PYTHON SOURCE CODE

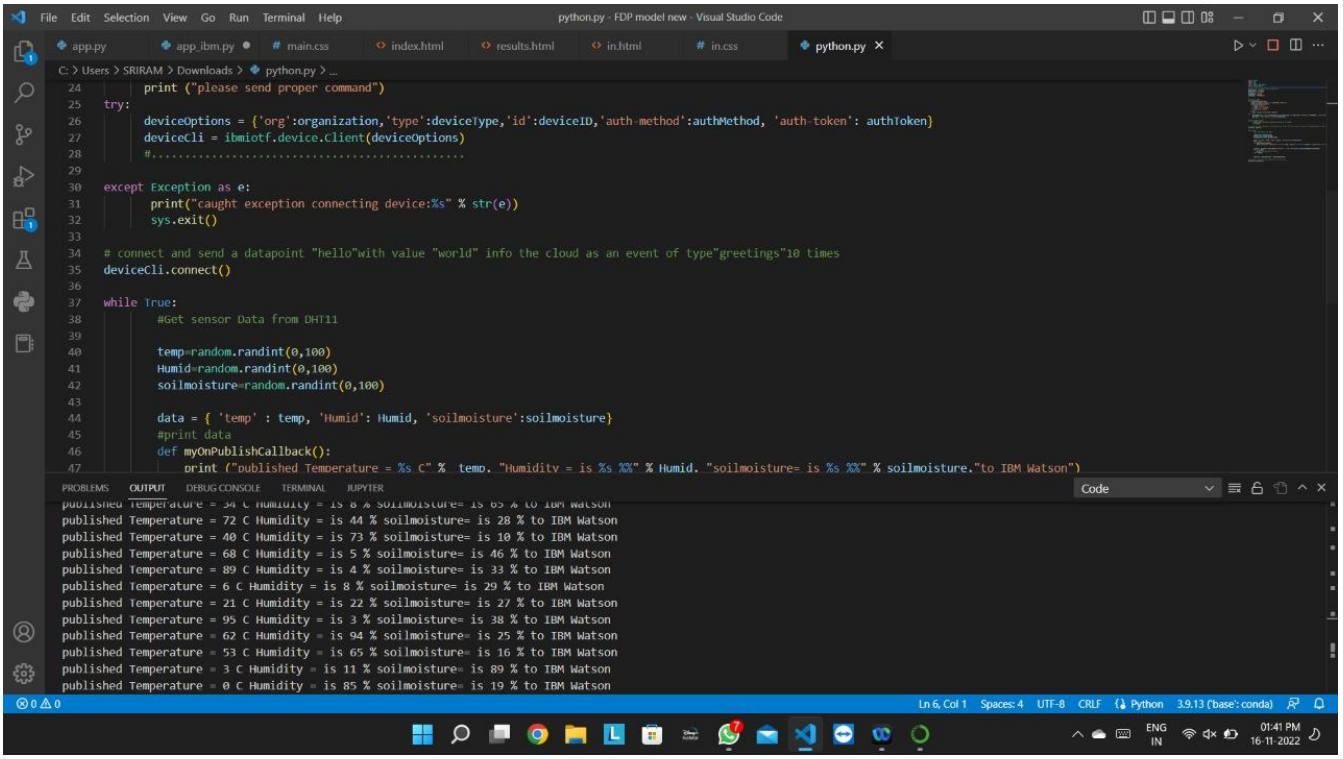
Team ID	PNT2022TMID29852
Project Name	SMART FARMER – IoT ENABLED SMART FARMING APPLICATION

PROGRAM:

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

#provide Your IBM Watson Device Credentials
organization = "9te1u1"
deviceType = "SFTTMS00"
deviceID = "SFTTMS11"
authMethod = "token"
authToken = "PNTIBMSb18"


#Initialize GPIO
def myCommandCallback(cmd):
    print ("command received: %s" %cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":print
        ("led is on")
    elif status == "lightoff":
       print ("led is off")
    else:
      print ("please send proper command")
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" info the
cloud as an event of type"greetings"10 times
deviceCli.connect()

while True:
        #Get sensor Data from DHT11

        temp=random.randint(0,100)
        Humid=random.randint(0,100)
        soilmoisture=random.randint(0,100)

        data = { 'temp' : temp, 'Humid': Humid,
'soilmoisture':soilmoisture}
        #print data
        def myOnPublishCallback():
            print ("published Temperature = %s C" % temp, "Humidity =
is %s %%" % Humid, "soilmoisture= is %s %%" %soilmoisture,"to
IBM Watson")


        success = deviceCli.publishEvent("IOTSensor",
"json",data,qos=0,on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IOTF")
        time.sleep(5)


        deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

PYTHON CODE:


File Edit Selection View Go Run Terminal Help
python.py - FDP model new - Visual Studio Code
app.py
app_ibm.py
main.css
index.html
results.html
in.html
in.css
python.py
C: > Users > SRIRAM > Downloads > python.py > ...
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PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER
Code
published Temperature = 72 C Humidity = is 44 % soilmoisture= is 28 % to IBM Watson
published Temperature = 40 C Humidity = is 73 % soilmoisture= is 10 % to IBM Watson
published Temperature = 68 C Humidity = is 5 % soilmoisture= is 46 % to IBM Watson
published Temperature = 89 C Humidity = is 4 % soilmoisture= is 33 % to IBM Watson
published Temperature = 6 C Humidity = is 8 % soilmoisture= is 29 % to IBM Watson
published Temperature = 21 C Humidity = is 22 % soilmoisture= is 27 % to IBM Watson
published Temperature = 95 C Humidity = is 3 % soilmoisture= is 38 % to IBM Watson
published Temperature = 62 C Humidity = is 94 % soilmoisture= is 25 % to IBM Watson
published Temperature = 53 C Humidity = is 65 % soilmoisture= is 16 % to IBM Watson
published Temperature = 3 C Humidity = is 11 % soilmoisture= is 89 % to IBM Watson
published Temperature = 0 C Humidity = is 85 % soilmoisture= is 19 % to IBM Watson
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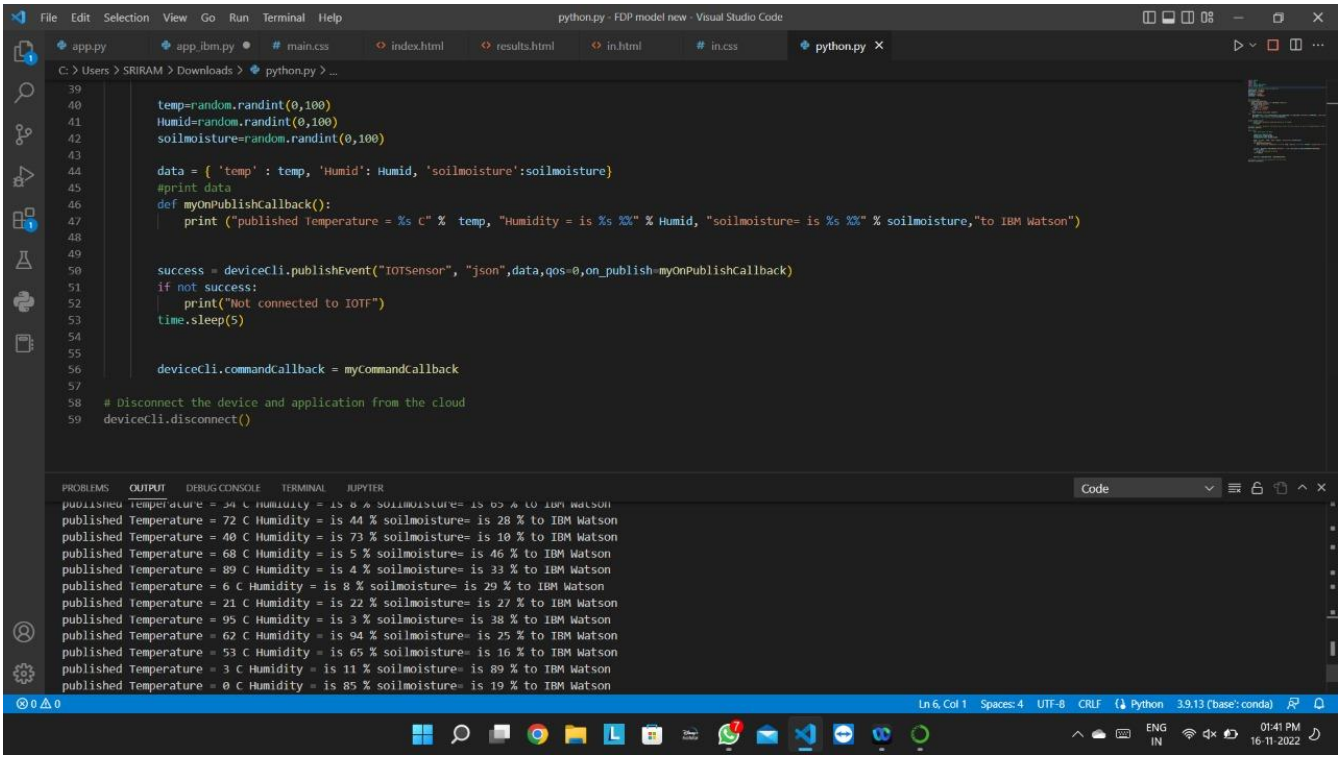
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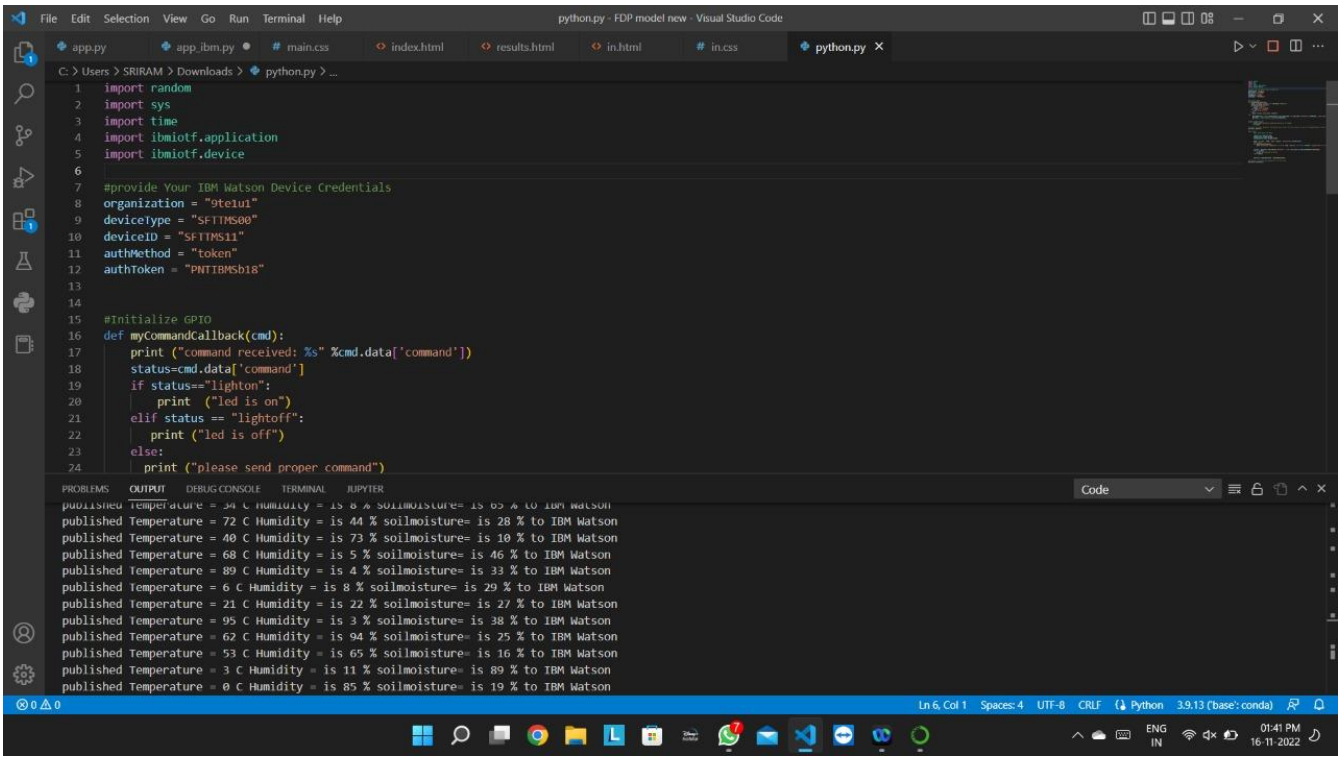
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