SPRINT I

Team ID	PNT2022TMID23131
Project Name	IOT Enabled Smart Farming Application

DOMAIN: IOT – Internet Of Things

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SPRINT I : Python Code for connecting IBM Watson with the device

CODE:

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



#Provide your IBM Watson Device Credentials
organization = "ewf12x"
deviceType = "Raspberrypi"
deviceId = "123459"
authMethod = "token"
authToken = "123456789"

# Initialize GPIO



def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("MOTOR is ON")
    else :
        print ("MOTOR is 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()


# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()


while True:
    #Get Sensor Data from DHT11


    temp=random.randint(60,100)
    hum=random.randint(90,110)
    moist=random.randint(0,100)


    data = { 'temp' : temp, 'hum': hum, 'moist': moist }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % hum, "Moisture = %s %%" %moist, "to IBM Watson")


    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
```

```
        time.sleep(1)

        deviceCli.commandCallback = myCommandCallback

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