**SPRINT 1**

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| Team ID | PNT2022TMID50177 |
| Project Name | Smart Waste Management System for Metropolitan Cities |

**PYTHON CODE:**

**importtime**

**importsys**

**importibmiotf.application**

**importibmiotf.device**

**importrandom**

**#ProvideyourIBMWatsonDeviceCredentials**

**organization="t5udfe"**

**deviceType="raspberrypi"**

**deviceId="12345"**

**authMethod="token"**

**authToken="12345678"**

**#InitializeGPIO**

**defmyCommandCallback(cmd):**

**print("Commandreceived:%s"%cmd.data['command'])**

**status=cmd.data['command']**

**ifstatus=="smartbinopened":**

**print("TheSmartBinisOpennow")**

**else:**

**print("TheSmartBinisClosenow")**

**#print(cmd)**

**try:**

**deviceOptions={"org":organization,"type":deviceType,"id":deviceId,**

**"auth-method":authMethod,"auth-token":authToken}**

**deviceCli=ibmiotf.device.Client(deviceOptions)**

**#..............................................**

**exceptExceptionase:**

**print("Caughtexceptionconnectingdevice:%s"%str(e))**

**sys.exit()**

**#Connectandsendadatapoint"hello"withvalue"world"intothecloudasan**

**eventoftype"greeting"10times**

**deviceCli.connect()**

**whileTrue:**

**#GetSensorDatafromDHT11**

**distance=random.randint(0,200)**

**weight=random.randint(0,10)**

**data={'distance':distance,'weight':weight}**

**#printdata**

**defmyOnPublishCallback():**

**print("PublishedDatatoIOTWatson:\n**

**Distance=%scm\n"%**

**distance,"Weight=%sKg\n"%weight)**

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

**ifnotsuccess:**

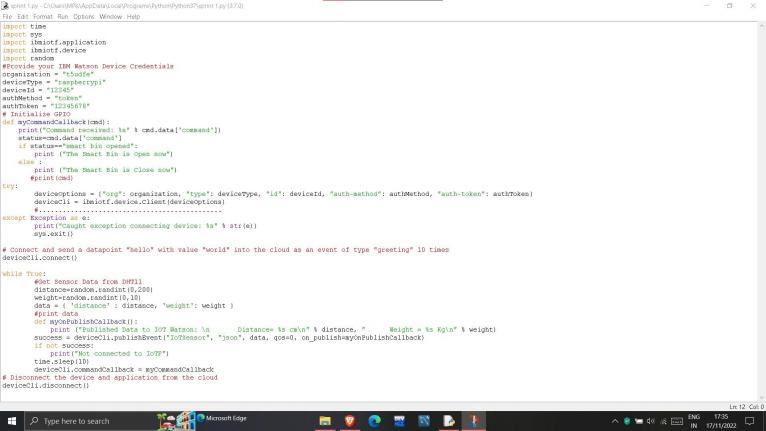
**print("NotconnectedtoIoTF")**

**time.sleep(10)**

**deviceCli.commandCallback=myCommandCallback**

**#Disconnectthedeviceandapplicationfromthecloud**

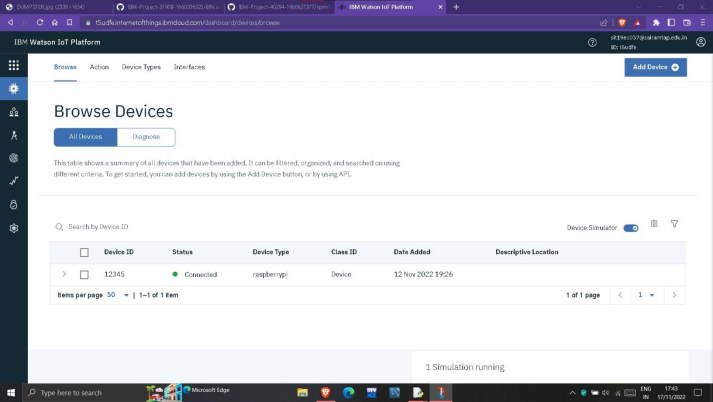
**deviceCli.disconnect()**

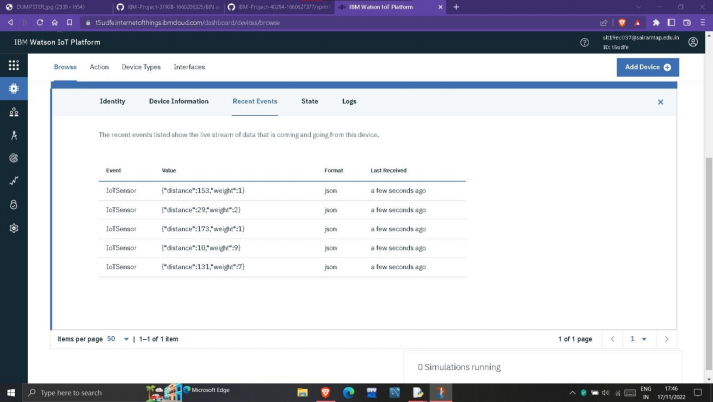


The Python code for generating random values for the parameters.



Here we are generating and 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 smart bin and the distance parameter denotes the amount of garbage present in the smart bin which has a maximum length of 200cm.





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.