Project Development Phase
Delivery of Sprint 3

Date	12 November 2022
Team ID	PNT2022TMID01909
Project Name	Project –Gas leakage monitoring and alerting system for industries
Marks	20 marks

Code:

```
import time import sys
import ibmiotf.application
import ibmiotf.device
import random



#Provide your IBM Watson Device Credentials
organization = "pi0ywk" deviceType =
"Gas_Geakage_Detector" deviceId =
"nazeer007" authMethod =
"token"
authToken = "8148922991"


# Initialize GPIO



def myCommandCallback(cmd): print("Command received:
  %s" % cmd.data['command'])
  status=cmd.data['command'] if status == "alarmon":
  print ("Alarm is on please all Evacuate Fans On") elif
  status == "alarmoff":
     print ("Alarm is off and Fans Off")
```

```
    elif status == "sprinkleron": print
      ("Sprinkler is On Evacuate Faster")
    elif status == "sprinkleroff":
      print("Sprinkler is Off") else:
      print("Please send proper command")
    #print(cmd)




try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method":
authMethod, "auth-token": authToken} deviceCli =
        ibmiotf.device.Client(deviceOptions)
        #.....


except Exception as e:
        print("Caught exception connecting device: %s" % str(e)) sys.exit()


# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type
"greeting" 10 times
deviceCli.connect()


while True:
      #Get Sensor Data from random function
      temp=random.randint(0,120)
      Humid=random.randint(0,100) gas=random.randint(0,1500)
      data={'temp':temp,'Humid':Humid,'gas':gas} #print data def
      myOnPublishCallback():
        print (" Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid, "Gas_Level =
%s ppm" %gas, "to IBM Watson")
```

```
        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
        if not success: print("\n Not connected to IoTF") if temp>60 : print("\n Fire Detected due to
        gas Leak ! Alarm ON! Sprinkler ON! Call The Fire Police \n") elif gas>350:
            print("\n Gas is Leaking \n")


time.sleep(10)
        deviceCli.commandCallback = myCommandCallback

        # Disconnect the device and application from the cloud
        deviceCli.disconnect()
```

The output is in the next page .

OUTPUT :