DEVELOP A PYTHON SCRIPT

TEAM ID	PNT2022TMID00923
PROJECT NAME	Signs with Smart Connectivity for Better Road Safety

STEPS TO DEVELOP A PYTHON SCRIPT:

STEP-1: Install Python IDLE 3.7 from any browser.

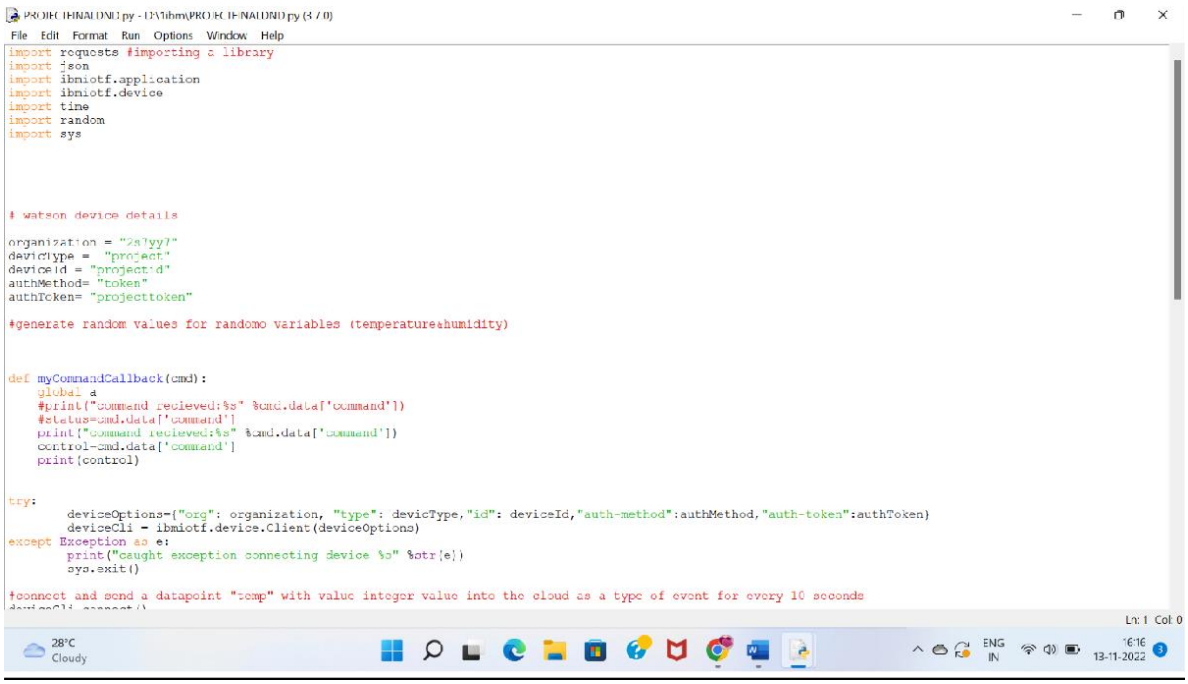
STEP-2: Open PYTHON IDLE. Click on File->New file. A new screenopens.

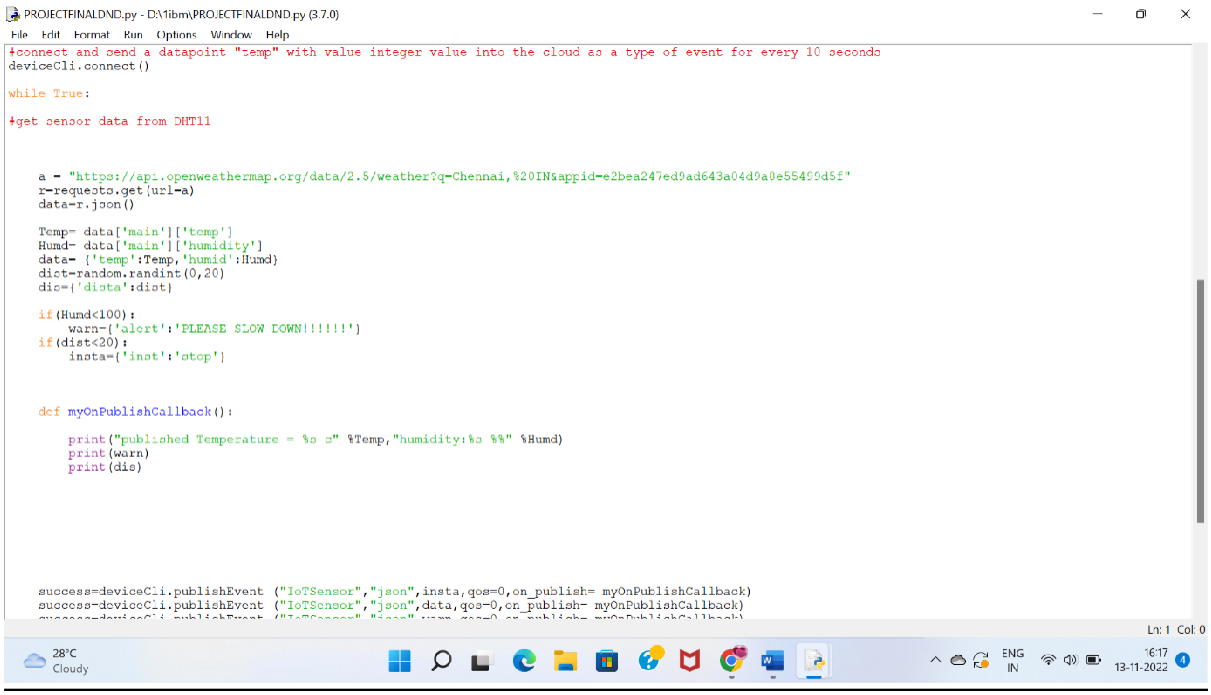
STEP-3: Develop a python program to satisfy the required needs.

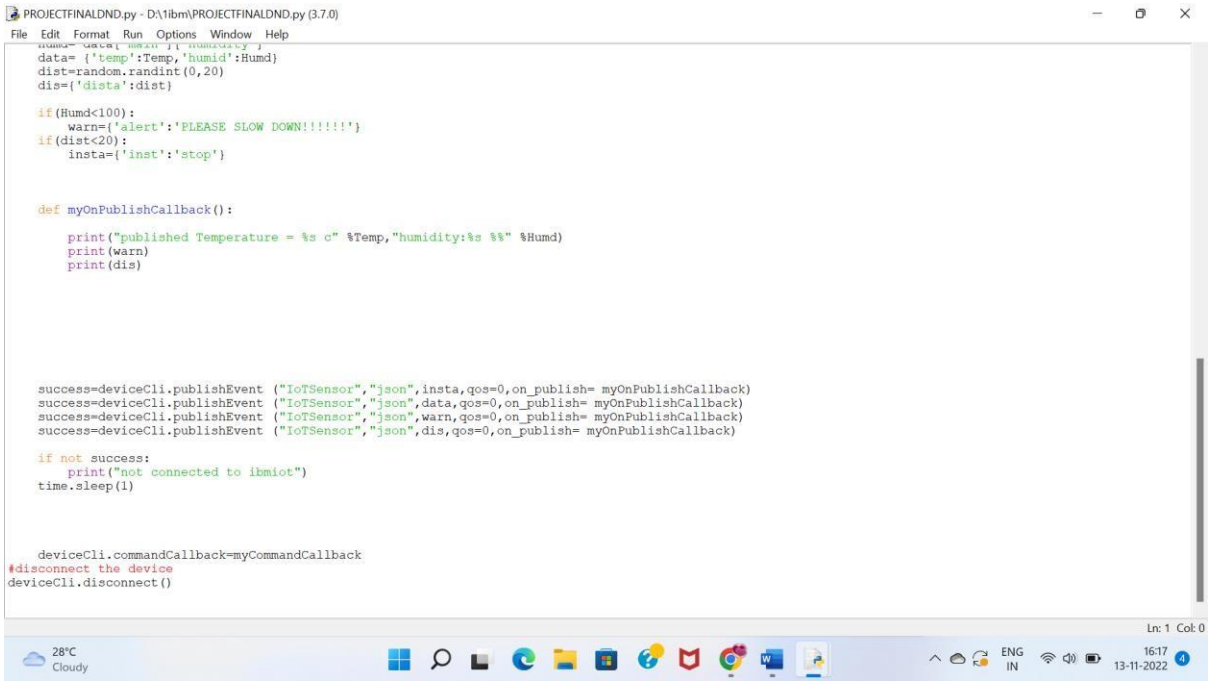
STEP-4: Save the file and click Run-> Run Module.

STEP-5: The program gets executed and it reports any error if present, else produces the output.

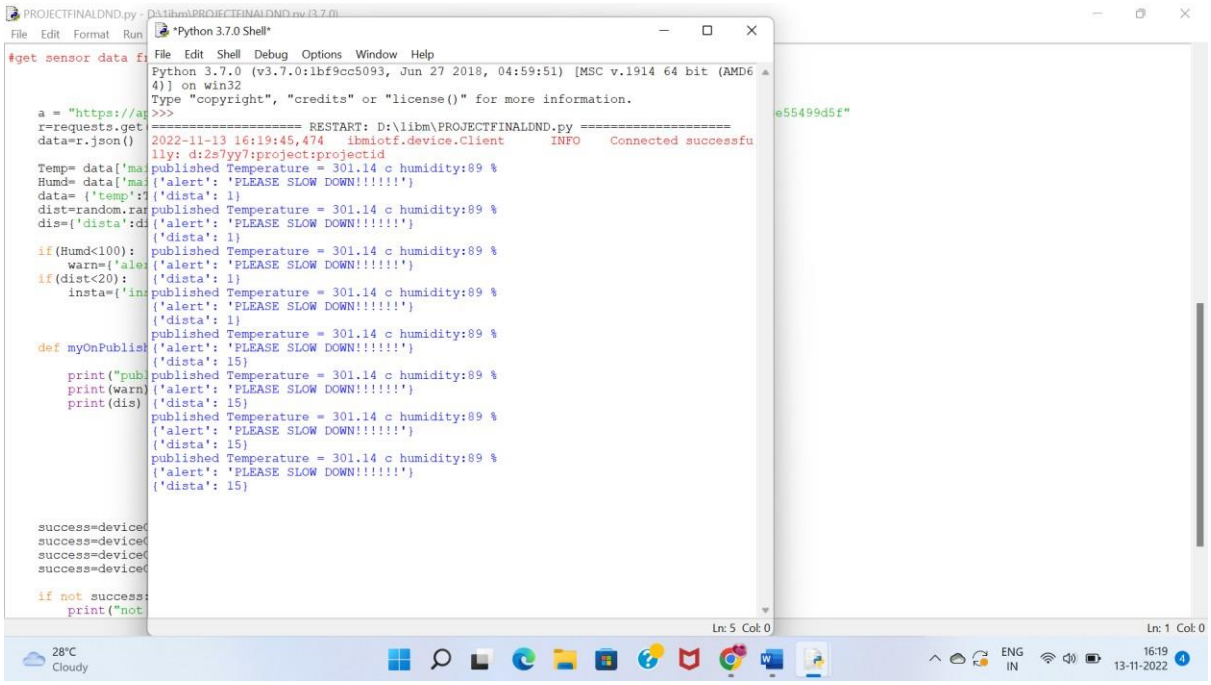
PYTHON CODE:




PROJECTFINALDND.py - D:\1ibm\PROJECTFINALDND.py (3.7.0)
File Edit Format Run Options Window Help
#connect and send a datapoint "temp" with value integer value into the cloud as a type of event for every 10 seconds
deviceCli.connect()
while True:
#get sensor data from DHT11
a = "https://api.openweathermap.org/data/2.5/weather?q=Chennai,%20IN&appid=e2bea247ed9ad643a04d9a0e55499d5f"
r=requests.get(url=a)
data=r.json()
Temp= data['main']['temp']
Humd= data['main']['humidity']
data= {'temp':Temp,'humid':Humd}
dist=random.randint(0,20)
dis={'dista':dist}
if(Humd<100):
warn={'alert':'PLEASE SLOW DOWN!!!!!!'}
if(dist<20):
insta={'inst':'stop'}
def myOnPublishCallback():
print("published Temperature = %s c" %Temp,"humidity:%s %%" %Humd)
print(warn)
print(dis)
success=deviceCli.publishEvent ("IoTSensor","json",insta,qos=0,on_publish= myOnPublishCallback)
success=deviceCli.publishEvent ("IoTSensor","json",data,qos=0,on_publish= myOnPublishCallback)
Ln: 1 Col: 0
28°C
Cloudy
ENG
IN
16:17
13-11-2022


PROJECTFINALDND.py - D:\1ibm\PROJECTFINALDND.py (3.7.0)
File Edit Format Run Options Window Help
data= {'temp':Temp,'humid':Humd}
dist=random.randint(0,20)
dis={'dista':dist}
if(Humd<100):
warn={'alert':'PLEASE SLOW DOWN!!!!!!'}
if(dist<20):
insta={'inst':'stop'}
def myOnPublishCallback():
print("published Temperature = %s c" %Temp,"humidity:%s %%" %Humd)
print(warn)
print(dis)
success=deviceCli.publishEvent ("IoTSensor","json",insta,qos=0,on_publish= myOnPublishCallback)
success=deviceCli.publishEvent ("IoTSensor","json",data,qos=0,on_publish= myOnPublishCallback)
success=deviceCli.publishEvent ("IoTSensor","json",warn,qos=0,on_publish= myOnPublishCallback)
success=deviceCli.publishEvent ("IoTSensor","json",dis,qos=0,on_publish= myOnPublishCallback)
if not success:
print("not connected to ibmiot")
time.sleep(1)
deviceCli.commandCallback=myCommandCallback
#disconnect the device
deviceCli.disconnect()
Ln: 1 Col: 0
28°C
Cloudy
ENG
IN
16:17
13-11-2022

OUTPUT:


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 (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: D:\libm\PROJECTFINALDND.py ==========
2022-11-13 16:19:45,474 ibmiotf.device.Client INFO Connected successfully: d:2s7yy7:project:projectid
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 1}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 1}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 1}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 1}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 15}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 15}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 15}
published Temperature = 301.14 c humidity:89 %
{'alert': 'PLEASE SLOW DOWN!!!!!!'}
{'dista': 15}
Ln: 5 Col: 0
Ln: 1 Col: 0
28°C
Cloudy
ENG
IN
16:19
13-11-2022