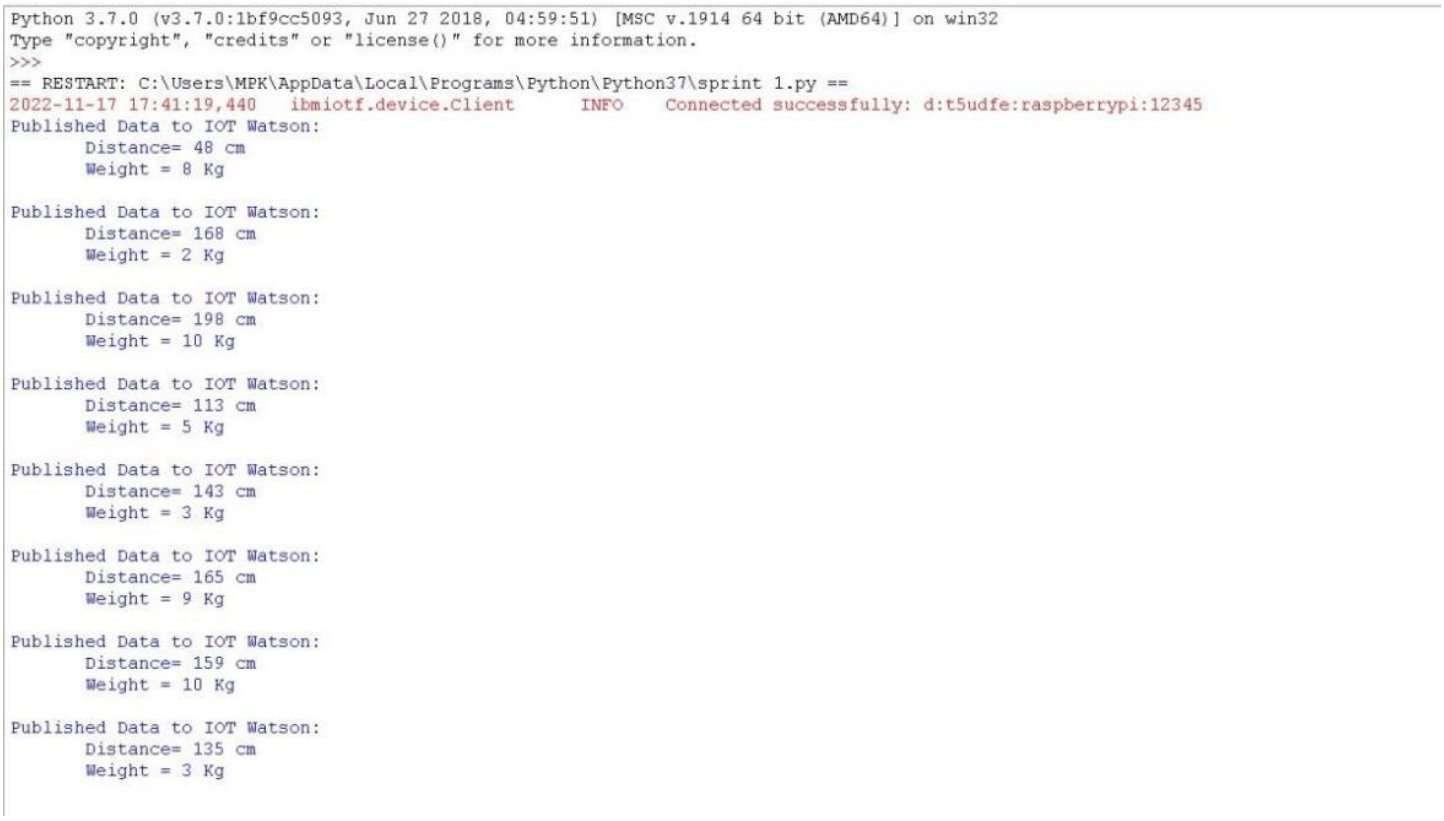
SPRINT 1

Team Id	PNT2022TMID21058
Project Name	Smart Waste Management System for Metropolitan Cities

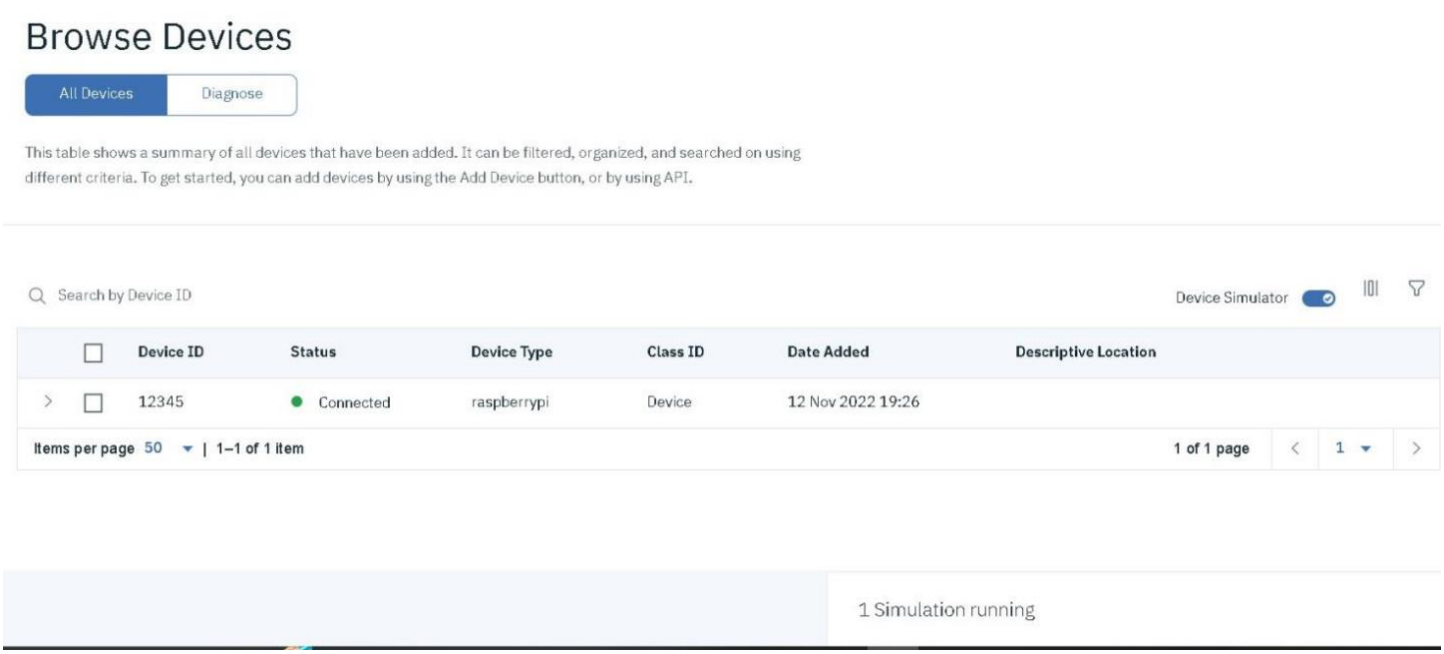
PYTHON CODE:

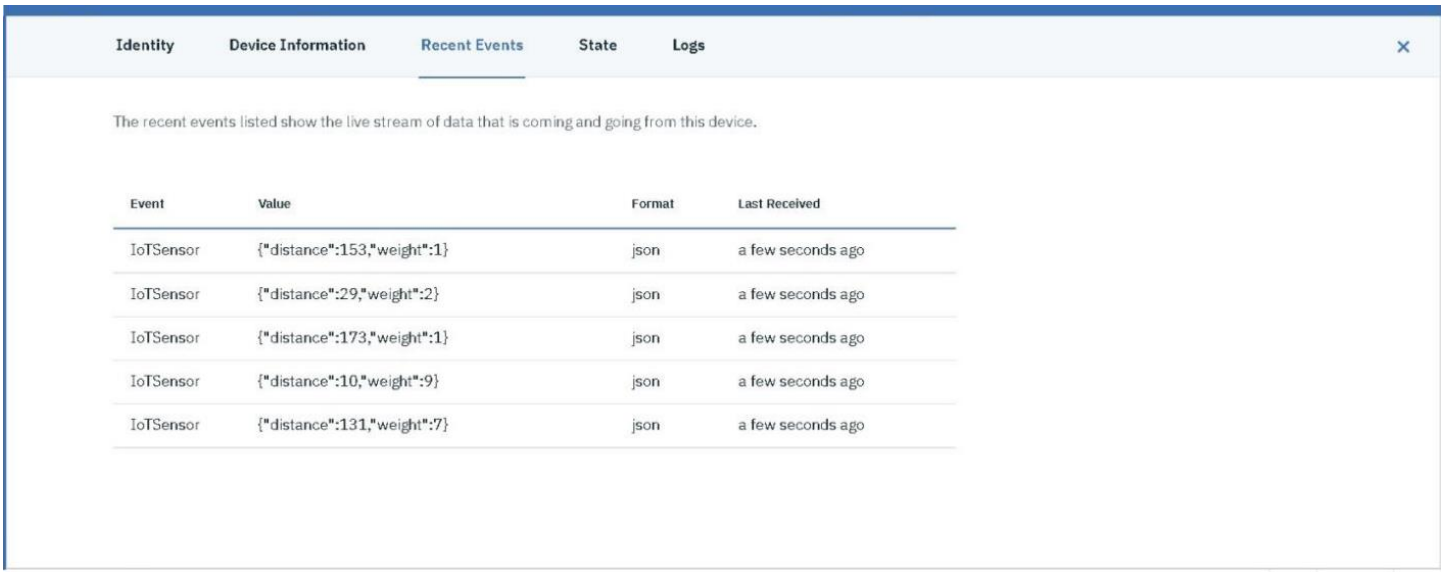
```
import time import
sys
import ibmiotf.application
import ibmiotf.device import
random
#Provide your IBM Watson Device Credentials organization =
"t5udfe" deviceType = "raspberrypi" deviceId = "12345"
authMethod = "token" authToken = "12345678" # Initialize
GPIO def myCommandCallback(cmd):     print("Command
received: %s" % cmd.data['command'])
status=cmd.data['command']     if status=="smart bin opened":
print ("The Smart Bin is Open now")     else :
       print ("The Smart Bin is Close now")
      #print(cmd) 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 "hello" with value "world" into the cloud as an event
of type "greeting" 10 times deviceCli.connect()

while True:
       #Get Sensor Data from DHT11
distance=random.randint(0,200)        weight=random.randint(0,10)
       data = { 'distance' : distance, 'weight': weight }
       #print data        def myOnPublishCallback():            print ("Published Data
to IOT Watson: \n       Distance= %s cm\n" % distance, "      Weight = %s Kg\n"
% weight)
```

```
        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
 on_publish=myOnPublishCallback)         if not success:
             print("Not connected to IoTF")
        time.sleep(10)
        deviceCli.commandCallback = myCommandCallback
 # Disconnect the device and application from the cloud
deviceCli.disconnect()
```



Here we are generating random values for both the parameters weight and distance with the help of the random function in python.The weight parameter denotes the weight of smartbin and the distance parameter denotes the amount of garbage present in the smartbin which has a maximum length of 200 cm.





A new device is created and the random values from the python code is connected to the iot sensors.These random values are considered to be sensor values