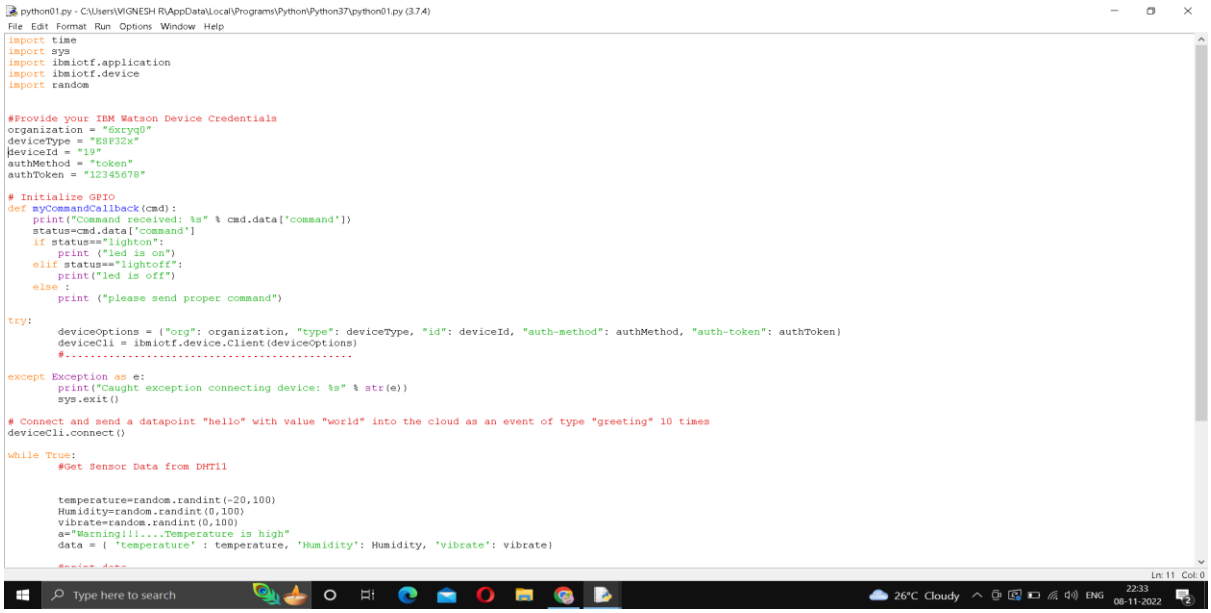
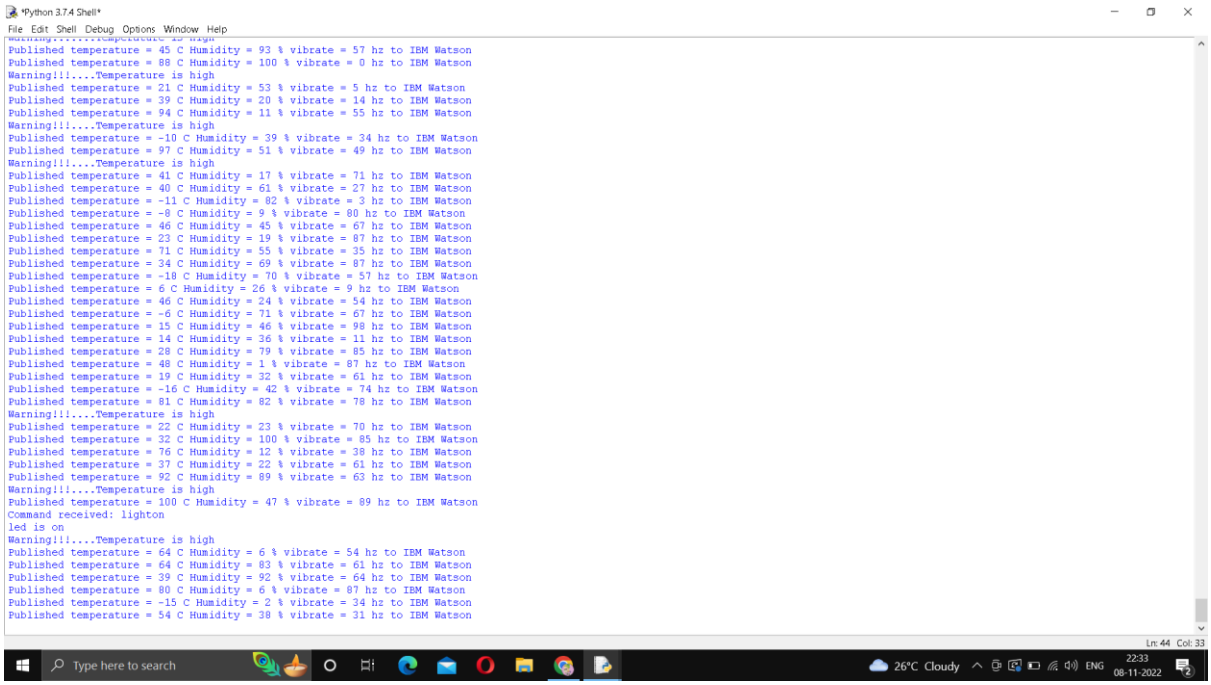
HAZARDOUS AREA MONITORING FOR INDUSTERIAL PLANT POWERED BY IoT

Team ID: PNT2022TMID41272 Project Development Phase: Sprint 2

❖ Install the IDLE Python version 3.7.4 and install the required libraries





PROGRAM :

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "6xryq0"
deviceType = "ESP32x"
deviceId = "19"
authMethod = "token"
authToken = "12345678"
# Initialize GPIO
def myCommandCallback(cmd):
   print("Command received: %s" % cmd.data['command'])
   status=cmd.data['command']
   if status=="lighton":
      print ("led is on")
   elif status=="lightoff":
      print("led is off")
   else :
      print ("please send proper command")
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 DHT11

        temperature=random.randint(-20,100)

        Humidity=random.randint(0,100)

        vibrate=random.randint(0,100)

        a="Warning!!!....Temperature is high"

        data = { 'temperature' : temperature, 'Humidity': Humidity, 'vibrate': vibrate}


        #print data

        def myOnPublishCallback():

            print ("Published temperature = %s C" % temperature, "Humidity = %s %%" % Humidity, "vibrate = %s hz" % vibrate, "to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)


    if not success:

            print("Not connected to IoTF")

        time.sleep(1)

        if temperature>80:

            a="Warning!!!....Temperature is high"

            print("Warning!!!....Temperature is high")


        deviceCli.commandCallback = myCommandCallback


# Disconnect the device and application from the cloud

deviceCli.disconnect()
```