Project Development Phase

Sprint - 1

Date	29 -10 - 2022
Team ID	PNT2022TMID06114
Project Name	Industry Specific Intelligent Fire Management System

Wokwi Simulation:

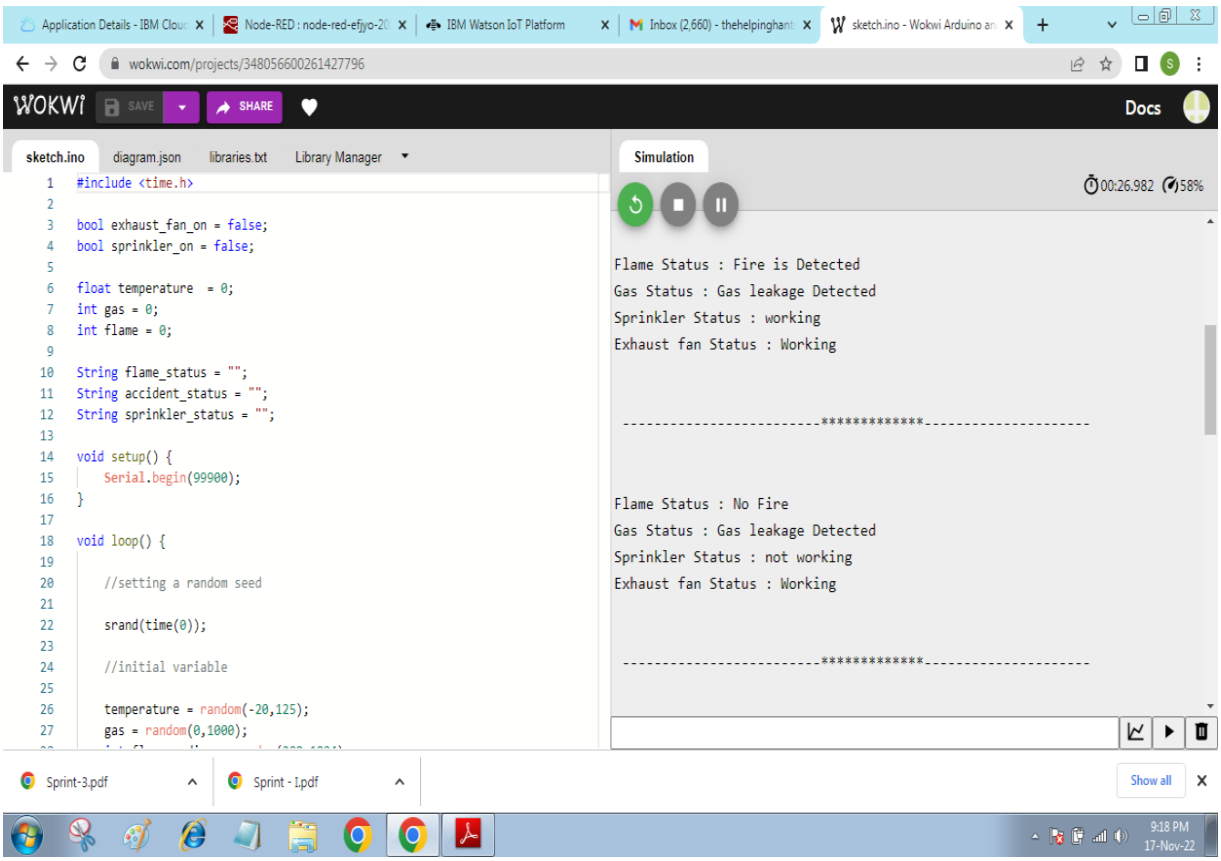

Fig. Wokwi Output Screen

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);
}
```

```
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);
```