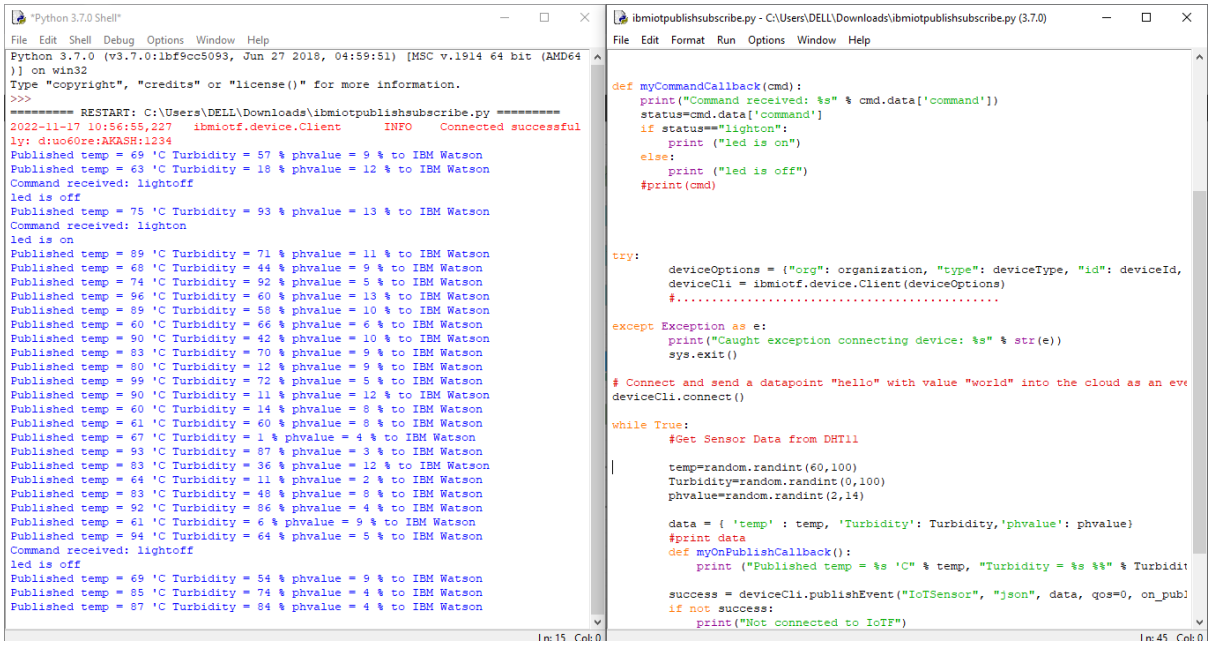
PYTHON SCRIPT

Date	16 NOVEMBER 2022
Team ID	PNT2022TMID32972
Project Name	**Project - Real-Time River Water Quality Monitoring and Control System**
Maximum Marks	4 Marks



CODE:

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

```
#Provide your IBM Watson Device Credentials
organization = "uo60re"
deviceType = "AKASH"
deviceId = "1234"
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")
   else:
      print ("led is off")
   #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 DHT11


        temp=random.randint(60,100)
        Turbidity=random.randint(0,100)
        phvalue=random.randint(2,14)


        data = { 'temp' : temp, 'Turbidity': Turbidity,'phvalue': phvalue}
        #print data
        def myOnPublishCallback():
            print ("Published temp = %s 'C" % temp, "Turbidity = %s %%" % Turbidity,"phvalue = %s %%" % phvalue, "to IBM Watson")


        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(10)


        deviceCli.commandCallback = myCommandCallback


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