SPRINT 1

Date	30 October 2022
Team ID	PNT2022TMID36144
Project Name	Smart Farmer- IOT Enabled Smart Farming Application

Task:

Create python code

CODE:

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

#Provide your IBM Watson Device Credentials
organization = "w1v28e"
deviceType = "raspberrypi"
deviceId = "sk40"
authMethod = "token"
authToken = "110319106040"

def myCommandCallback (cmd):
    print ("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status== "motoron":
        print ("motor is on")
    elif status == "motorff":
        print ("motor 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 evention connecting device: %s" % str(e))
    sys.exit()



deviceCli.connect()
while True:
    temp=random.randint (-10,100)
    Humid=random.randint (40,100)
    soilmoisture=random.randint (10,100)
    Windspeed_kmh=random.randint (15,60)
    data = {'temp': temp,'Humid': Humid,'soilmoisture': soilmoisture,'Windspeed_kmh':
Windspeed_kmh}
    def myonPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid,"soilmoisture =
%s" % soilmoisture,"Windspeed_kmh = %s NTU" % Windspeed_kmh, "to IBM Watson")
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myonPublishCallback)
    if not success:
        print("Not connected to IOTF")
    time.sleep (10)
    deviceCli.commandCallback = myCommandCallback
deviceCli.disconnect()
```

OUTPUT:

tem..py - C:\Users\sathi\Downloads\ibm\tem..py (3.7.0)

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```
import time
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Python 3.7.0 Shell

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```
Published Temperature = 53 C Humidity = 77 % soilmoisture = 54 Windspeed_kmh = 21 NTU to IBM Watson
Published Temperature = 13 C Humidity = 66 % soilmoisture = 79 Windspeed_kmh = 57 NTU to IBM Watson
Published Temperature = 77 C Humidity = 77 % soilmoisture = 61 Windspeed_kmh = 36 NTU to IBM Watson
Published Temperature = 61 C Humidity = 66 % soilmoisture = 62 Windspeed_kmh = 22 NTU to IBM Watson
Published Temperature = 89 C Humidity = 81 % soilmoisture = 33 Windspeed_kmh = 27 NTU to IBM Watson
Published Temperature = 98 C Humidity = 49 % soilmoisture = 82 Windspeed_kmh = 30 NTU to IBM Watson
Published Temperature = 17 C Humidity = 74 % soilmoisture = 65 Windspeed_kmh = 54 NTU to IBM Watson
Published Temperature = -3 C Humidity = 48 % soilmoisture = 78 Windspeed_kmh = 35 NTU to IBM Watson
Published Temperature = -2 C Humidity = 98 % soilmoisture = 100 Windspeed_kmh = 52 NTU to IBM Watson
Published Temperature = 50 C Humidity = 50 % soilmoisture = 31 Windspeed_kmh = 52 NTU to IBM Watson
Published Temperature = -6 C Humidity = 60 % soilmoisture = 93 Windspeed_kmh = 25 NTU to IBM Watson
Published Temperature = -5 C Humidity = 45 % soilmoisture = 55 Windspeed_kmh = 55 NTU to IBM Watson
Published Temperature = 52 C Humidity = 63 % soilmoisture = 86 Windspeed_kmh = 25 NTU to IBM Watson
Published Temperature = 61 C Humidity = 60 % soilmoisture = 11 Windspeed_kmh = 18 NTU to IBM Watson
Published Temperature = 3 C Humidity = 40 % soilmoisture = 76 Windspeed_kmh = 19 NTU to IBM Watson
Published Temperature = 89 C Humidity = 73 % soilmoisture = 81 Windspeed_kmh = 27 NTU to IBM Watson
Published Temperature = 54 C Humidity = 61 % soilmoisture = 93 Windspeed_kmh = 60 NTU to IBM Watson
Published Temperature = 58 C Humidity = 91 % soilmoisture = 33 Windspeed_kmh = 59 NTU to IBM Watson
Published Temperature = 73 C Humidity = 69 % soilmoisture = 58 Windspeed_kmh = 22 NTU to IBM Watson
Published Temperature = 4 C Humidity = 57 % soilmoisture = 95 Windspeed_kmh = 18 NTU to IBM Watson
Published Temperature = 21 C Humidity = 52 % soilmoisture = 92 Windspeed_kmh = 49 NTU to IBM Watson
Published Temperature = 37 C Humidity = 59 % soilmoisture = 73 Windspeed_kmh = 34 NTU to IBM Watson
Published Temperature = 56 C Humidity = 76 % soilmoisture = 60 Windspeed_kmh = 56 NTU to IBM Watson
Published Temperature = 15 C Humidity = 51 % soilmoisture = 30 Windspeed_kmh = 59 NTU to IBM Watson
Published Temperature = 4 C Humidity = 52 % soilmoisture = 87 Windspeed_kmh = 52 NTU to IBM Watson
Published Temperature = 30 C Humidity = 42 % soilmoisture = 45 Windspeed_kmh = 27 NTU to IBM Watson
Published Temperature = 3 C Humidity = 79 % soilmoisture = 25 Windspeed_kmh = 25 NTU to IBM Watson
Published Temperature = 26 C Humidity = 69 % soilmoisture = 28 Windspeed_kmh = 24 NTU to IBM Watson
Published Temperature = 28 C Humidity = 94 % soilmoisture = 59 Windspeed_kmh = 39 NTU to IBM Watson
Published Temperature = 79 C Humidity = 83 % soilmoisture = 90 Windspeed_kmh = 55 NTU to IBM Watson
Published Temperature = 60 C Humidity = 44 % soilmoisture = 49 Windspeed_kmh = 59 NTU to IBM Watson
Published Temperature = 91 C Humidity = 74 % soilmoisture = 46 Windspeed_kmh = 54 NTU to IBM Watson
Published Temperature = 2 C Humidity = 90 % soilmoisture = 63 Windspeed_kmh = 59 NTU to IBM Watson
Published Temperature = 49 C Humidity = 54 % soilmoisture = 43 Windspeed_kmh = 39 NTU to IBM Watson
2022-11-19 09:46:20,583    ibmiotf.device.Client       ERROR    Unexpected disconnect from the IBM Watson IoT Platform: 7
2022-11-19 09:46:23,537    ibmiotf.device.Client       INFO     Connected successfully: d:wlv28e:raspberrypi:sk40
Published Temperature = 34 C Humidity = 74 % soilmoisture = 18 Windspeed_kmh = 32 NTU to IBM Watson
Published Temperature = 20 C Humidity = 93 % soilmoisture = 93 Windspeed_kmh = 17 NTU to IBM Watson
Published Temperature = 18 C Humidity = 60 % soilmoisture = 27 Windspeed_kmh = 37 NTU to IBM Watson
Published Temperature = 30 C Humidity = 87 % soilmoisture = 12 Windspeed_kmh = 54 NTU to IBM Watson
Published Temperature = 49 C Humidity = 98 % soilmoisture = 55 Windspeed_kmh = 35 NTU to IBM Watson
Published Temperature = 54 C Humidity = 92 % soilmoisture = 94 Windspeed_kmh = 55 NTU to IBM Watson
Published Temperature = 20 C Humidity = 48 % soilmoisture = 67 Windspeed_kmh = 22 NTU to IBM Watson
Published Temperature = 84 C Humidity = 86 % soilmoisture = 12 Windspeed_kmh = 22 NTU to IBM Watson
Published Temperature = 87 C Humidity = 80 % soilmoisture = 22 Windspeed_kmh = 22 NTU to IBM Watson
Published Temperature = 0 C Humidity = 81 % soilmoisture = 32 Windspeed_kmh = 36 NTU to IBM Watson
Published Temperature = 91 C Humidity = 68 % soilmoisture = 26 Windspeed_kmh = 37 NTU to IBM Watson
Published Temperature = 16 C Humidity = 95 % soilmoisture = 14 Windspeed_kmh = 21 NTU to IBM Watson
Published Temperature = 57 C Humidity = 90 % soilmoisture = 87 Windspeed_kmh = 51 NTU to IBM Watson
Published Temperature = 75 C Humidity = 64 % soilmoisture = 96 Windspeed_kmh = 15 NTU to IBM Watson
Published Temperature = 7 C Humidity = 62 % soilmoisture = 89 Windspeed_kmh = 39 NTU to IBM Watson
Published Temperature = 15 C Humidity = 58 % soilmoisture = 12 Windspeed_kmh = 55 NTU to IBM Watson
Published Temperature = 0 C Humidity = 82 % soilmoisture = 15 Windspeed_kmh = 24 NTU to IBM Watson
Published Temperature = -4 C Humidity = 95 % soilmoisture = 83 Windspeed_kmh = 51 NTU to IBM Watson
Published Temperature = 42 C Humidity = 42 % soilmoisture = 75 Windspeed_kmh = 19 NTU to IBM Watson
Published Temperature = 7 C Humidity = 96 % soilmoisture = 65 Windspeed_kmh = 39 NTU to IBM Watson
Published Temperature = 7 C Humidity = 72 % soilmoisture = 77 Windspeed_kmh = 31 NTU to IBM Watson
Published Temperature = 76 C Humidity = 62 % soilmoisture = 16 Windspeed_kmh = 27 NTU to IBM Watson
Published Temperature = 12 C Humidity = 79 % soilmoisture = 19 Windspeed_kmh = 24 NTU to IBM Watson
```