

DEVELOPING A PYTHON SCRIPT

TEAM ID	PNT2022TMID21422
PROJECT NAME	IOT BASED SMART CROP PROTECTION SYSTEMFOR AGRICULTURE.
MAX MARKS	20 MARKS

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

#Provide your IBM Watson Device Credentials
organization = "iritj7"
deviceType = "abcd"
deviceId = "12345"
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" into
the cloud as an event of type
"greeting" 10 times
deviceCli.connect()
while True:
    #Get Sensor Data from DHT11
```

```
temp=random.randint(90,110)
Humid=random.randint(60,100)
Moist=random.randint(20,100)
Animal_dect=random.randint(1,20)
```

```
data = { 'temp' : temp, 'Humid': Humid, 'Moist' : Moist,
'Animal_dect' : Animal_dect }

#print data

def myOnPublishCallback():

    print ("Published Temperature = %s C" % temp, "Humidity = %s
%%" % Humid, "to IBM
Watson", "Published Moisture= %s" % Moist, "Published Animal
detection = " , Animal_dect)

    success = deviceCli.publishEvent("IoTSensor", "json", data,
qos=0,
on_publish=myOnPublishCallback)

    if not success:

        print("Not connected to IoT")
```

```
time.sleep(10)
```

```
deviceCli.commandCallback = myCommandCallback
```

```
# Disconnect the device and application from the cloud
```

```
deviceCli.disconnect()
```