

SPRINT-2

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Python Code

```
import time import sys
```

```
import
```

```
ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

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

```
Credentialsorganization = "2melo1"
```

```
deviceType = "waste" deviceId = "1234"
```

```
authMethod = "token" authToken =
```

```
"12345678"
```

```
# Initialize GPIO
```

```
def myCommandCallback(cmd): print("Command
```

```
received: %s" % cmd.data['command'])
```

```
status=cmd.data['command'] if status=="waste
```

```
level":
```

```
    print ("waste level
```

```
monitored")else :
```

```
print ("weight level monitored")
```

```
#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
```

```
level=random.randint(0,10
```

```
0)
```

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

```

data = { 'level' : level, 'weight':
weight }#print data

def myOnPublishCallback():

    print ("Published Level = %s %" % level, "Weight = %s %" % weight, "to IBM Watson")


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

    if not success:

        print("Not
connected      to
                IoT")

time.sleep(20)

deviceCli.commandCallback = myCommandCallback

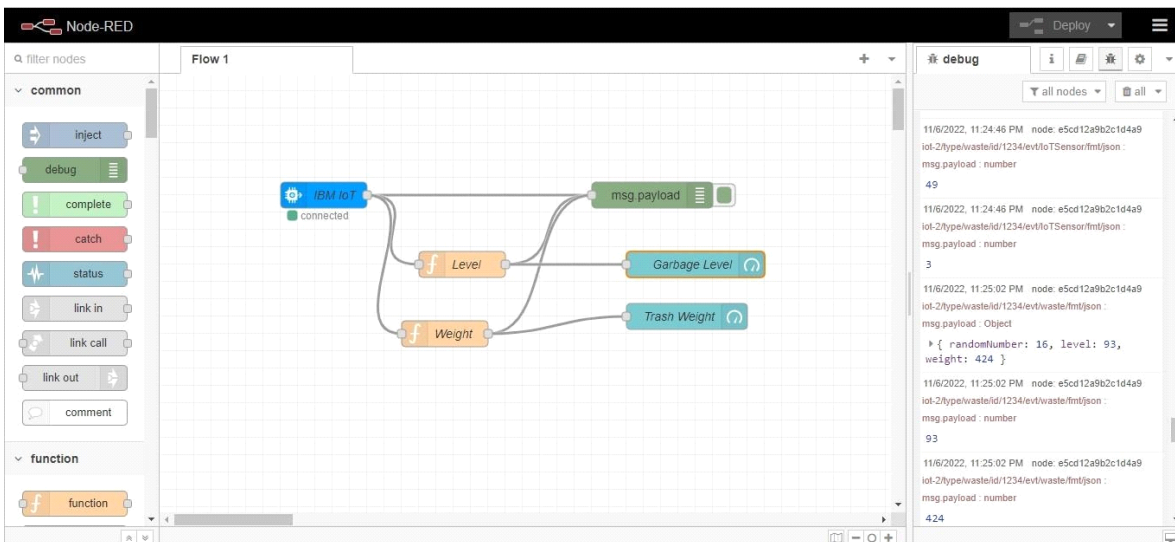
# Disconnect the device and application from the cloud deviceCli.disconnect()

```

OUTPUT:

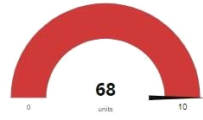
```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/welcome/AppData/Local/Programs/Python/Python37/smart waste.py
2022-11-06 23:23:06,437 ibmiotf.device.Client INFO Connected successfully: d:2melol:waste:1234
Published Level = 6 % Weight = 28 % to IBM Watson
Published Level = 24 % Weight = 48 % to IBM Watson
Published Level = 72 % Weight = 51 % to IBM Watson
Published Level = 70 % Weight = 59 % to IBM Watson
Published Level = 8 % Weight = 73 % to IBM Watson
Published Level = 49 % Weight = 3 % to IBM Watson
Published Level = 23 % Weight = 30 % to IBM Watson
Published Level = 20 % Weight = 73 % to IBM Watson
Published Level = 2 % Weight = 15 % to IBM Watson
Published Level = 69 % Weight = 45 % to IBM Watson
Published Level = 0 % Weight = 33 % to IBM Watson
Published Level = 32 % Weight = 68 % to IBM Watson
Published Level = 77 % Weight = 8 % to IBM Watson
Published Level = 28 % Weight = 42 % to IBM Watson
Published Level = 79 % Weight = 24 % to IBM Watson
Published Level = 29 % Weight = 90 % to IBM Watson
Published Level = 78 % Weight = 25 % to IBM Watson
```

NODE RED INPUT AND OUPUT:



Garbage Monitoring

Trash Weight



Garbage Level

