Sprint-3

DATE	12 NOVEMBER 2022
TEAM ID	PNT2022TMID41544
PROJECT NAME	IOT Based Smart Crop Protection System For Agriculture.
MAXIMU MARKS	20 MARKS

PYTHON CODE:

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


#Provide your IBM Watson Device Credentials
organization ="8osflk"
deviceType = "cropprotection99"
deviceId = "cropprotection99"
authMethod="token"
authToken ="duiH-8z@4u@JXTmx20"
# InitializeGPIO
def myCommandCallback(cmd):
   print("Command received: %s" %cmd.data['command'])
   status =cmd.data['command']
   if status=="lighton":
```

```
        print("led on")
    else:
        print("led off")
#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()


#Connectandsendadatapoint"hello"withvalue"world"intothecloudasaneventtye "greeting"10times
deviceCli.connect()



while True:
    #GetSensorDatafromDHT11


    temp=random.randint(0,100)
    humid=random.randint(0,100)
```

```
   data={'temperature':temp,'humidity':humid}
         #printdata
   def myOnPublishCallback():
      print("Published Temperature=%s C" %temp,"Humidity=%s %%" % humid,"to IBMWatson")

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

   if not success:
      print("NotconnectedtoIoTF")
   time.sleep(1)

   deviceCli.commandCallback=myCommandCallback

#Disconnectthedeviceandapplicationfromthecloud
deviceCli.disconnect()
```

OUTPUT:

ibmiot.py - C:/Users/Latha/AppData/Local/Programs/Python/Python37/ibmiot.py (3.7.0)

File Edit Format Run Options Window Help

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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: C:/Users/Latha/AppData/Local/Programs/Python/Python37/ibmiot.py ==
2022-11-13 22:01:48,939 ibmiotf.device.Client INFO Connected successfully: d:8osflk:cropprotection99:cropprotection99
Published Temperature=9 C Humidity=50 % to IBMWatson
Published Temperature=37 C Humidity=55 % to IBMWatson
Published Temperature=96 C Humidity=60 % to IBMWatson
Published Temperature=4 C Humidity=11 % to IBMWatson
Published Temperature=67 C Humidity=49 % to IBMWatson
Published Temperature=79 C Humidity=13 % to IBMWatson
Published Temperature=83 C Humidity=7 % to IBMWatson
Published Temperature=68 C Humidity=70 % to IBMWatson
Published Temperature=69 C Humidity=68 % to IBMWatson
Published Temperature=61 C Humidity=36 % to IBMWatson
Published Temperature=20 C Humidity=76 % to IBMWatson
Published Temperature=3 C Humidity=93 % to IBMWatson
Published Temperature=41 C Humidity=98 % to IBMWatson
Published Temperature=31 C Humidity=96 % to IBMWatson
Published Temperature=78 C Humidity=22 % to IBMWatson
Published Temperature=65 C Humidity=75 % to IBMWatson
Published Temperature=16 C Humidity=89 % to IBMWatson
Published Temperature=87 C Humidity=95 % to IBMWatson
Published Temperature=7 C Humidity=35 % to IBMWatson
Published Temperature=17 C Humidity=85 % to IBMWatson
Published Temperature=32 C Humidity=74 % to IBMWatson
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IBM WATSON IOT PLATFORM: