IBM PROJECT

TEAM ID:PNT2022TMID01408
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TEAM MEMBERS: TINI J MERCY
SNEHA.N
BRINDHA.S
SAMYUKTHAA.V.G

Source Code:

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

#Provide your IBM Watson Device Credentials
organization = "nckdv7"
deviceType = "NodeMCU"
deviceId = "12345"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" %cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print("Motor is ON")
    else:
        print("Motor 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(0,100)
        pulse=random.randint(0,100)
        moisture= random.randint(0,100)
        humidity=random.randint(0,100);
        lat = 17
        lon = 18

        data = { 'temp' : temp, 'humidity' : humidity, 'Soil Moisture' :
moisture}
        #print data
        def myOnPublishCallback():
           print ("Published Temperature = %s C" % temp, "Humidity
= %s %%" % humidity, "Soil Moisture = %s %%" % moisture,"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)

        deviceCli.commandCallback = myCommandCallback

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