

TEAM ID: PNT2022TMID20269

```
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
```