

Develop a Python Script

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Team ID	B2-2M4E
Project Name	Smart waste Management for Metropolitician cities

Python:

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

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

```
organization = "uzesig"
deviceType = "Arduino"
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")
    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 esp32
```

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

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

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

```
    data = { 'weight' : weightSensor, 'ir':irSensor, 'ultrasonic':ultrasSensor }
```

```
    #print data
```

```
    def myOnPublishCallback():
```

```
        print ("Published Weight of Trashcan is = %s C" % weightSensor, "IR Sensor = %s %" %  
irSensor, "Ultrasonic Sensor = %s %" % ultrasSensor, "to IBM Watson")
```

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

```
    if not success:
```

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

```
time.sleep(1)
```

```
deviceCli.commandCallback = myCommandCallback
```

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

```
deviceCli.disconnect()
```