

# Python code to display Bin Location

|              |   |
|--------------|---|
| Team ID      | PNT2022TMID27888                                      |
| Project Name | Smart Waste Management System For Metropolitan Cities |

## DESCRIPTION:

The below python code display and publish the location (latitude and longitude) along with the bin values to the IBM IoT platform.

## PYTHON CODE:

```
Binlocation.py - C:\Python\Python37\Binlocation.py (3.7.4)
File Edit Format Run Options Window Help

import wiotp.sdk.device
import time
import random
import requests
import urllib.parse
address= ['Kodambakkam', 'T.nagar', 'West mambalam', 'vadapalani', 'ekkattuthangal']
myConfig = {
    "identity": {
        "orgId": "dluuh",
        "typeId": "SWMS",
        "deviceId": "6032"
    },
    "auth": {
        "token": "311519106032"
    }
}

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()

#Location=input("enter location: ")
#while(Location == address0):
for x in address:
    url = 'https://nominatim.openstreetmap.org/search/' + urllib.parse.quote(x) + '?format=json'
    response = requests.get(url).json()
    a = response[1]["lat"]
    b = response[1]["lon"]
    bin_stat = random.randint(0,100)
    In_percent = str(bin_stat)+ "%"
    myData={"Latitude":a, "Longitude":b, "Bin Status":In_percent}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully:", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

## OUTPUT:

```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Python\Python37\Bin\location.py =====
2022-11-11 15:05:56,492 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:dluuhi:SWMS:6032
Published data Successfully: {'Latitude': '13.0517176', 'Longitude': '80.2300054', 'Bin Status': '13%'}
Published data Successfully: {'Latitude': '13.03969', 'Longitude': '80.23565', 'Bin Status': '18%'}
Published data Successfully: {'Latitude': '13.038996', 'Longitude': '80.223169', 'Bin Status': '87%'}
Published data Successfully: {'Latitude': '13.0495316', 'Longitude': '80.211027', 'Bin Status': '66%'}
Published data Successfully: {'Latitude': '13.0169222', 'Longitude': '80.2054236', 'Bin Status': '41%'}
2022-11-11 15:06:11,326 wiotp.sdk.device.client.DeviceClient INFO Disconnected from the IBM Watson IoT Platform
2022-11-11 15:06:11,326 wiotp.sdk.device.client.DeviceClient INFO Closed connection to the IBM Watson IoT Platform
>>> |
```

## IBM WATSON CLOUD PLATFORM:

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Service Details - IBM Cloud', 'IBM Watson IoT Platform', and 'IBM'. The main content area shows the 'Browse' tab selected, displaying a list of devices. The device with ID 6032 is highlighted, showing its status as 'Disconnected' and its assignment to 'Assignment\_4'. Below the device list, the 'Recent Events' tab is selected, showing a stream of data events. The events table includes columns for 'Event', 'Value', 'Format', and 'Last Received'. The events are listed in descending order of time, with the most recent event at the top.

| Event  | Value  | Format | Last Received |
|--------|--|--------|---------------|
| status | {"Latitude":"13.0169222","Longitude":"80.2054..."} | json   | 9 minutes ago |
| status | {"Latitude":"13.0495316","Longitude":"80.2110..."} | json   | 9 minutes ago |
| status | {"Latitude":"13.038996","Longitude":"80.22316..."} | json   | 9 minutes ago |
| status | {"Latitude":"13.03969","Longitude":"80.23565..."}  | json   | 9 minutes ago |
| status | {"Latitude":"13.0517176","Longitude":"80.2300..."} | json   | 9 minutes ago |

0 Simulations running

IBM Watson IoT Platform

311519106032@smartinternz.com  
ID: dluuhi

Event Payload

Event Name: status

Time Received: Nov 11, 2022 3:06 PM

```
1 {  
2   "Latitude": "13.0169222",  
3   "Longitude": "80.2054236",  
4   "Bin Status": "41%",  
5 }
```

0 Simulations running

23323850

6032

Identity Device

The recent events listed

| Event  | Value |
|--------|-------|
| status | ["L   |
| status | ["L   |
| status | ["L   |
| status | ["L   |
| status | ["L   |

Type here to search

Rain off and on

ENG 03:19 PM 11-11-2022