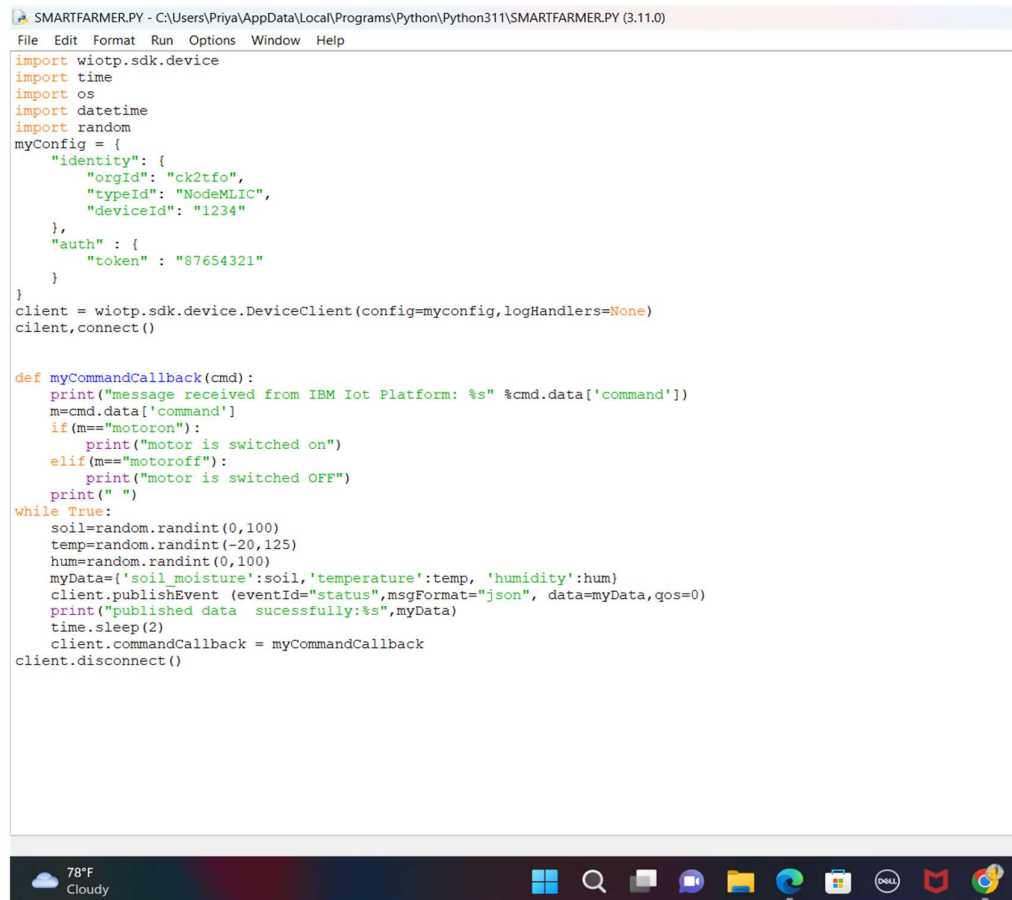


ARUNAI ENGINEERING COLLEGE

TEAM ID : PNT2022TMID29459

A screenshot of a Python IDE window titled 'SMARTFARMER.PY - C:\Users\Priya\AppData\Local\Programs\Python\Python311\SMARTFARMER.PY (3.11.0)'. The window contains a Python script for an IoT-based smart farming application. The script imports necessary modules like wiotp, time, os, datetime, and random. It defines a configuration dictionary 'myConfig' for an IBM IoT device. A 'DeviceClient' is created and connected. A callback function 'myCommandCallback' is defined to handle incoming commands from the IoT platform, such as switching a motor on or off. A 'while True' loop generates random sensor data (soil moisture, temperature, humidity) and publishes it to the IoT platform as JSON events. The script also includes a sleep function to control the data publishing rate and a disconnect function at the end.

```
import wiotp.sdk.device
import time
import os
import datetime
import random
myConfig = {
    "identity": {
        "orgId": "ck2tfo",
        "typeId": "NodeMLIC",
        "deviceId": "1234"
    },
    "auth": {
        "token": "87654321"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myconfig, logHandlers=None)
client.connect()

def myCommandCallback(cmd):
    print("message received from IBM Iot Platform: %s" %cmd.data['command'])
    m=cmd.data['command']
    if(m=="motoron"):
        print("motor is switched on")
    elif(m=="motoroff"):
        print("motor is switched OFF")
    print(" ")
while True:
    soil=random.randint(0,100)
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'soil_moisture':soil,'temperature':temp, 'humidity':hum}
    client.publishEvent (eventId="status",msgFormat="json", data=myData,qos=0)
    print("published data sucessfully:%s",myData)
    time.sleep(2)
    client.commandCallback = myCommandCallback
client.disconnect()
```