

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "uo60re"
```

```
deviceType = "AKASH"
```

```
deviceId = "1234"
```

```
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")
```

```
    else:
```

```
        print ("led 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(60,100)
```

```
    Turbidity=random.randint(0,100)
```

```
    phvalue=random.randint(2,14)
```

```
    data = { 'temp' : temp, 'Turbidity': Turbidity, 'phvalue': phvalue}
```

```
#print data

def myOnPublishCallback():

    print ("Published temp = %s 'C" % temp, "Turbidity = %s %" % Turbidity,"phvalue = %s %" %
phvalue, "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()
```