digitalWrite
( buz_pin , LOW ) ; // otherwise turn it low
}
}

void loop() {    temperature();   GasSensors();
flamesensor();
}
```