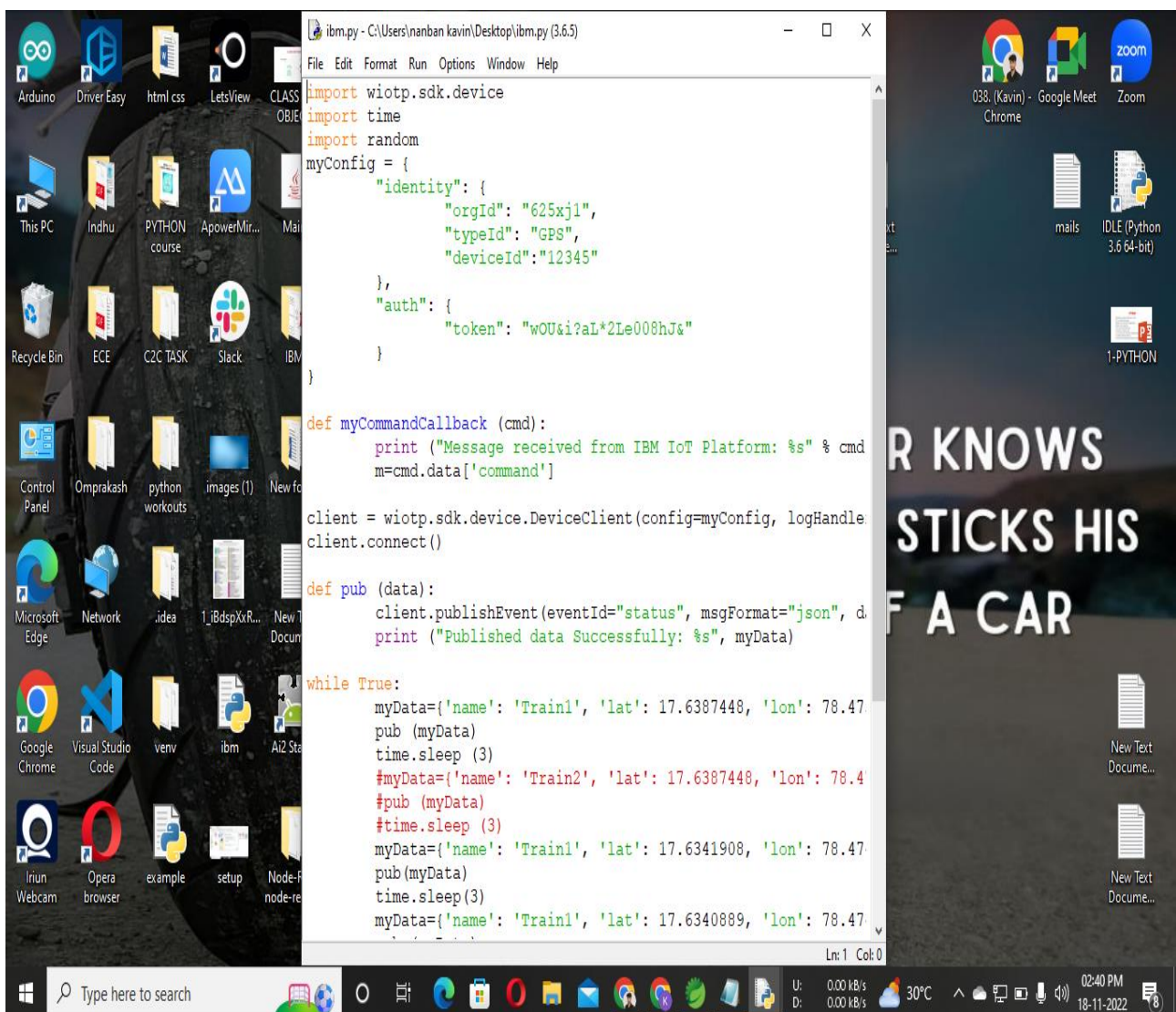


DEVELOPED PYTHON SCRIPT

Date	13 NOVEMBER 2022
Team ID	PNT2022TMID13493
Title	SMART SOLUTION FOR RAILWAYS



The screenshot shows a Windows desktop environment. In the center, a terminal window titled 'ibm.py - C:\Users\nanban kavin\Desktop\ibm.py (3.6.5)' is open, displaying a Python script. The script imports 'wiotp.sdk.device', 'time', and 'random'. It defines a 'myConfig' dictionary with 'identity' (orgId: '625xj1', typeId: 'GPS', deviceId: '12345') and 'auth' (token: 'wOU&i?al*2Le008hJ&'). The script then defines a 'myCommandCallback' function, initializes a 'DeviceClient', and enters a 'while True' loop that publishes data to the IBM IoT Platform. The data is a dictionary with 'name', 'lat', and 'lon' fields. The desktop background is a dark image of a person. Various application icons are visible on the desktop, including Arduino, Driver Easy, html css, LetsView, CLASS, OBJE, This PC, Indhu, PYTHON course, ApowerMir..., Mail, Recycle Bin, ECE, C2C TASK, Slack, IBM, Control Panel, Omprakash, python workouts, images (1), New f..., Microsoft Edge, Network, idea, i_BdspXsR..., New T..., Google Chrome, Visual Studio Code, venv, ibm, AI2 Sta..., Iriun Webcam, Opera browser, example, setup, and Node-f... The taskbar at the bottom shows the search bar, task view button, and several open applications. The system tray on the right indicates the time as 02:40 PM on 18-11-2022, with a temperature of 30°C.

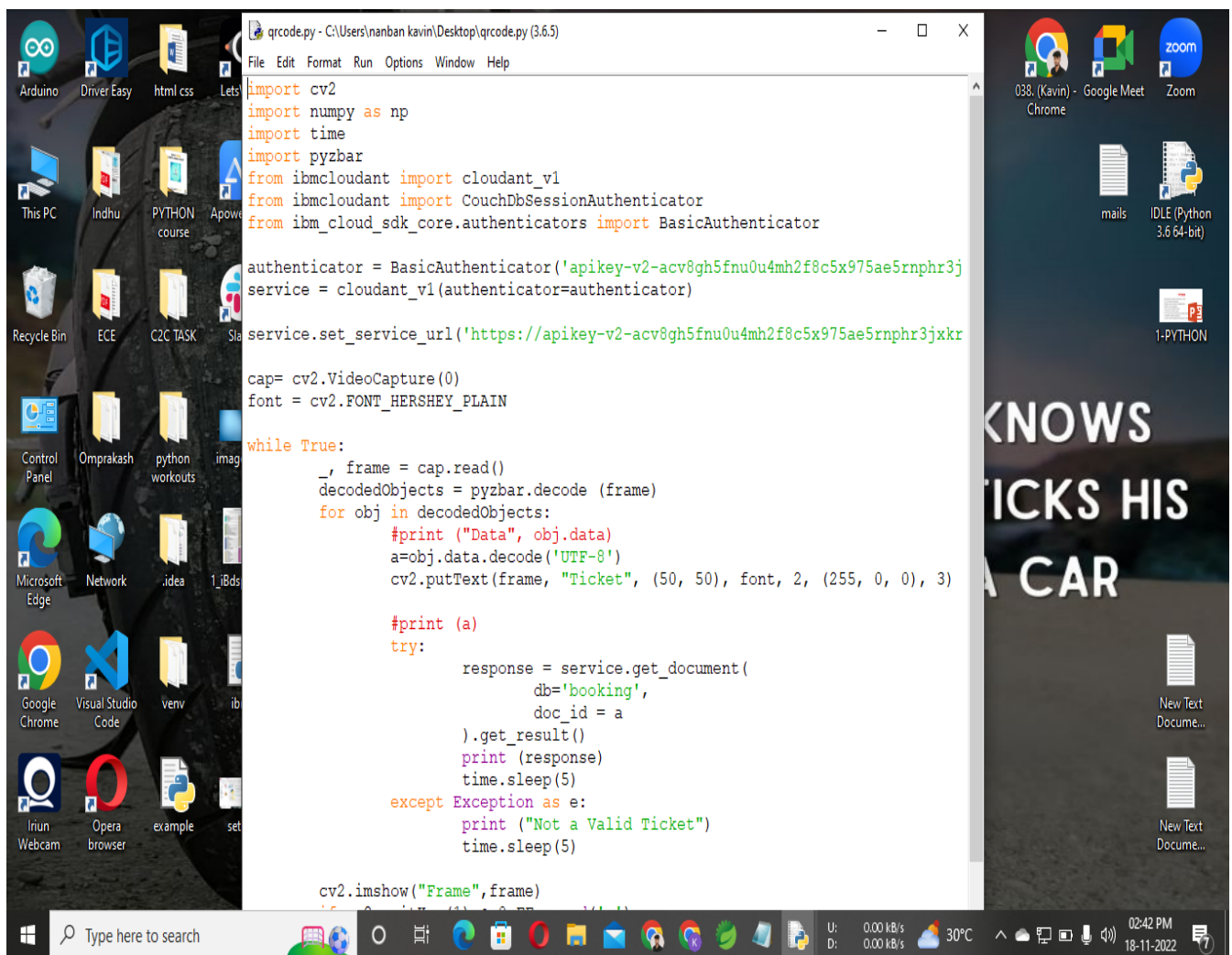
```
ibm.py - C:\Users\nanban kavin\Desktop\ibm.py (3.6.5)
File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "625xj1",
        "typeId": "GPS",
        "deviceId": "12345"
    },
    "auth": {
        "token": "wOU&i?al*2Le008hJ&"
    }
}

def myCommandCallback (cmd):
    print ("Message received from IBM IoT Platform: %s" % cmd)
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandle=
client.connect()

def pub (data):
    client.publishEvent(eventId="status", msgFormat="json", d
    print ("Published data Successfully: %s", myData)

while True:
    myData={'name': 'Train1', 'lat': 17.6387448, 'lon': 78.47
    pub (myData)
    time.sleep (3)
    #myData={'name': 'Train2', 'lat': 17.6387448, 'lon': 78.4
    #pub (myData)
    #time.sleep (3)
    myData={'name': 'Train1', 'lat': 17.6341908, 'lon': 78.47
    pub (myData)
    time.sleep (3)
    myData={'name': 'Train1', 'lat': 17.6340889, 'lon': 78.47
```



```
*Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6248626, 'lon': 78.4720259}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6188577, 'lon': 78.4698726}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6387448, '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': 17.6248626, 'lon': 78.4720259}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6188577, 'lon': 78.4698726}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6387448, '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': 17.6248626, 'lon': 78.4720259}
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Published data Successfully: %s {'name': 'Train1', 'lat': 17.6341908, 'lon': 78.4744722}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6340889, 'lon': 78.4745052}
Ln: 54 Col: 0
```

IBM:

```
import wiotp.sdk.device

import time
import random
myConfig = {
    "identity": {
        "orgId": "625xj1",
        "typeId": "GPS",
        "deviceId": "12345"
    },
    "auth": {
        "token": "wOU&i?aL*2Le008hJ&"
    }
}

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 ()
```

QR CODE:-

```
import cv2
import numpy as np
import time
import pyzbar
from ibmcloudant import cloudant_v1
from ibmcloudant import CouchDbSessionAuthenticator
from ibm_cloud_sdk_core.authenticators import BasicAuthenticator

authenticator = BasicAuthenticator('apikey-v2-
acv8gh5fnu0u4mh2f8c5x975ae5rnphr3jxkr5d9ril','c1dd4db6e976d915751882f688e410ec')
service = cloudant_v1(authenticator=authenticator)
```

```
service.set_service_url('https://apikey-v2-  
acv8gh5fnu0u4mh2f8c5x975ae5rnphr3jxkr5d9ril:c1dd4db6e976d915751882f688e410ec@a  
dad2af9-59c4-41bb-b4b4-806f0d6962b2-bluemix.cloudantnosqldb.appdomain.cloud')
```

```
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()
```

