Final Delivery

Date	19 November 2022
Team ID	PNT2022TMID49521
Project Name	IOT – Smart Waste Management Systems for Metropolitan Cities

1. Final Code for Project

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
#IBM Watson Device Credentials
organization = "sfouh6"
deviceType = "Python"
deviceId = "9238"
authMethod = "token"
authToken = "vishnuprabhu923819106057"\\
try:
       deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-
token": authToken}
       deviceCli = ibmiotf.device.Client(deviceOptions)
       #.....
except Exception as e:
       print("Caught exception connecting device: %s" % str(e))
       sys.exit()
# Connect and send a datapoint
deviceCli.connect()
```

while True:

print("\nDon't use any capital letters to given an input \nSenosr sensing gas is") #Unavailable of sensors in the wokwi and tinkercad, we give inputs manually

```
detect = input()
  Sensing = () #Detecting Harmful Wastage
  Location_info = () #Sending Location & Contact information
  if detect == "ammonia":
                            #Harmful material sensing by MQ-137 gas sensor
    Sensing = "Harmful Waste is detected"
    Location_info = "7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9876123450"
  elif detect == "hydrogen sulfide": #Harmful material sensing by MQ-136 gas sensor
    Sensing = "Harmful Waste is detected"
    Location_info = "7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9876123450"
  elif detect == "methane": #Harmful material sensing by TGS-2611 gas sensor
    Sensing = "Harmful Waste is detected"
    Location_info = "7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9876123450"
  else:
    Sensing = "Harmful Waste is not detected"
    Location_info = "Everything is normal in the particular house"
  data = { 'Sensing' : Sensing, 'Location info' : Location info}
    #print data
  def myOnPublishCallback():
    print ("Published Sensing data - %s " % Sensing, "\nLocation_info - %s" %Location_info, "to IBM Watson")
  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()
```

Disconnect the device and

application from the cloud

deviceCli.disconnect()

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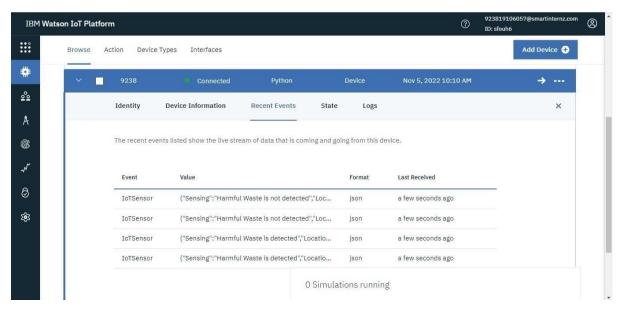
```
X
sprint 2.py - C:\Users\ELCOT\Desktop\Smart Waste Management System for Metropolitan cities\Z - Programmaing\Sensing Program\sprint 2.py (3.7.0)
File Edit Format Run Options Window Help
 except Exception as e:
        print("Caught exception connecting device: %s" % str(e))
        sys.exit()
    print("\nDon't use any capital letters to given an input \nSenosr sensing gas is") #Unavailable of sensors in the wokwi and tinkercad, we give inputs manually detect = input()
    Sensing = "Harmful Waste is not detected"

Location_info = "7-1-139, lst street, Mangayarkarasi Nagar, Paravai, Madurai. & 9876123450"
    data = { 'Sensing' : Sensing, 'Location_info' : Location_info}
    #print data
def myOnPublishCallback():
    print ("Published Sensing data - %s " % Sensing, "\nLocation_info - %s" %Location_info, "to IEM Watson")
    success = deviceCli.publishEvent("IoTSensor", "ison", data, gos=0, on publish=mvOnPublishCallback)
    if not success:
    print("Not connected to IoTF")
time.sleep(1)
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

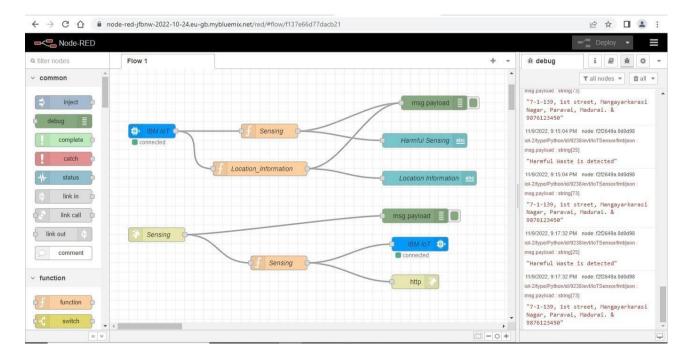
Output in Python Shell Module:

```
*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\ELCOT\Desktop\Smart Waste Management System for Metropolitan
cities\Z - Programmaing\Sensing Program\sprint 2.py
Don't use any capital letters to given an input
Senosr sensing gas is2022-11-05 20:39:42,254
                                                                             INFO
                                                ibmiotf.device.Client
 Connected successfully: d:sfouh6:Python:9238
ammonia
Published Sensing data - Harmful Waste is detected
Location_info - 7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9
876123450 to IBM Watson
Don't use any capital letters to given an input
Senosr sensing gas is
methane
Published Sensing data - Harmful Waste is detected
Location_info - 7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9
876123450 to IBM Watson
Don't use any capital letters to given an input
Senosr sensing gas is
chlorine
Published Sensing data - Harmful Waste is not detected
Location_info - 7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9
876123450 to IBM Watson
Don't use any capital letters to given an input
Senosr sensing gas is
sulfide
Published Sensing data - Harmful Waste is not detected
Location_info - 7-1-139, 1st street, Mangayarkarasi Nagar, Paravai, Madurai. & 9
876123450 to IBM Watson
Don't use any capital letters to given an input
Senosr sensing gas is
```

Output in IBM IOT Cloud Recent Events:



Output in Node-Red Debug:



Output in Web UI:

