The Python Script

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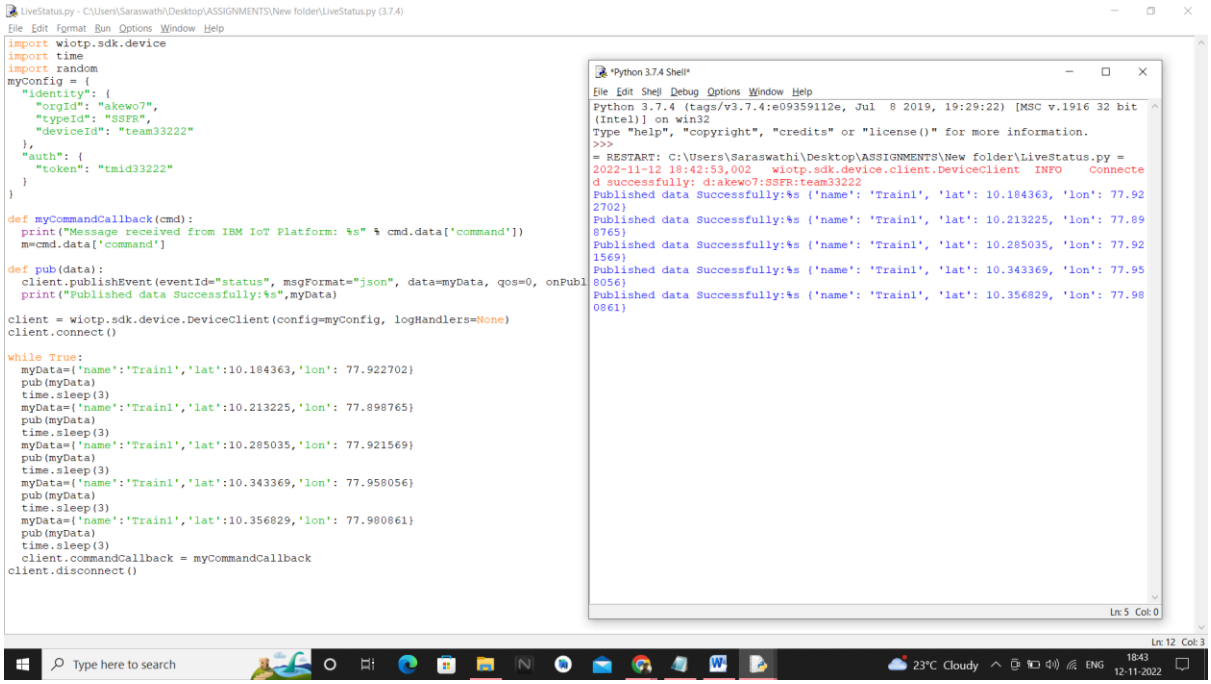
Team ID	PNT2022TMID33222
Project	Smart Solutions For Railways

Python code for publishing the location (latitude and longitude) data to the IBM IoT Platform.

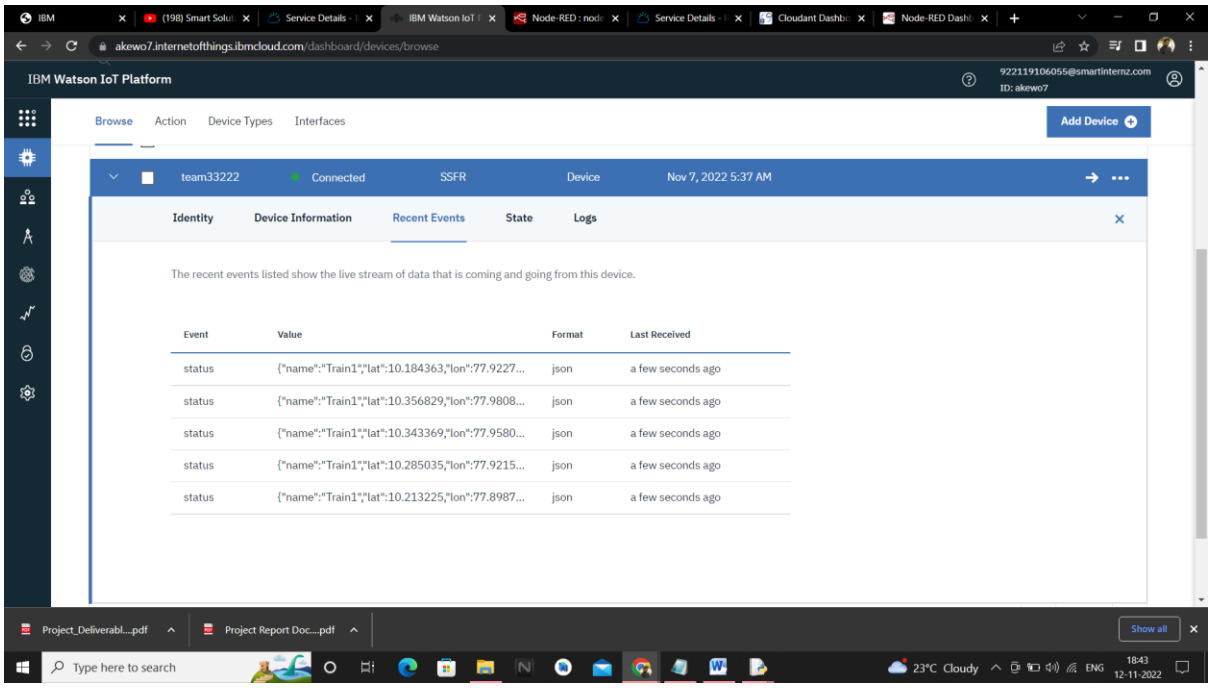
```
import wiotp.sdk.device
import time
import random
myConfig = {
  "identity": {
    "orgId": "akewo7",
    "typeId": "SSFR",
    "deviceId": "team33222"
  },
  "auth": {
    "token": "tmid33222"
  }
}
def myCommandCallback(cmd):
  print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
  m=cmd.data['command']
def pub(data):
  client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
  print("Published data Successfully:%s",myData)
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
  myData={'name':'Train1','lat':10.184363,'lon': 77.922702}
  pub(myData)
  time.sleep(3)
  myData={'name':'Train1','lat':10.213225,'lon': 77.898765}
  pub(myData)
  time.sleep(3)
  myData={'name':'Train1','lat':10.285035,'lon': 77.921569}
  pub(myData)
  time.sleep(3)
  myData={'name':'Train1','lat':10.343369,'lon': 77.958056}
  pub(myData)
  time.sleep(3)
  myData={'name':'Train1','lat':10.356829,'lon': 77.980861}
  pub(myData)
  time.sleep(3)
  client.commandCallback = myCommandCallback
client.disconnect()
```

Output:

Python IDLE output:



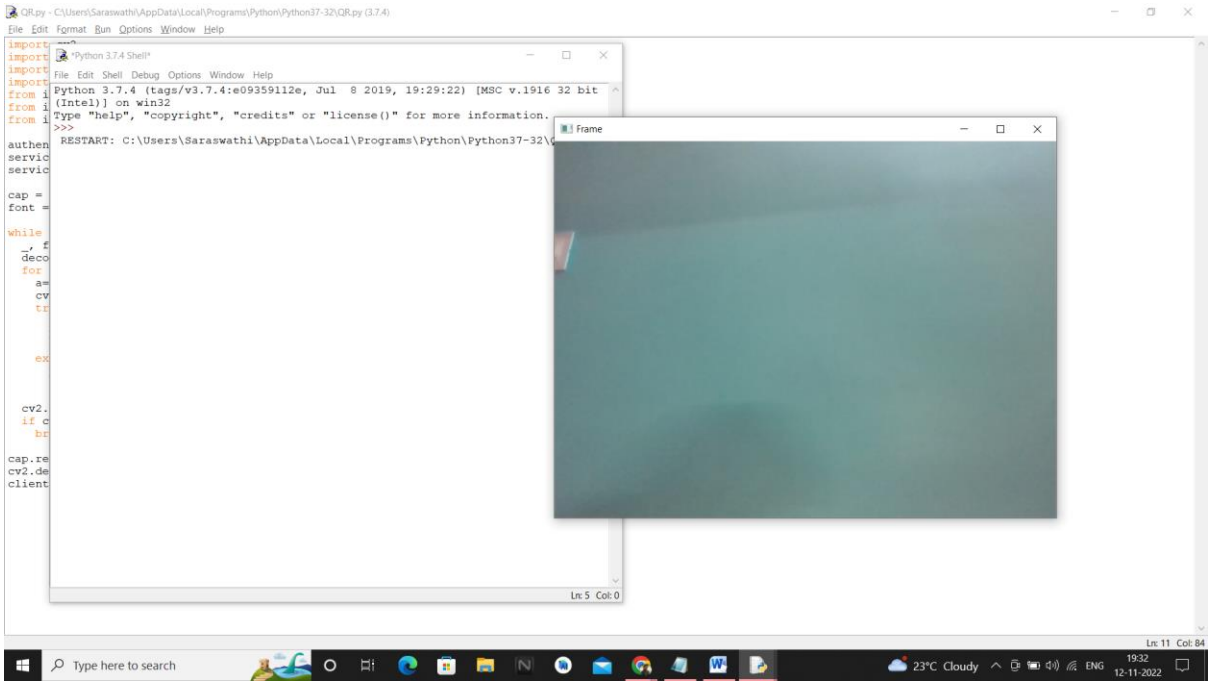
IBM Watson Output:



Python code to read the QR Code and fetch the data from Cloudant DB

```
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-
iufbfeavfqqzri2a1toob4eqpp1o0os7qa33jorulvz','4b171c068dcccc74c1a0155dae6533f5')
service = CloudantV1(authenticator=authenticator)
service.set_service_url('https://245c54f0-3778-46cb-bfd9-6e1bfca37902-
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:
    a=obj.data.decode('UTF-8')
    cv2.putText(frame, "Ticket", (50,50), font, 2, (255, 0, 0), 3)
    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()
```

Output:


Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
RESTART: C:\Users\Saraswathi\AppData\Local\Programs\Python\Python37-32\
Frame
Type here to search
23°C Cloudy
ENG
19:32
12-11-2022