Sprint-2

**Team ID** : PNT2022TMID20931

**Project Title** : Industry-specific intelligent fire management system

**Project Development - Delivery CODE**

int LED\_PIN = 2; // the current reading from the input pin and int Motor\_PIN= 12;//Pin for ventilation fan

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 #define PIN\_LM35 39

#define ADC\_VREF\_mV 3300.0

#define ADC\_RESOLUTION 4096.0

void setup()

{

Serial.begin(115200); 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(Motor\_PIN, HIGH); // turn on

}

else

{

digitalWrite(Motor\_PIN, LOW); // turn off

}

}

void GasSensors()

{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");//message to user Serial.println("Alert");

}

else

{

Serial.println("No mq2Gas");//message to user

}

}

void flamesensor()

{

flame\_pin = digitalRead ( flame\_sensor\_pin ) ; // reading from the sensor

if (flame\_pin == LOW ) // applying condition

{

Serial.println ( " ALERT: FLAME DETECTED" ) ; digitalWrite ( Motor\_PIN , HIGH ) ;// if state is high, then turn high the BUZZER

}

else

{

Serial.println ( " NO FLAME DETECTED " ) ; digitalWrite ( Motor\_PIN , LOW ) ; // otherwise turn it low

}

}

void loop()

{

temperature(); GasSensors(); flame