Source Code :

DATE	**19 NOVEMBER 2022**
TEAM ID	**PNT2022TMID42644**
PROJECT TITLE	**INDUSTRY-SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM**

```
#include <time.h>
#include <WiFi.h>
#include <PubSubClient.h>
 bool exhaust_fan_on =
false; bool sprinkler_on =
false; float temperature =
0; int gas_level = 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_level = random(0,200);
int flamereading =
random(200,1024); flame =
map(flamereading,0,1024,0,
2);
//set a flame status
Serial.print("Temperature : ");
Serial.println(temperature);

Serial.print("Gas_level : ");
Serial.println(gas_level);

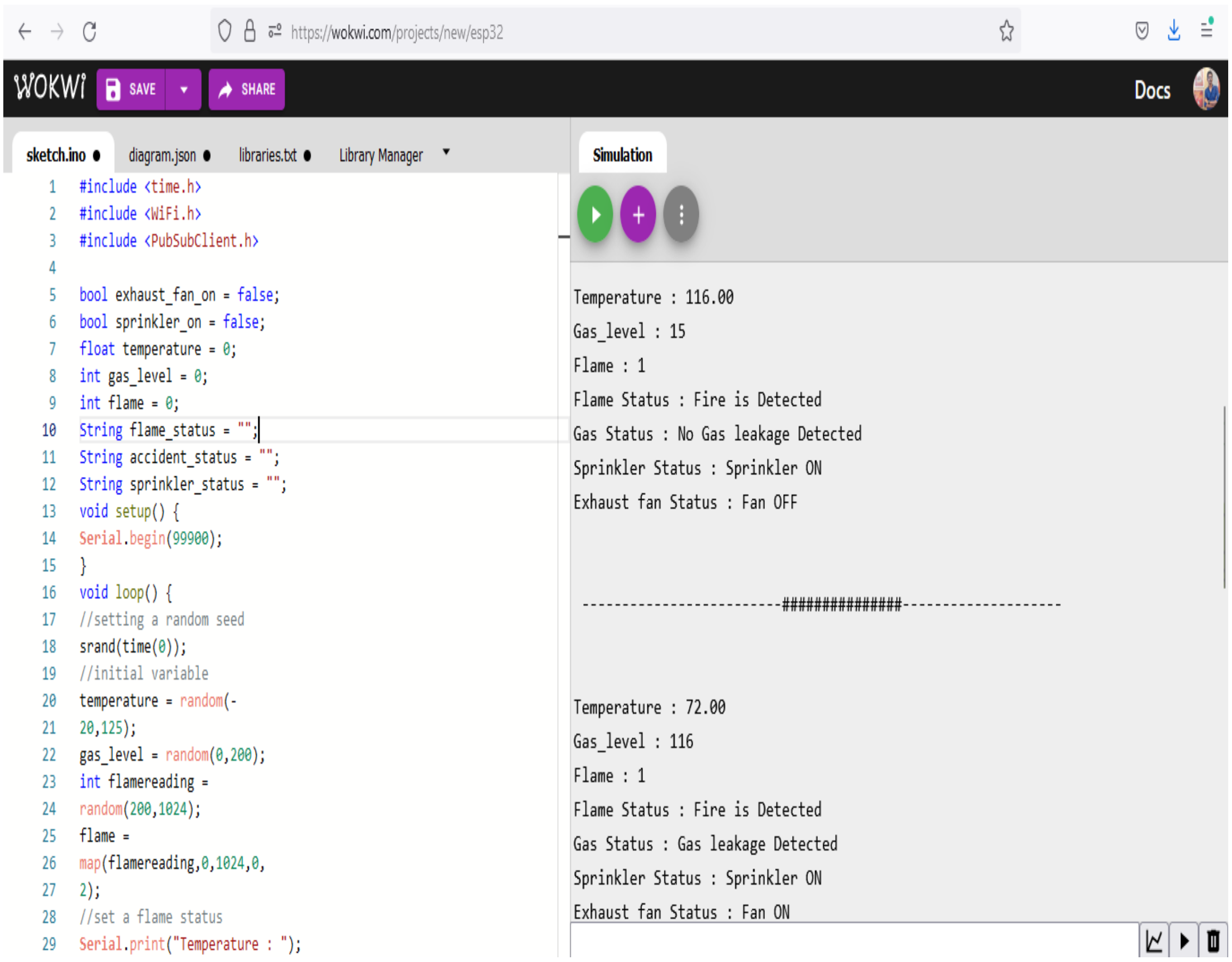
Serial.print("Flame : ");
Serial.println(flame);

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_level
> 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
="Sprinkler ON";
Serial.println("Sprinkler Status : "+sprinkler_status);
} else{
sprinkler_status = "Sprinkler OFF";
Serial.println("Sprinkler Status : "+sprinkler_status);
}
//toggle the fan according to gas
if(gas_level > 100)
{
exhaust_fan_on = true;
Serial.println("Exhaust fan Status : Fan ON");
}
else{
exhaust_fan_on = false;
Serial.println("Exhaust fan Status : Fan OFF");
}
Serial.println("");
Serial.println("");
Serial.println(" -------------------------###############-------------------
");
Serial.println("");
Serial.println(""); delay(3000);

}
```

OUTPUT :



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bool sprinkler_on = false;
float temperature = 0;
int gas_level = 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_level = random(0,200);
int flamereading =
random(200,1024);
flame =
map(flamereading,0,1024,0,
2);
//set a flame status
Serial.print("Temperature : ");
```

```
Temperature : 116.00
Gas_level : 15
Flame : 1
Flame Status : Fire is Detected
Gas Status : No Gas leakage Detected
Sprinkler Status : Sprinkler ON
Exhaust fan Status : Fan OFF



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Temperature : 72.00
Gas_level : 116
Flame : 1
Flame Status : Fire is Detected
Gas Status : Gas leakage Detected
Sprinkler Status : Sprinkler ON
Exhaust fan Status : Fan ON
```