

DEVELOP THE PYTHON CODE

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Team ID	PNT2022TMID12343
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Mark	4 marks

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PYTHON CODE:

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

#Provide your IBM Watson Device
Credentialsorganization = "5py6q9"
deviceType = "Weather_now"
deviceId = "Weather1234"
authMethod = "token"
authToken = "XeJFia7_@ @t9@ @eq_?"

# 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
```

```
IoTE ")
```

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

```
deviceCli.commandCallback = myCommandCallback
```

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

```
deviceCli.disconnect()
```