Coding and Solution

TEAM ID	PNT2022TMID33826
PROJECT NAME	Smart Waste Management System For Metropolitan Cities

PYTHON CODE:

sys.exit()

```
import time import sys
import ibmiotf.application import ibmiotf.device import random

#Provide your IBM Watson Device Credentials organization = "3f3tah"
deviceType = "sensor" deviceId = "123456" authMethod = "token" authToken = "1234567890"

# Initialize GPIO

print("Command received: %s" % cmd.data['command'])
status=cmd.data['command'] if status=="binfull":
print (" EMPTY THE BIN
```

Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times

```
deviceCli.connect()
while True:
#Get Sensor Data from DHT11
binlevel=random.randint(10,100) locationId=random.randint(1,5) district="Tirunelveli"
state="Tamilnadu" country="India"
if locationId == 1: latitude=8.7060581 longitude=77.7633162 village="VM Chathiram"
elif locationId == 2: latitude=8.7066676 longitude=77.732578 village="Perumalpuram"
elif locationId == 3: latitude=8.7199159
village="Palayamkottai" elif locationId == 4:
latitude=8.7282671 longitude=77.7180244 village="Vannarpettai"
elif locationId == 5: latitude=8.7289086 longitude=77.6745726 village="Nellai Town"
else:
print("No location Found!!")
data = { 'latitude' : latitude, 'longitude': longitude, 'binlevel':
binlevel, 'village':village, 'district':district, 'state':stat e, 'country':country }
#print data
def myOnPublishCallback():
print ("Published Latitude = %s " % latitude, "Longitude = %s % %" % longitude, "Binlevel
= %s" % binlevel, "village = %s" % village, "district= %s" % district, "state = %s" %
state, "country = %s" % country, "to IBM Watson\n")
if binlevel >= 90: data={'Latitude':latitude,
'Longitude':longitude, 'Binlevel':binlevel, 'Village':village, 'District':district,
'State':state,'Country':country}
EMPTY THE BIN IMMEDIATELY-----
print("
  n''
deviceCli.commandCallback = myCommandCallback
time.sleep(5) else:
print("BIN IS IN NORMAL LEVEL\n")
time.sleep(5)
```

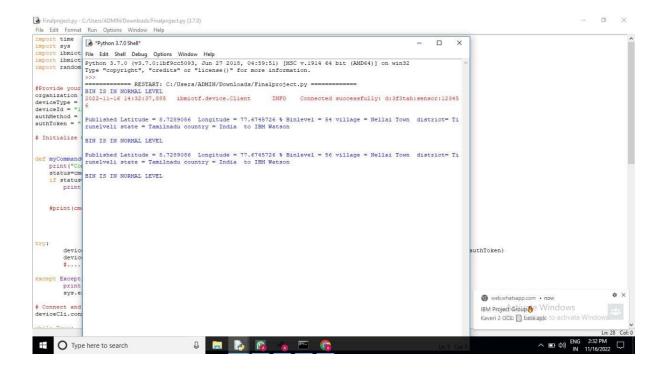
success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

if not success:

print("Not connected to IoTF") time.sleep(1)

Disconnect the device and application from the cloud deviceCli.disconnect()

Code Output:



- ø × Python 3.7.0 Shell* File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:lbf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information. = RESTART: C:/Users/ADMIN/Downloads/Finalproject.py ===== BIN IS IN NORMAL LEVEL 2022-11-16 14:35:24,495 ibmiotf.device.Client INFO Connected successfully: d:3f3tah:sensor:123456 Published Latitude = 8.7066676 Longitude = 77.732578 % Binlevel = 65 village = Perumalpuram district= Tirunelveli state = Tamilnadu country = India to IBM Watson BIN IS IN NORMAL LEVEL Published Latitude = 8.7066676 Longitude = 77.732578 % Binlevel = 61 village = Perumalpuram district= Tirunelveli state = Tamilnadu country = India to IBM Watson BIN IS IN NORMAL LEVEL Published Latitude = 8.7282671 Longitude = 77.7180244 % Binlevel = 41 village = Vannarpettai district= Tirunelveli state = Tamilnadu country = India to IBM Watson Published Latitude = 8.7199159 Longitude = 77.725674 % Binlevel = 70 village = Palayamkottai district= Tirunelveli state = Tamilnadu country = India to IBM Watson BIN IS IN NORMAL LEVEL Published Latitude = 8.7066676 Longitude = 77.732578 % Binlevel = 34 village = Perumalpuram district= Tirunelveli state = Tamilnadu country = India to IBM Watson BIN IS IN NORMAL LEVEL Published Latitude = 8.7060581 Longitude = 77.7633162 % Binlevel = 61 village = VM Chathiram district= Tirunelveli state = Tamilnadu country = India to IBM Watson BIN IS FULL -----EMPTY THE BIN IMMEDIATELY-----Activate Windows

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