SPRINT - 3

Date	12 NOV 2022
Team ID	PNT2022TMID53567
Project Name	Smart Waste Management System for Metropolitan Cities

1, Simulate python code in Python IDE software to transmit data to IBM Watson IOT platform

Python code:

smartbin.py:

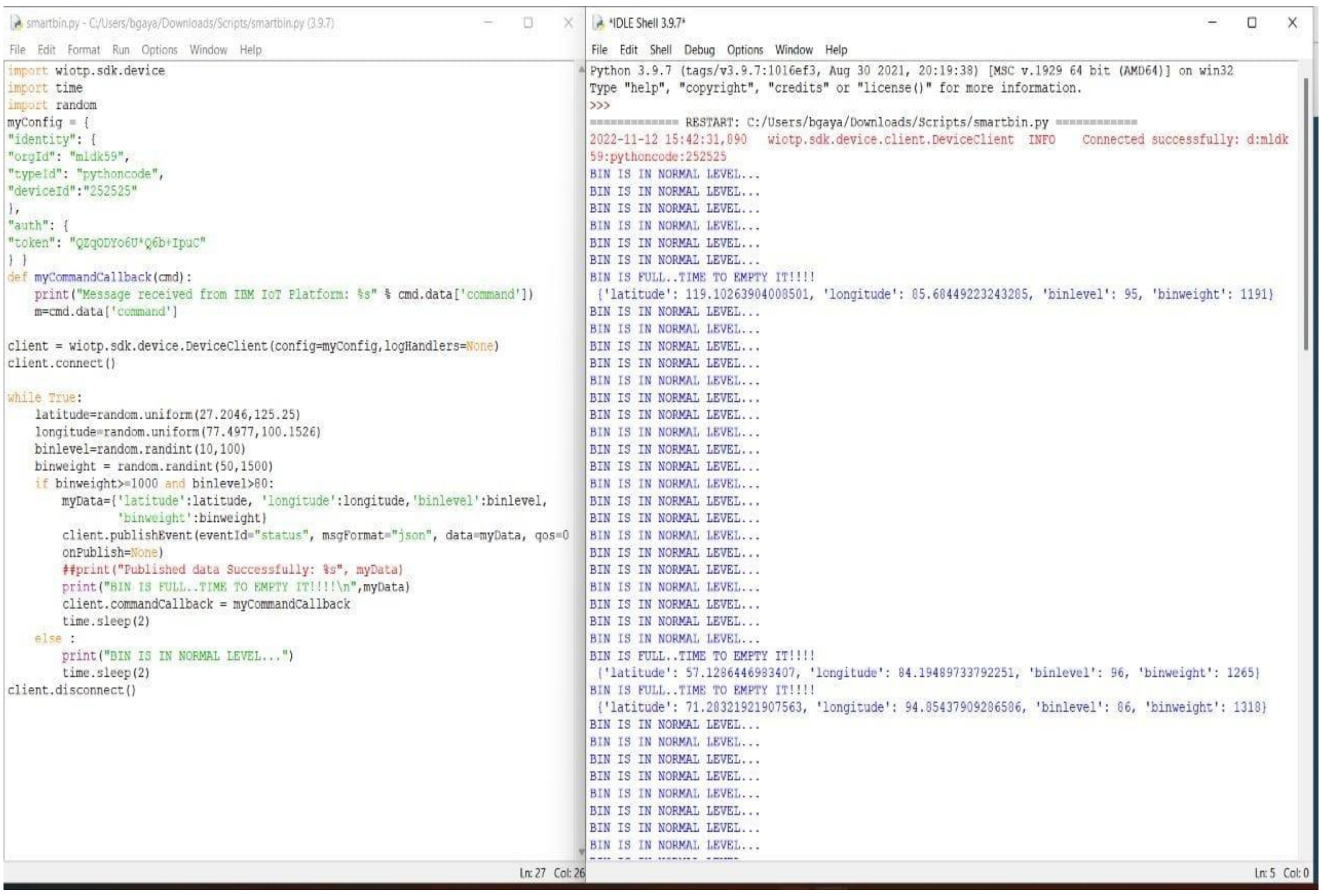
```
import wiotp.sdk.device
import time
import random
myConfig = {
"identity": {
"orgId": "mldk59",
"typeId": "pythoncode",
"deviceId":"252525"
},
"auth": {
"token": "QZqODYo6U*Q6b+IpuC"
} }
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
client.connect()

while True:
    latitude=random.uniform(27.2046,125.25)
    longitude=random.uniform(77.4977,100.1526)
    binlevel=random.randint(10,100)
    binweight = random.randint(50,1500)
    if binweight>=1000 and binlevel>80:
        myData={'latitude':latitude, 'longitude':longitude,'binlevel':binlevel,
                'binweight':binweight}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
        onPublish=None)
        ##print("Published data Successfully: %s", myData)
```

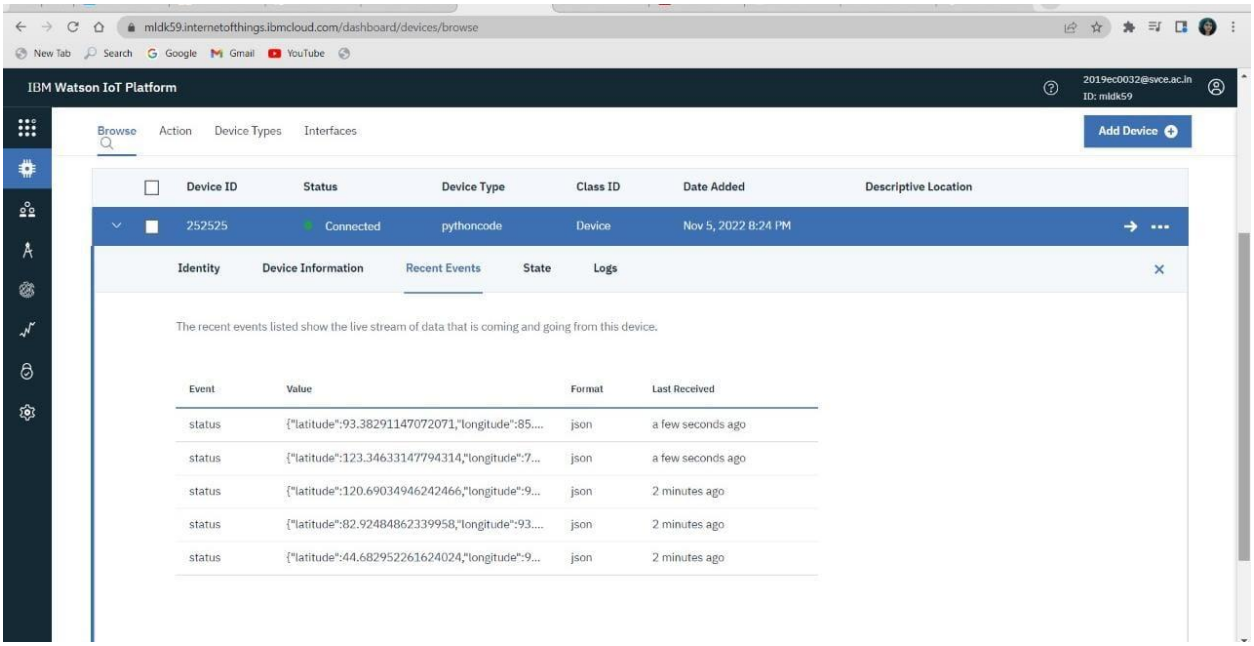
```
        print("BIN IS FULL..TIME TO EMPTY IT!!!!\n",myData)
        client.commandCallback = myCommandCallback
        time.sleep(2)
    else :
        print("BIN IS IN NORMAL LEVEL...")
        time.sleep(2)
client.disconnect()
```

Python IDE output:



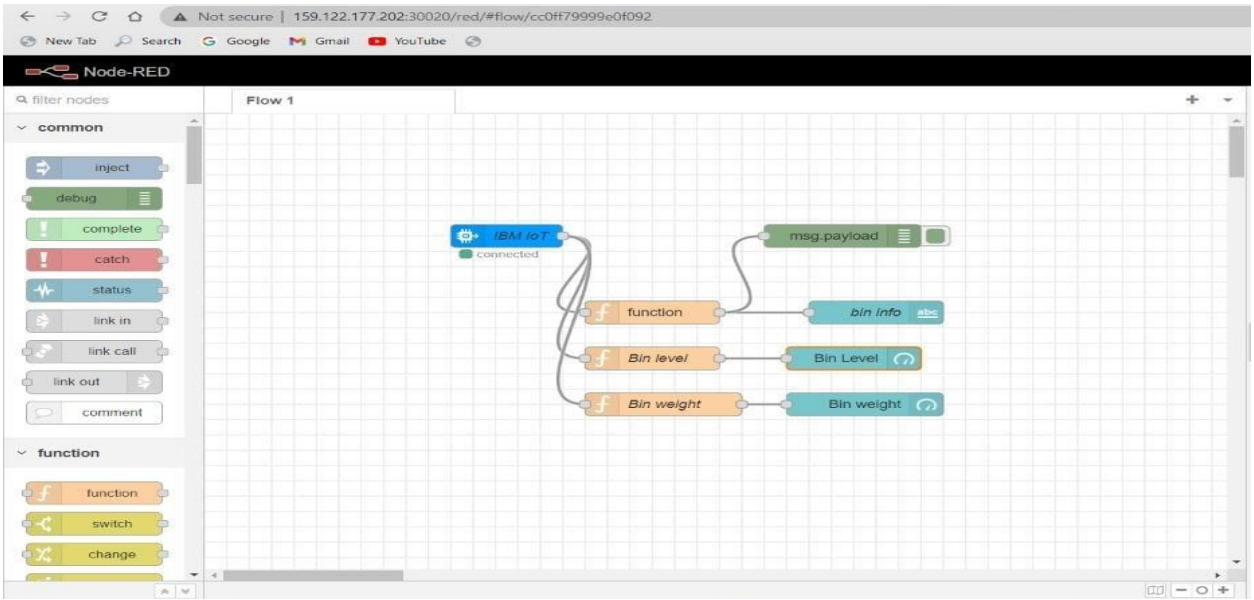
2. Data is transferred to IBM Watson IoT platform.

IBM Platform output:



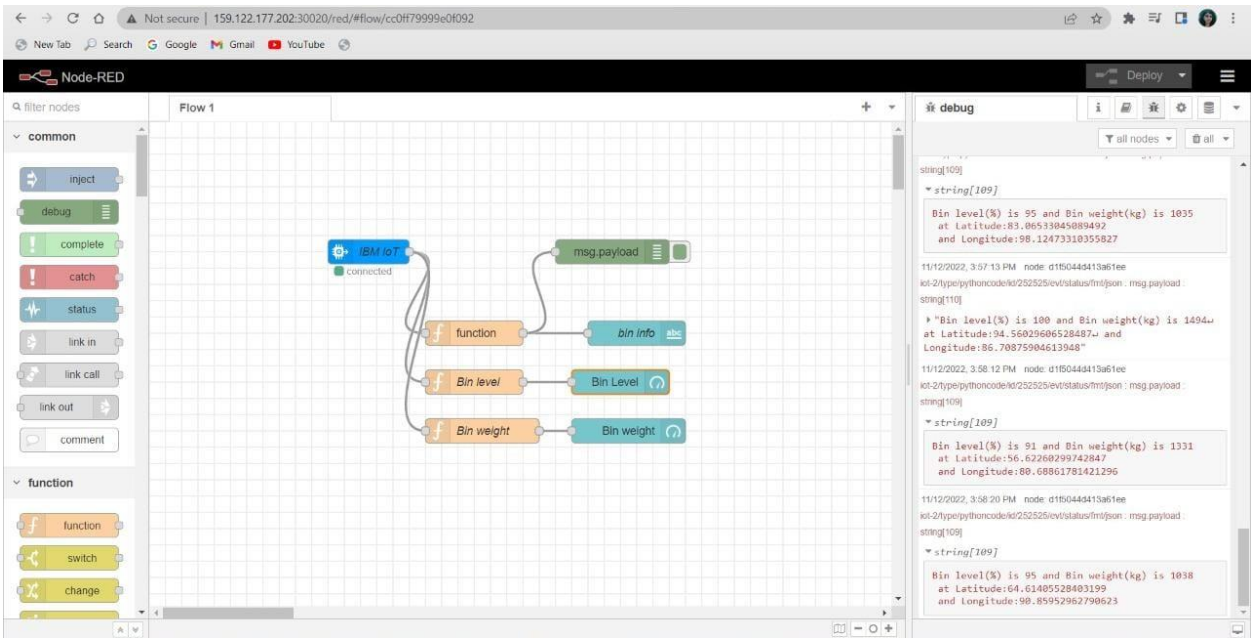
3. Data transfer from IBM Watson IOT platform and Python IDE to Node RED.

Node-RED:



4. Node-RED Connection setup for data transmission from IBM Watson IoT platform to Node-RED dashboard and viewing in Web UI .

Node-RED:



Web UI: