

## SPRINT-3

Date	12 November 2022
Team ID	PNT2022TMID47478
Project Name	SMART SOLUTIONS FOR RAILWAYS

# A python code for publishing the location (latitude and longitude) data to the IBM IoT Platform :

```
PYTHON CODE FOR PROJECT.py - C:\python\Python37\PYTHON CODE FOR PROJECT.py (3.7.0)
File Edit Format Run Options Window Help

import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "jqgr6mg",
        "typeId": "b1lm3edevicetype",
        "deviceId": "MKSJ16"
    },
    "auth": {
        "token": "25214317"
    }
}

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()

def pub(data):
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)

while True:
    myData={'name':'Train1','lat': 17.6387448,'lon': 78.4754336}
    pub(myData)
    time.sleep(3)
    #myData={'name':'Train2','lat':17.6387448,'lon': 78.4754336}
    #pub(myData)
    #time.sleep(3)
    myData={'name':'Train1','lat': 17.6341908,'lon': 78.4744722}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat': 17.6340889,'lon': 78.4745052}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat': 17.6248626,'lon': 78.4720259}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat': 17.6188577,'lon': 78.4698726}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat': 17.6132382,'lon': 78.4707318}
    pub(myData)
    time.sleep(3)
    client.commandCallback = myCommandCallback
client.disconnect()
```

# OUTPUT OF PYTHON CODE:

```
*Python 3.7.0 Shell*
File Edit Shell Debug Options Window Help
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6340889, 'lon': 78.4744722)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6240626, 'lon': 78.4720259)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6180577, 'lon': 78.4690726)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6307448, 'lon': 78.4754336)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6341908, 'lon': 78.4744722)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6340889, 'lon': 78.4745052)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6240626, 'lon': 78.4720259)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6180577, 'lon': 78.4690726)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318)
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Published data Successfully: %s ('name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318)
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Published data Successfully: %s ('name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6307448, 'lon': 78.4754336)
Ln: 5 Col: 0
```

# IBM IOT WATSON OUTPUT USING PYTHON CODE:

IBM Watson IoT Platform

monishkumars@student.atmdm.in  
ID: jg6mg

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ⓘ

Browse Action Device Types Interfaces

Add Device

Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	Device Class	Firmware Version	Hardware Version
MKSJ16	Connected	l11m3edevicetype	Device	Nov 3, 2022 12:42 PM		monishkumars@student.atmdm.in			

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	['name': 'Train1', 'lat': 17.6180577, 'lon': 78.469...	json	a few seconds ago
status	['name': 'Train1', 'lat': 17.6240626, 'lon': 78.472...	json	a few seconds ago
status	['name': 'Train1', 'lat': 17.6340889, 'lon': 78.474...	json	a few seconds ago
status	['name': 'Train1', 'lat': 17.6341908, 'lon': 78.474...	json	a few seconds ago
status	['name': 'Train1', 'lat': 17.6307448, 'lon': 78.475...	json	a few seconds ago

generaldevice

Disconnected

generaldevice

Device

Nov 8, 2022 12:01 PM

monishkumars@student.atmdm.in

# PYTHON CODE FOR SCANNER:

```
scanning code for project.py - C:\python\Python37\scanning code for project.py (3.7.0)
File Edit Format Run Options Window Help
import cv2
import numpy as np
import time
import pyzbar.pyzbar as pyzbar
from ibmcloudant.cloudant_v1 import CloudantV1
from ibmcloudant import CouchDbSessionAuthenticator
from ibm_cloud_sdk_core.authenticators import BasicAuthenticator

authenticator = BasicAuthenticator('apikey-v2-16u3crmdpkghhxfdi kvpssoh5fwezrmuup5fv5g3ubz', 'b0ab119f45d3e6255eabb978')
service = CloudantV1(authenticator=authenticator)

service.set_service_url('https://apikey-v2-16u3crmdpkghhxfdikvpssoh5fwezrmuup5fv5g3ubz:b0ab119f45d3e6255eabb978e7e2f0')

cap = cv2.VideoCapture(0)
font = cv2.FONT_HERSHEY_PLAIN

while True:
    _, frame = cap.read()
    decodedObjects = pyzbar.decode(frame)
    for obj in decodedObjects:
        #print ("Data", obj.data)
        a=obj.data.decode('UTF-8')
        cv2.putText(frame, "Ticket", (50, 50), font, 2, (255, 0, 0), 3)

        #print (a)
        try:
            response = service.get_document(
                db='booking',
                doc_id = a
            ).get_result()
            print(response)
            time.sleep(5)
        except Exception as e:
            print ("Not a Valid Ticket")
            time.sleep(5)

    cv2.imshow("Frame",frame)
    if cv2.waitKey(1) & 0xFF ==ord('q'):
        break
cap.release()
cv2.destroyAllWindows()
client.disconnect()

Ln: 1 Col: 0
```

