Sprint 1

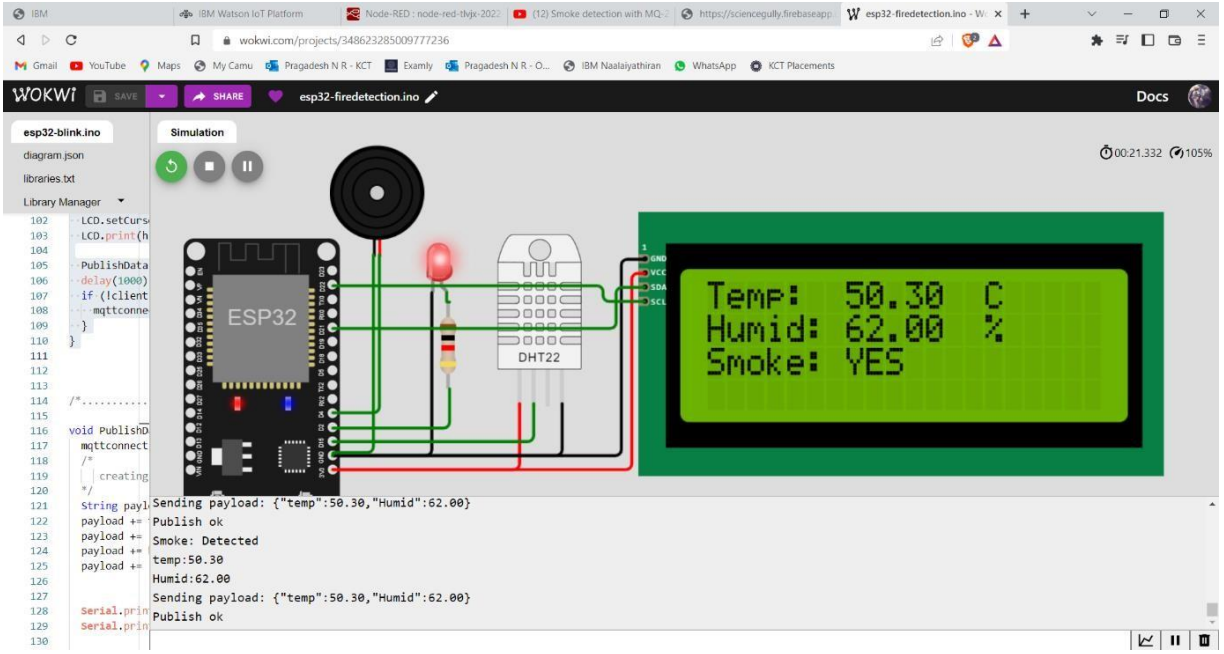
Team ID	PNT2022TMID16771
Project Name	Industry-specific Intelligent Fire Management System

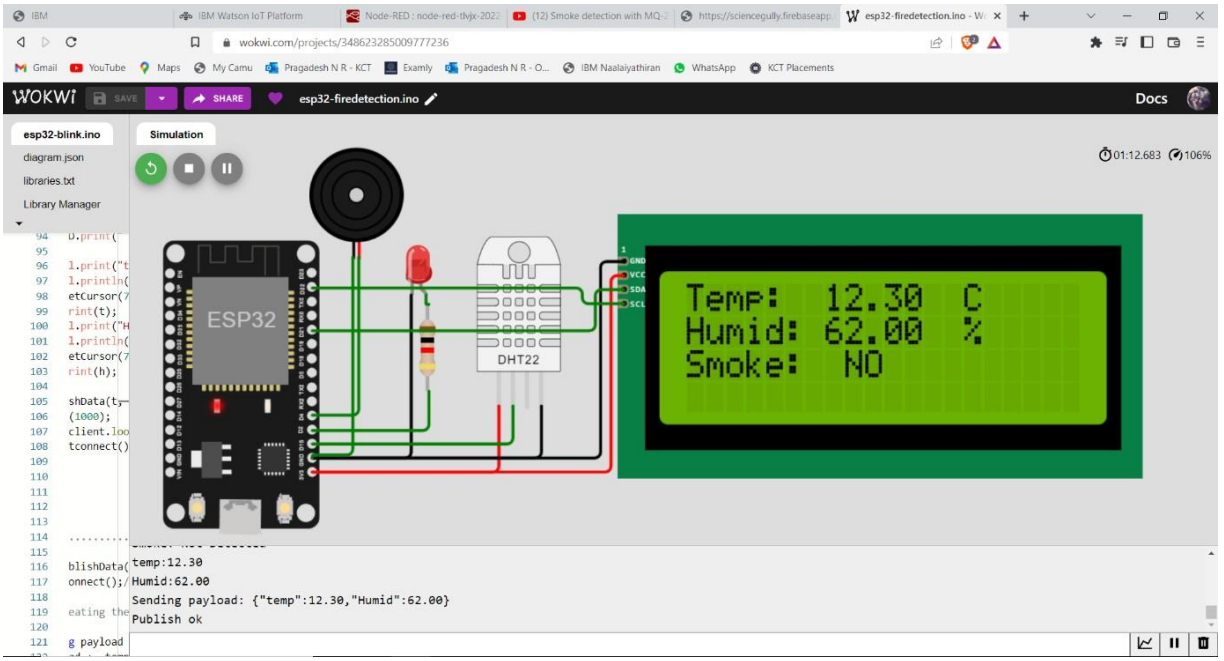
Sprint 1 – CODING

```
#include <WiFi.h>
#include "DHT.h"
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#define DHTPIN 15
#define DHTTYPE DHT22
#define LED 2
#define BUZZER 4



LiquidCrystal_I2C LCD = LiquidCrystal_I2C(0x27, 20, 4);

DHT dht (DHTPIN, DHTTYPE);

void setup()
{
  Serial.begin(115200);
  dht.begin();
  pinMode(LED,OUTPUT);
  pinMode(BUZZER,OUTPUT);
  digitalWrite(LED,LOW);
  digitalWrite(BUZZER,LOW);
  delay(10);
  Serial.println();
  wificonnect();
  mqttconnect();
  LCD.init();
  LCD.backlight();
  LCD.setCursor(0, 0);
  LCD.print("Connecting to ");
  LCD.setCursor(0, 1);
  LCD.print("WiFi ");
  delay(1000);
  LCD.clear();
}
```

```
void loop()
{
    LCD.setCursor(0,2);
    LCD.print("Smoke: ");
    LCD.setCursor(0, 0);
    LCD.print("Temp: ");
    LCD.setCursor(14, 0);
    LCD.print("C");
    LCD.setCursor(0, 1);
    LCD.print("Humid: ");
    LCD.setCursor(14, 1);
    LCD.print("%");
  h = dht.readHumidity();
  t = dht.readTemperature();
  f = random(0,1023);
  if (f>300)
  {
    Serial.print("Smoke: ");
    Serial.println("Detected");
    digitalWrite(LED,HIGH);
    digitalWrite(BUZZER,HIGH);
    LCD.setCursor(7, 2);
    LCD.print("YES");
  }
  else{
      Serial.print("Smoke: ");
     Serial.println("Not Detected");
     digitalWrite(LED,LOW);
     digitalWrite(BUZZER,LOW);
     LCD.setCursor(7,  2);
     LCD.print(" NO");
  }
  Serial.print("temp:");
  Serial.println(t);
  LCD.setCursor(7, 0);
  LCD.print(t);
  Serial.print("Humid:");
  Serial.println(h);
  LCD.setCursor(7, 1);
  LCD.print(h);
}
```

Sprint 1 Output – Display Values is LCD





For Smoke sensor random Analog-values are generated for ADC range from 0 to 1023.

Wokwi Link: https://wokwi.com/projects/348623285009777236