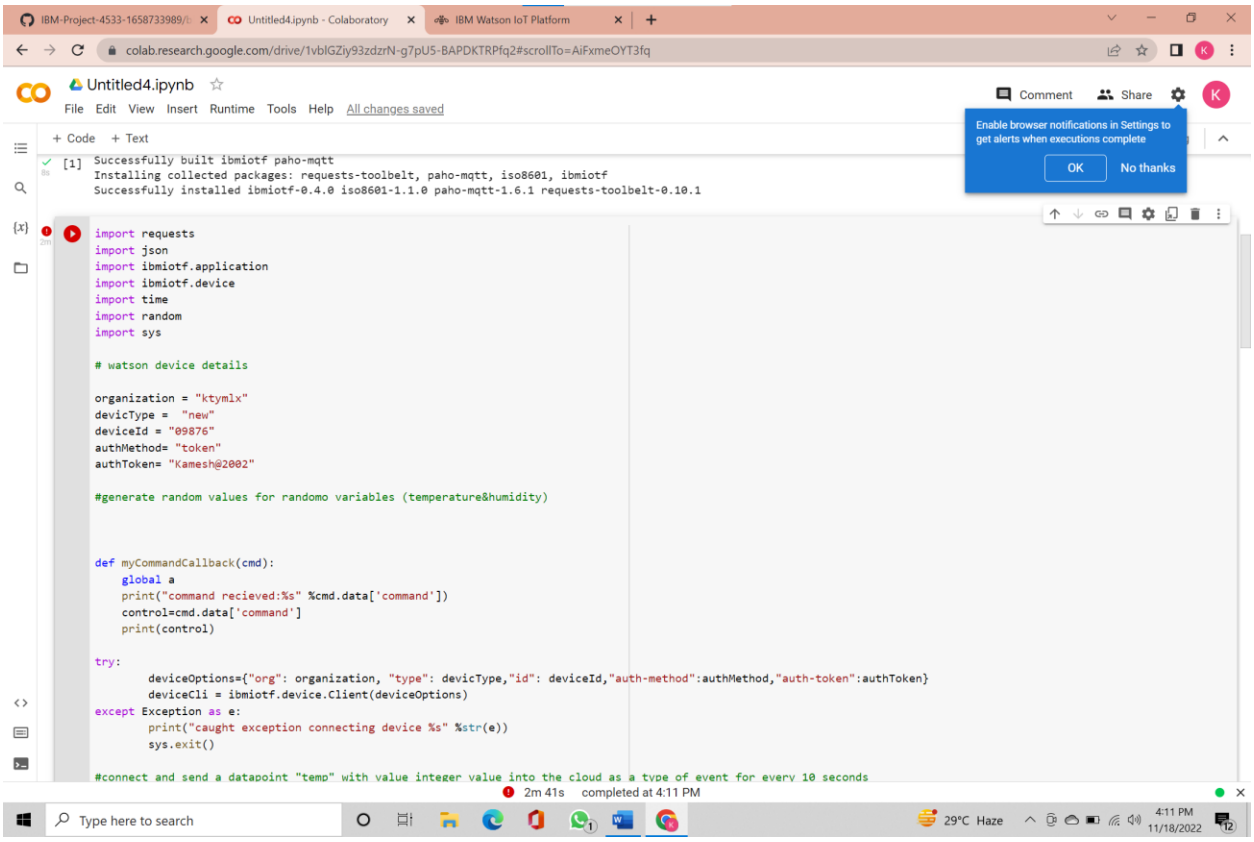
Python code

Team id : PNT2022TMID28837


IBM-Project-4533-1658733989/
Untitled4.ipynb - Colaboratory
IBM Watson IoT Platform
colab.research.google.com/drive/1vblGZiy93zdzrN-g7pU5-BAPDKTRPfq2#scrollTo=AiFxmeOYT3fq
Untitled4.ipynb
File Edit View Insert Runtime Tools Help All changes saved
Comment
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Enable browser notifications in Settings to get alerts when executions complete
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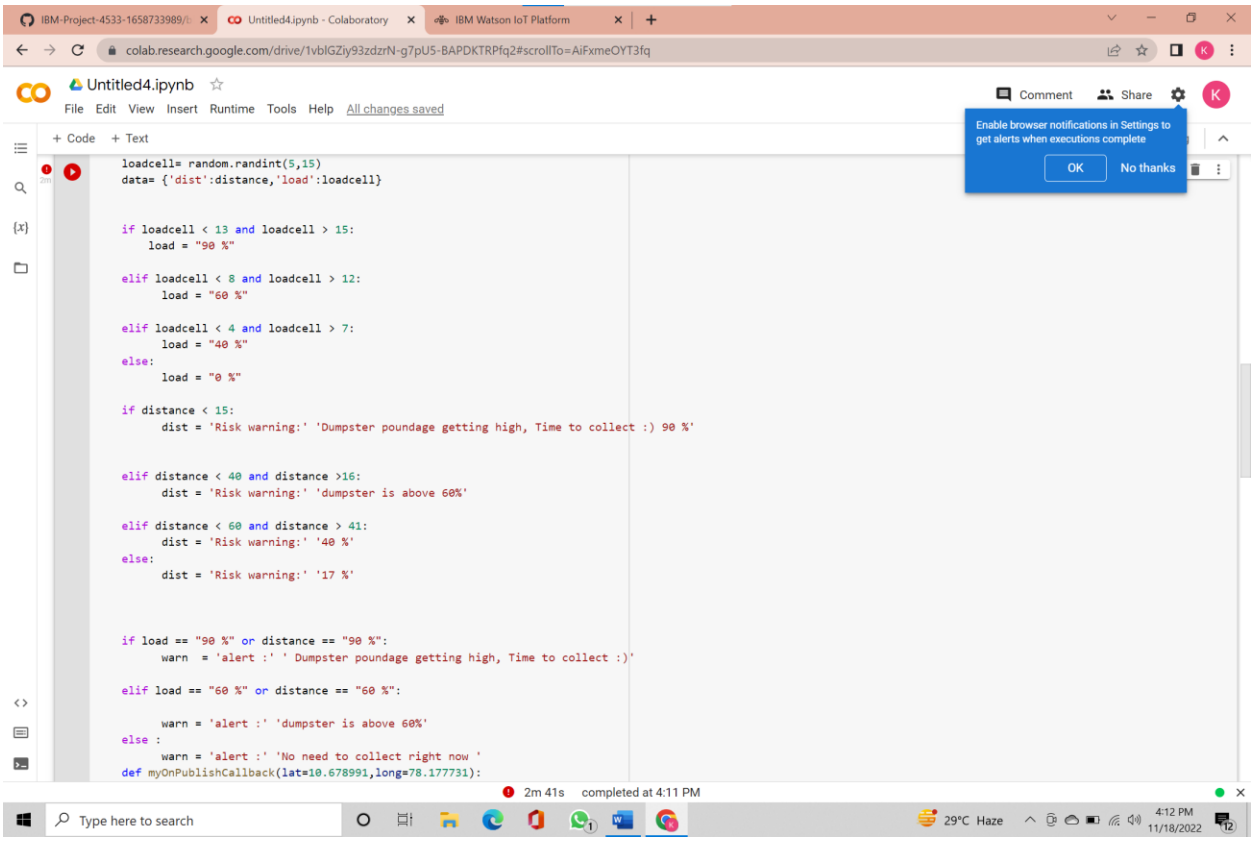
[1] Successfully built ibmiotf paho-mqtt
Installing collected packages: requests-toolbelt, paho-mqtt, iso8601, ibmiotf
Successfully installed ibmiotf-0.4.0 iso8601-1.1.0 paho-mqtt-1.6.1 requests-toolbelt-0.10.1
import requests
import json
import ibmiotf.application
import ibmiotf.device
import time
import random
import sys
# watson device details
organization = "ktymlx"
devicType = "new"
deviceId = "09876"
authMethod= "token"
authToken= "Kamesh@2002"
#generate random values for randomo variables (temperature&humidity)
def myCommandCallback(cmd):
global a
print("command recieved:%s" %cmd.data['command'])
control=cmd.data['command']
print(control)
try:
deviceOptions={"org": organization, "type": devicType,"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 "temp" with value integer value into the cloud as a type of event for every 10 seconds
2m 41s completed at 4:11 PM
Type here to search
29°C Haze
4:11 PM
11/18/2022


IBM-Project-4533-1658733989/
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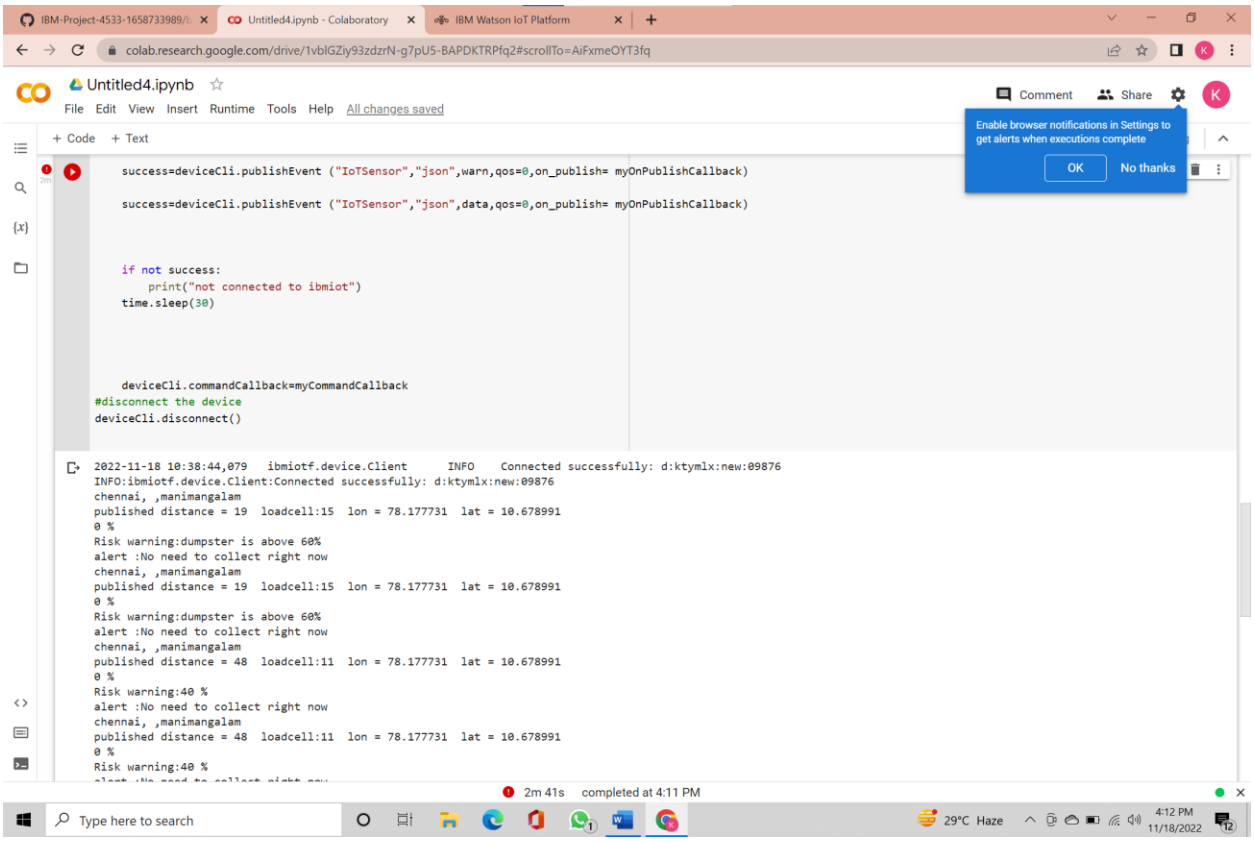
+ Code + Text
loadcell= random.randint(5,15)
data= {'dist':distance,'load':loadcell}
if loadcell < 13 and loadcell > 15:
load = "90 %"
elif loadcell < 8 and loadcell > 12:
load = "60 %"
elif loadcell < 4 and loadcell > 7:
load = "40 %"
else:
load = "0 %"
if distance < 15:
dist = 'Risk warning:' 'Dumpster poundage getting high, Time to collect :) 90 %'
elif distance < 40 and distance >16:
dist = 'Risk warning:' 'dumpster is above 60%'
elif distance < 60 and distance > 41:
dist = 'Risk warning:' '40 %'
else:
dist = 'Risk warning:' '17 %'
if load == "90 %" or distance == "90 %":
warn = 'alert :' ' Dumpster poundage getting high, Time to collect :)'
elif load == "60 %" or distance == "60 %":
warn = 'alert :' 'dumpster is above 60%'
else :
warn = 'alert :' 'No need to collect right now '
def myOnPublishCallback(lat=10.678991,long=78.177731):
2m 41s completed at 4:11 PM
Type here to search
29°C Haze
4:12 PM
11/18/2022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Untitled4.ipynb
File Edit View Insert Runtime Tools Help All changes saved
Comment
Share
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OK
No thanks
+ Code + Text
success=deviceCli.publishEvent ("IoTSensor","json",warn,qos=0,on_publish= myOnPublishCallback)
success=deviceCli.publishEvent ("IoTSensor","json",data,qos=0,on_publish= myOnPublishCallback)
if not success:
print("not connected to ibmiot")
time.sleep(30)
deviceCli.commandCallback=myCommandCallback
#disconnect the device
deviceCli.disconnect()
2022-11-18 10:38:44,079 ibmiotf.device.Client INFO Connected successfully: d:ktymlx:new:09876
INFO:ibmiotf.device.Client:Connected successfully: d:ktymlx:new:09876
chennai, ,manimangalam
published distance = 19 loadcell:15 lon = 78.177731 lat = 10.678991
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
chennai, ,manimangalam
published distance = 19 loadcell:15 lon = 78.177731 lat = 10.678991
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
chennai, ,manimangalam
published distance = 48 loadcell:11 lon = 78.177731 lat = 10.678991
0 %
Risk warning:40 %
alert :No need to collect right now
chennai, ,manimangalam
published distance = 48 loadcell:11 lon = 78.177731 lat = 10.678991
0 %
Risk warning:40 %
2m 41s completed at 4:11 PM
Type here to search
29°C Haze
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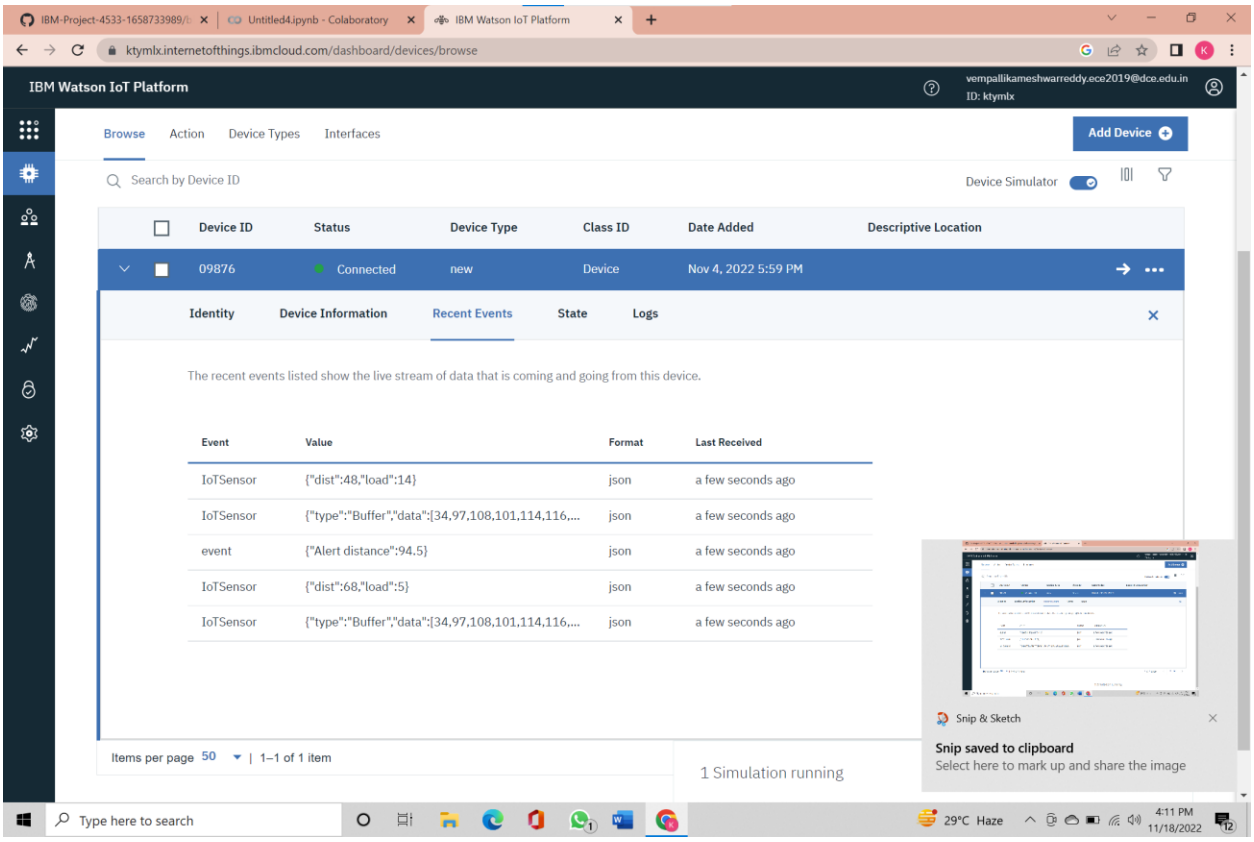

Code:

```
import requests
```

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

# watson device details

organization = "ktymlx"
devicType =  "new"
deviceId = "09876"
authMethod= "token"
authToken= "Kamesh@2002"

#generate random values for randomo variables (temperature&humidity)



def myCommandCallback(cmd):
    global a
    print("command recieved:%s" %cmd.data['command'])
    control=cmd.data['command']
    print(control)

try:
```

```
        deviceOptions={"org": organization, "type": devicType,"id": device
Id,"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 "temp" with value integer value into the clo
ud as a type of event for every 10 seconds
deviceCli.connect()

while True:

    distance= random.randint(10,70)
    loadcell= random.randint(5,15)
    data= {'dist':distance,'load':loadcell}


    if loadcell < 13 and loadcell > 15:
        load = "90 %"

    elif loadcell < 8 and loadcell > 12:
          load = "60 %"

    elif loadcell < 4 and loadcell > 7:
```

```
            load = "40 %"
    else:
            load = "0 %"

    if distance < 15:
            dist = 'Risk warning:' 'Dumpster poundage getting high, Time to
collect :) 90 %'


    elif distance < 40 and distance >16:
            dist = 'Risk warning:' 'dumpster is above 60%'

    elif distance < 60 and distance > 41:
            dist = 'Risk warning:' '40 %'
    else:
            dist = 'Risk warning:' '17 %'



    if load == "90 %" or distance == "90 %":
            warn  = 'alert :' ' Dumpster poundage getting high, Time to coll
ect :)'

    elif load == "60 %" or distance == "60 %":
```

```
            warn = 'alert :' 'dumpster is above 60%'
    else :
            warn = 'alert :' 'No need to collect right now '
    def myOnPublishCallback(lat=10.678991,long=78.177731):
        print("chennai, ,manimangalam")
        print("published distance = %s " %distance,"loadcell:%s " %loadcel
l,"lon = %s " %long,"lat = %s" %lat)
        print(load)
        print(dist)
        print(warn)

    time.sleep(10)


    success=deviceCli.publishEvent ("IoTSensor","json",warn,qos=0,on_publi
sh= myOnPublishCallback)

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



    if not success:
        print("not connected to ibmiot")
    time.sleep(30)
```

```
    deviceCli.commandCallback=myCommandCallback
#disconnect the device
deviceCli.disconnect()
```