

FINAL DELIVERABLES

FINAL CODE

BIN PYTHON CODE SIMULATOR→_BIN2.PY_

```
import requests

import json

import ibmiotf.application

import ibmiotf.device

import time

import random

import sys


# watson device details


organization = "4yi0vc"

devicType = "BIN2"

deviceId = "BIN2ID"

authMethod= "token"

authToken= "123456789"


#generate random values for random variables (temperature&humidity)


def myCommandCallback(cmd):

    global a

    print("command recieved:%s" %cmd.data['command'])

    control=cmd.data['command']
```

```
print(control)
```

```
try:
```

```
    deviceOptions={"org": organization, "type": devicType,"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 "temp" with value integer value into the cloud as a type of event for  
every 10 seconds
```

```
deviceCli.connect()
```

```
while True:
```

```
    distance= random.randint(10,70)
```

```
    loadcell= random.randint(5,15)
```

```
    data= {'dist':distance,'load':loadcell}
```

```
    if loadcell < 13 and loadcell > 15:
```

```
        load = "90 %"
```

```
    elif loadcell < 8 and loadcell > 12:
```

```
        load = "60 %"
```

```
    elif loadcell < 4 and loadcell > 7:
```

```
        load = "40 %"
```

```
    else:
```

```
        load = "0 %"
```

```
if distance < 15:
```

```
    dist = 'Risk warning:' 'Dumpster poundage getting high, Time to collect :) 90 %'
```

```
elif distance < 40 and distance >16:
```

```
    dist = 'Risk warning:' 'dumpster is above 60%'
```

```
elif distance < 60 and distance > 41:
```

```
    dist = 'Risk warning:' '40 %'
```

```
else:
```

```
    dist = 'Risk warning:' '17 %'
```

```
if load == "90 %" or distance == "90 %":
```

```
    warn = 'alert :' ' Dumpster poundage getting high, Time to collect :)'
```

```
elif load == "60 %" or distance == "60 %":
```

```
    warn = 'alert :' 'dumpster is above 60%'
```

```
else :
```

```
    warn = 'alert :' 'No need to collect right now '
```

```
def myOnPublishCallback(lat=10.939091,long=78.135731):
```

```
    print("Bustand, Karur")
```

```
    print("published distance = %s " %distance,"loadcell:%s " %loadcell,"lon = %s " %long,"lat = %s" %lat)
```

```
    print(load)
```

```
    print(dist)
```

```
    print(warn)
```

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

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

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

```
if not success:
```

```
    print("not connected to ibmiot")
```

```
time.sleep(30)
```

```
deviceCli.commandCallback=myCommandCallback
```

```
#disconnect the device
```

```
deviceCli.disconnect()
```