PYTHON SCRIPT

Date	*26.10.2022*
Team ID	PNT2022TMID30880
Project Title	Real-Time River Water Quality Monitoring and Control System

PROGRAM:

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

#provide Your IBM Watson Device Credentials
organization = "m89nt2"
deviceType = "arduino"
deviceID = "123"
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" info the cloud as an event of
type"greetings"10 times
deviceCli.connect()

while True:
#Get sensor Data from DHT11

temp=random.randint(90,110)
pH=random.randint(0,14)
turbidity=random.randint(0,100)

data = { 'Temperature' : temp, 'pH': pH, 'Turbidity':turbidity }
#print data
def myOnPublishCallback():
print ("published Temperature = %s C" % temp, "pH = is %s %%" % pH, "Turbidity= is
%s %%" % turbidity,"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
deviceCli.disconnect()
```

OUTPUT: