**SPRINT 1**

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| **TEAM ID** | PNT2022TMID15324 |
| **PROJECT NAME** | Smart Farmer - IoT Enabled Smart Farming  Application |
| **Date** | 15 November 2022 |

Python code:

import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "nw3318"

deviceType = "123"

deviceId = "1234567"

authMethod = "token"

authToken = "12345678"

# 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")

elif status == "motoron":

print("motor is on")

elif status == "motoroff":

print("motor is off")

else :

print ("please send proper command")

#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)

humid=random.randint(0,100)

soilmoist=random.randint(0,100)

data = { 'temp' : temp, 'humid': humid, 'soilmoist': soilmoist }

#print data

def myOnPublishCallback():

print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % humid,"Soilmoisture = %s %%" % soilmoist, "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

# Disconnect the device and application from the cloud

deviceCli.disconnect()