

FINAL REPORT

Team id:	PNT2022TMID52180
Project name:	IoT based smart crop protection system for agriculture

CODE:

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

#Provide your IBM Watson Device Credentials
organization = "i3869j"
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)

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

    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()

```