

Hazardous area monitoring for industrial plant

Project development phase

Delivery of sprint-1

Date	10 November 2022
Team ID	PNT2022TMID39386
Project Name	Hazardous area monitoring for industrial plant

Program:

```
#include <dht.h>
```

```
#define dht_apin A0 // Analog Pin 0 is connected to DHT sensor
```

```
#define mqt_apin A1 // Analog Pin 1 is connected to MQT 135 sensor
```

```
dht DHT;
```

```
int sensorValue;
```

```
void setup(){
```

```
    Serial.begin(9600); //Serial port to communicate with Python code
```

```
    Serial1.begin(9600); //Serial port to communicate with Wearable device through Bluetooth (HC-05)
```

```
    delay(500); //Delay to let system boot
}
```

```
void loop(){
```

```
    DHT.read11(dht_apin); // read analog input pin 0(DHT11)
```

```
    sensorValue = analogRead(mqt_apin); // read analog input pin
```

1(MQ135)

```
//Send Humidity status to Python Code
```

```
Serial.print("Current humidity = ");
```

```
Serial.print(DHT.humidity);
```

```
Serial.print("% ");
```

```
//Send Temperature status to Python Code
```

```
Serial.print("temperature = ");
```

```
Serial.print(DHT.temperature);
```

```
Serial.println("C ");
```

```
//Send AirQuality sensor value to Python code
```

```
Serial.print("AirQua=");
```

```
Serial.print(sensorValue, DEC);
```

```
Serial.println(" PPM");
```

```
//Send signals to the Wearable
```

```
Serial1.println("H T A");
```

```
Serial1.println(DHT.humidity);
```

```
Serial1.println(DHT.temperature);
```

```
Serial1.println(sensorValue, DEC);
```

```
delay(100);
```

```
}
```