

PROJECT DEVELOPMENT PHASE

SPRINT-3 CODING

Date	08 November 2022
Team ID	PNT2022TMID49497
Project Name	Smart farmer-IOT Enabled Smart Farming Application
Maximum Marks	8 Marks

Coding:

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

```
#Provide your IBM Watson Device Credentials
organization = "puubdh"
deviceType = "raspberrypi"
deviceId = "demo123"
authMethod = "token"
authToken = "12345678"
```

```
# 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(0,100)
    hum=random.randint(0,100)
    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, "Soil Moisture
= %s " % moist, "to IBM Watson")

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

    deviceCli.commandCallback = myCommandCallback

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

```