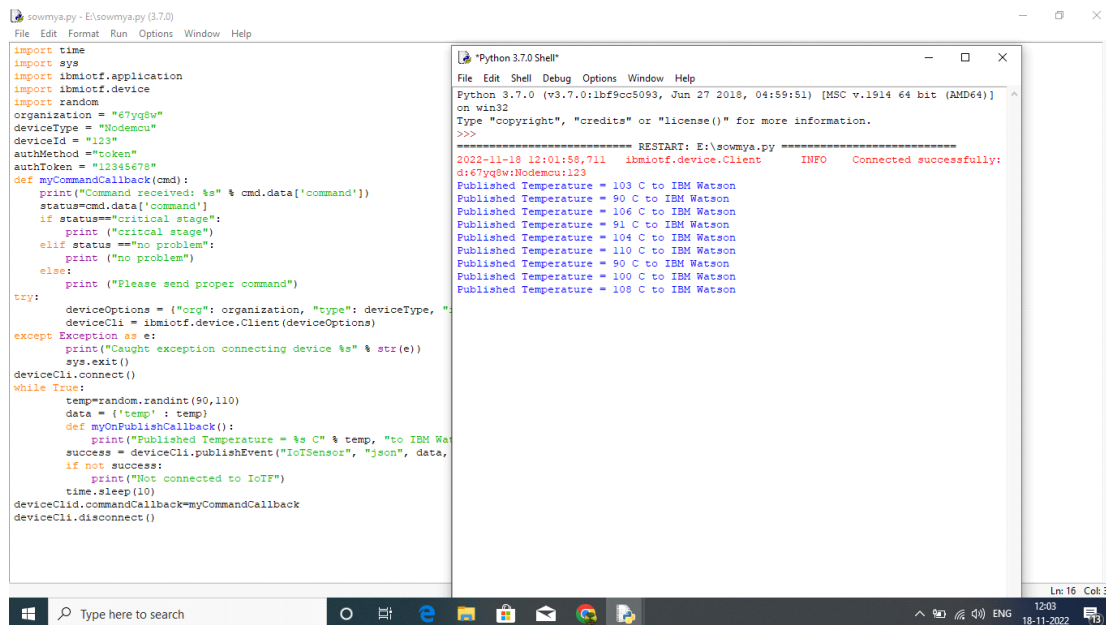


DEVELOP A PYTHON SCRIPT

Date	14 November 2022
Team ID	PNT2022TMID13542
Project Name	Hazardous Area Monitoring for industrial power plant by IoT
Maximum Marks	4 Marks

Hazardous Area Monitoring for Industrial Power Plant by IoT

Python code :



```
sowmya.py - E:\sowmya.py (3.7.0)
File Edit Format Run Options Window Help

import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
organization = "67yg8w"
deviceType = "NodeMCU"
deviceId = "123"
authMethod = "token"
authToken = "123456789"
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="critical stage":
        print ("critical stage")
    elif status=="no problem":
        print ("no problem")
    else:
        print ("Please send proper command")
try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "authMethod": authMethod, "authToken": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
except Exception as e:
    print("Caught exception connecting device %s" % str(e))
    sys.exit()
deviceCli.connect()
while True:
    temp=random.randint(90,110)
    data = {'temp' : temp}
    def myOnPublishCallback():
        print("Published Temperature = %s C" % temp, "to IBM Watson")
    success = deviceCli.publishEvent("IoT5ensor", "json", data, myOnPublishCallback)
    if not success:
        print("Not connected to IoT")
    time.sleep(10)
deviceCli.commandCallback=myCommandCallback
deviceCli.disconnect()

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (tags/v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)]
on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\sowmya.py =====
2022-11-18 12:01:58,711 ibmiotf.device.Client INFO Connected successfully:
d:67yg8w:NodeMCU:123
Published Temperature = 103 C to IBM Watson
Published Temperature = 90 C to IBM Watson
Published Temperature = 106 C to IBM Watson
Published Temperature = 91 C to IBM Watson
Published Temperature = 104 C to IBM Watson
Published Temperature = 110 C to IBM Watson
Published Temperature = 90 C to IBM Watson
Published Temperature = 100 C to IBM Watson
Published Temperature = 108 C to IBM Watson
```

IBM Watson Connection :

The screenshot displays the IBM Watson IoT Platform interface. At the top, the navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar and an 'Add Device' button are also present. The main content area shows a table of devices. The selected device, '123', is in a 'Disconnected' state. Below the device list, the 'Recent Events' tab is active, showing a live stream of data. The events table has columns for Event, Value, Format, and Last Received. The most recent event is a temperature reading of 98, which is highlighted with a tooltip indicating it is a simulation.

Event	Value	Format	Last Received
eventflow	{"temperature":98}	json	a few seconds ago
eventflow	{"temperature":90}	json	a few seconds ago
eventflow	{"temperature":92}	json	a few seconds ago
eventflow	{"temperature":96}	json	a few seconds ago
eventflow	{"temperature":94}	json	a few seconds ago

1 Simulation running