

SPRINT - 3

Date	12 NOV 2022
Team ID	PNT2022TMID05358
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:

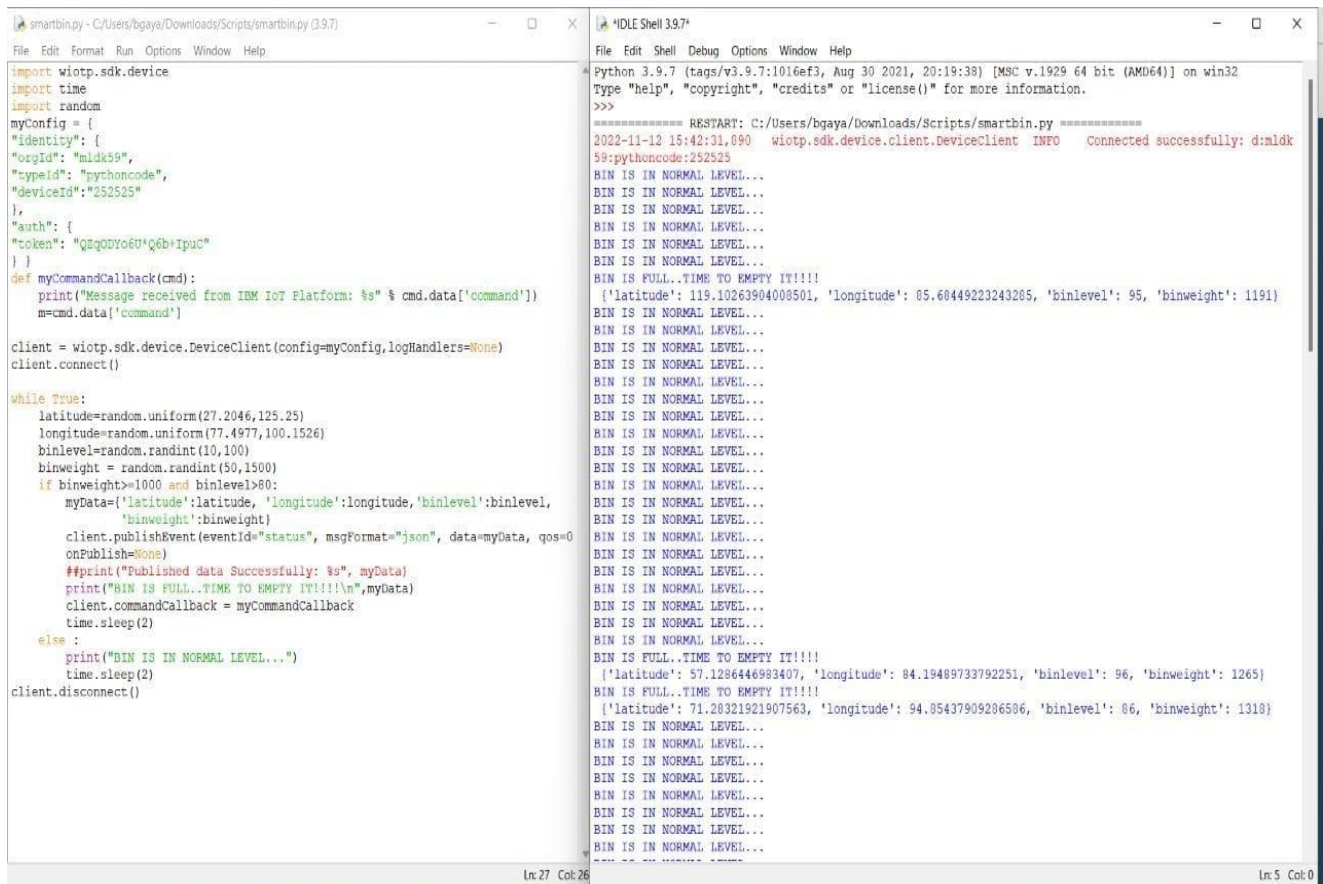
smartbin.py:

```
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()

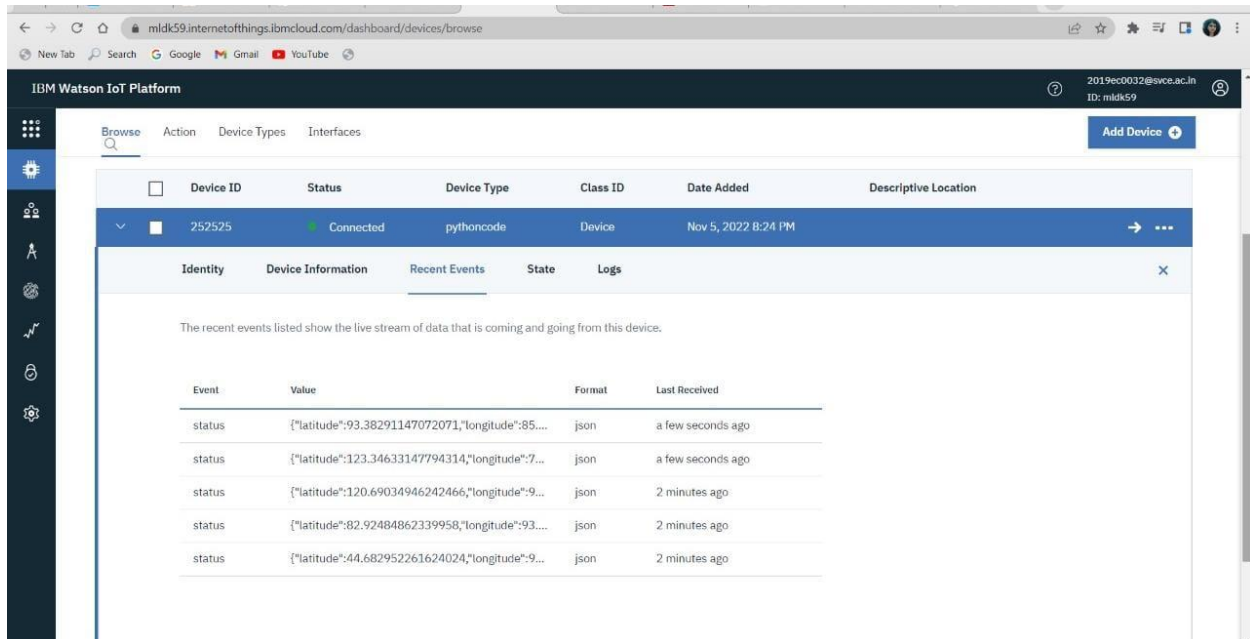
while True:
    latitude=random.uniform(27.2046,125.25)
    longitude=random.uniform(77.4977,100.1526)
    binlevel=random.randint(10,100)
    binweight = random.randint(50,1500)
    if binweight>=1000 and binlevel>80:
        myData={'latitude':latitude, 'longitude':longitude, 'binlevel':binlevel,
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

Python IDE output:



2. Data is transferred to IBM Watson IoT platform.

IBM Platform output:



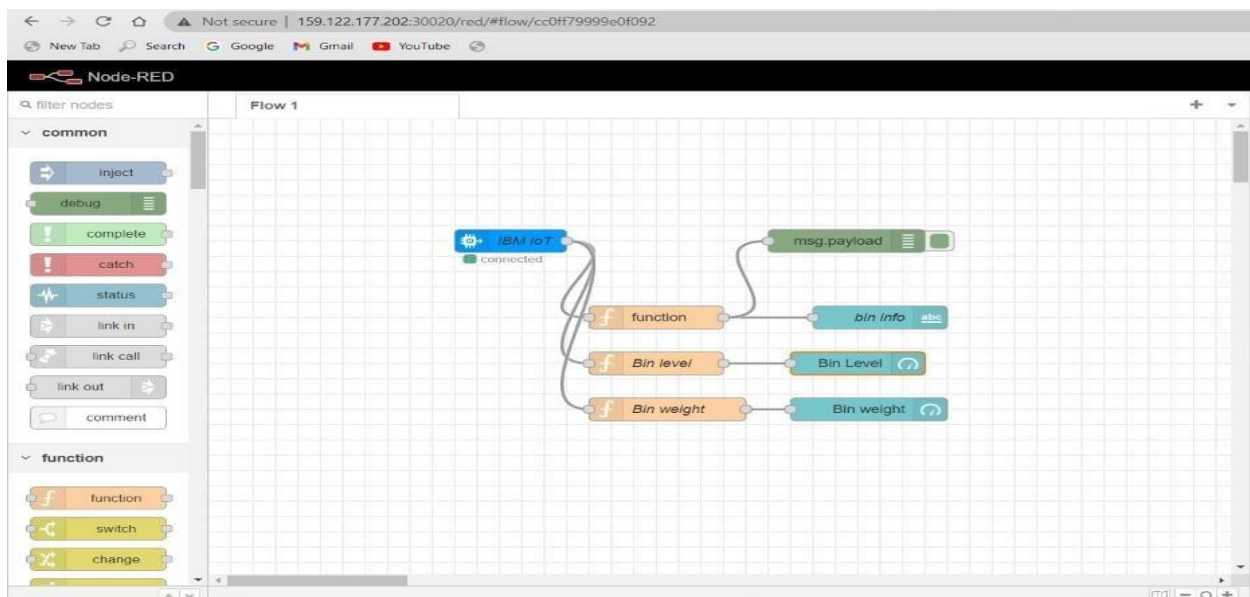
The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area displays a table of devices, with one device selected and its 'Recent Events' tab active. The events table shows a stream of data with columns for Event, Value, Format, and Last Received.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
252525	Connected	pythoncode	Device	Nov 5, 2022 8:24 PM	

Event	Value	Format	Last Received
status	{"latitude":93.38291147072071,"longitude":85....	json	a few seconds ago
status	{"latitude":123.34633147794314,"longitude":7...	json	a few seconds ago
status	{"latitude":120.69034946242466,"longitude":9...	json	2 minutes ago
status	{"latitude":82.92484862339958,"longitude":93...	json	2 minutes ago
status	{"latitude":44.682952261624024,"longitude":9...	json	2 minutes ago

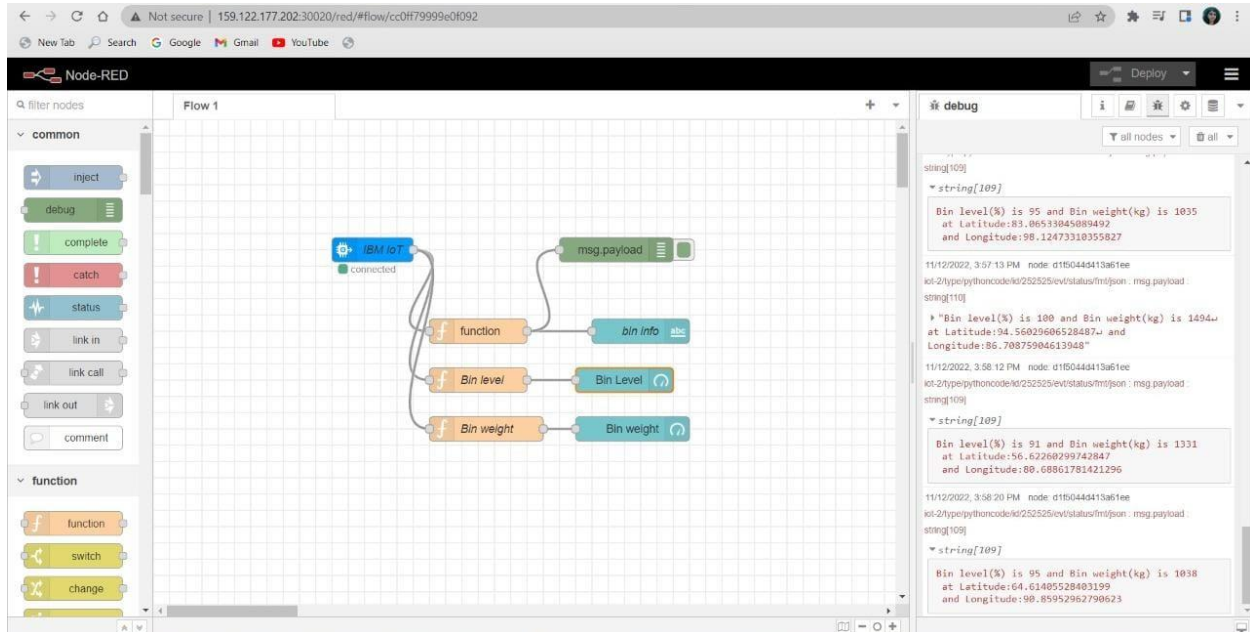
3. Data transfer from IBM Watson IOT platform and Python IDE to Node RED.

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:

