Project Development phase

Date	09 November 2022
Team ID	PNT2022TMID41308
Project Name	Project – SMART WASTE MANAGEMENT FOR METROPOLITAN CITIES
Maximum Marks	4 Marks

Delivering of Sprint-2

Python script:

- We create a python code to detect the level, weight of the bin
- Send the status of the bin to the IBM Watson using python script

Python code (sending status of the bin):

```python
 import time

import sys

import ibmiotf.application

import ibmiotf.device

import random


#Provide your IBM Watson Device Credentials

organization = "pb6xw8"

deviceType = "efgh"

deviceId = "1234"

authMethod = "token"

authToken = "12345678"

try:

        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId,
"auth-method": authMethod, "auth-token": authToken}
```

```python
        deviceCli = ibmiotf.device.Client(deviceOptions)
        #.............................................


except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()




# Connect and send a datapoint "hello" with value "world" into the cloud as an
event of type "greeting" 10 times
deviceCli.connect()
while True:
    level=random.randint(1,100)
    weight=random.randint(1,100)
    if(level<30):
        level_status="low level"
        print("level_status=low level garbage")
    elif(level>30)and(level<80):
        level_status="medium level garbage"
        print("level_status=low level garbage")
    else:
        level_status="high level garbage"
        print("level_status=high level garbage")
    if (weight<30):
        weight_status="low level"
```

```python
            print("weight_status=low level garbage")
        elif(weight>30)and(weight<80):
            weight_status="medium level garbage"
            print("weight_status=low level garbage")
        else:
            weight_status="high level garbage"
            print("weight_status=high level garbage")
    data={'level':level,'level_status':level_status,'weight':weight,'weight_status':weight_status }
    def myOnpublishCallback():
        print ("level=%s m"%level,"weight=%s kg"%weight , "to IBM watson" )
        success=deviceCli.publishEvent("project", "json", data, qos=0,
    on_publish=myOnpublishCallback)
        if not success:
                print("not connection last from sensor to IBM IOT")


        time.sleep(10)
    # Disconnect the device and application from the cloud
    deviceCli.disconnect()
```

1234   Disconnected   efgh   Device   4 Nov 2022 11:10

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
project	{"level":86,"level_status":"high level garbage","w...	json	a few seconds ago
project	{"level":30,"level_status":"high level garbage","w...	json	a few seconds ago
project	{"level":87,"level_status":"high level garbage","w...	json	a few seconds ago
project	{"level":10,"level_status":"low level","weight":16...	json	a few seconds ago
project	{"level":50,"level_status":"medium level garbage...	json	a few seconds ago

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Python 3.7.0 Shell

File   Edit   Shell   Debug   Options   Window   Help

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD6
4)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======= RESTART: C:/Users/91934/Documents/PYTHON/SPRINT 2 TEST CODE.py =======
level_status=low level garbage2022-11-10 13:09:05,297   ibmiotf.device.Client
   INFO    Connected successfully: d:pb6xw8:efgh:1234

weight_status=low level garbage
level=50 m weight=4 kg to IBM watson
level_status=low level garbage
weight_status=low level garbage
level=10 m weight=16 kg to IBM watson
level_status=high level garbage
weight_status=high level garbage
level=87 m weight=90 kg to IBM watson
level_status=high level garbage
weight_status=high level garbage
level=30 m weight=88 kg to IBM watson
```