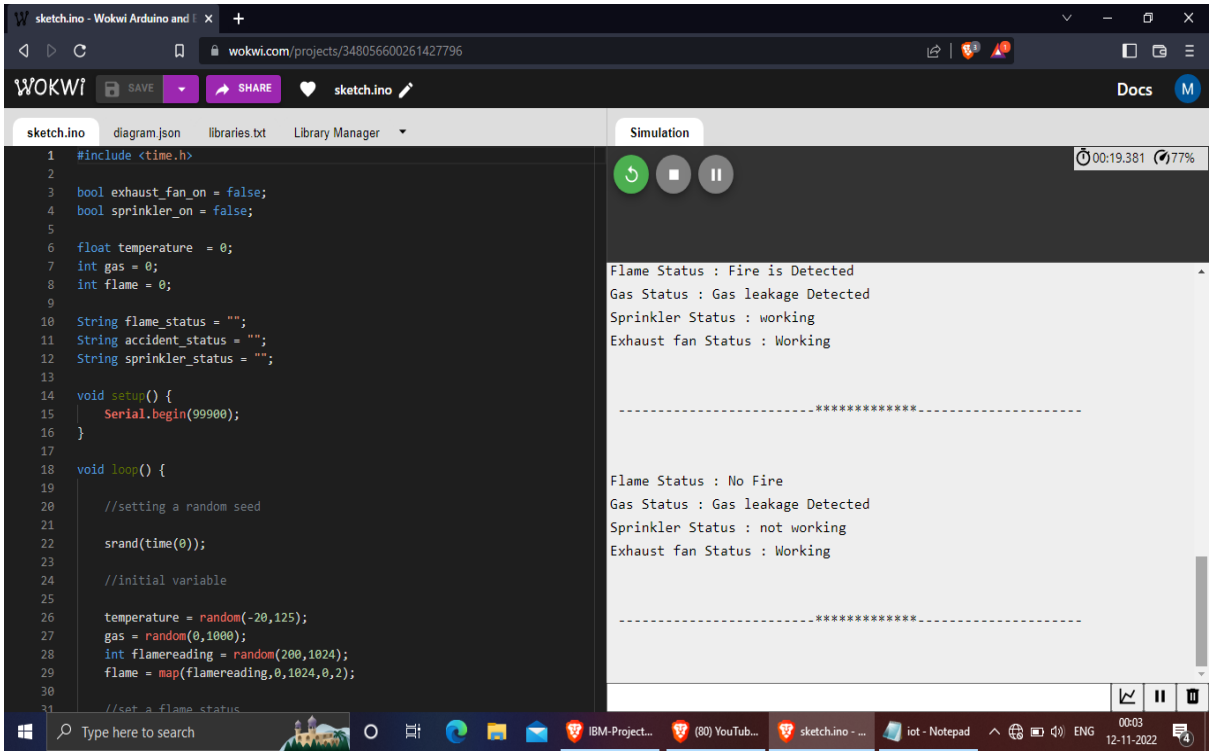
Project development phase

Sprint - I

| | |
|---|---|
| Date | 29 October 2022 |
| Team ID | PNT2022TMID13566 |
| Project Name | Industry-specific intelligent fire management system |
| Maximum Marks | 8 Marks |

# OUTPUT:



## CODE:

```
#include <time.h>
bool exhaust_fan_on = false;
bool sprinkler_on = false;
float temperature  = 0;
int gas = 0;
int flame = 0;
String flame_status = "";
String accident_status = "";
String sprinkler_status = "";
void setup() {
  Serial.begin(99900);
}
void loop() {
  //setting a random seed
  srand(time(0));
  //initial variable
  temperature = random(-20,125);
  gas = random(0,1000);
  int flamereading = random(200,1024);
  flame = map(flamereading,0,1024,0,2);
  //set a flame status
  switch (flame) {
  case 0:
    flame_status = "No Fire";
    Serial.println("Flame Status : "+flame_status);
    break;
  case 1:
    flame_status = "Fire is Detected";
    Serial.println("Flame Status : "+flame_status);
    break;
  }
  //Gas Detection
  if(gas > 100){
    Serial.println("Gas Status : Gas leakage Detected");
  }
  else{
    exhaust_fan_on = false;
    Serial.println("Gas Status : No Gas leakage Detected");
  }
  //send the sprinkler status
  if(flame){
    sprinkler_status = "working";
    Serial.println("Sprinkler Status : "+sprinkler_status);
```

```
    }
    else{
      sprinkler_status = "not working";
      Serial.println("Sprinkler Status : "+sprinkler_status);
    }
    //toggle the fan according to gas
    if(gas > 100){
      exhaust_fan_on = true;
      Serial.println("Exhaust fan Status : Working");
    }
    else{
      exhaust_fan_on = false;
      Serial.println("Exhaust fan Status : Not Working");
    }
    Serial.println("");
    Serial.println("");
    Serial.println(" -------------------------*************----------------------");
    Serial.println("");
    Serial.println("");
    delay(3000);
}
```