FINAL CODE:-

Date	19 Novmeber 2022
Team ID	PNT2022TMID52394
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

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PYTHON CODE

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


organization = "zxnybt"
deviceType = "dominators"
deviceId = "12345"
authMethod = "token"
authToken = "123456789"


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data)
    for key in cmd.data.keys():
      if key == 'motor':
         if cmd.data['motor'] == 'ON':
            print("MOTOR is turned ON")

         elif cmd.data['motor'] == 'OFF':
```

```
            print("MOTOR is turned OFF")
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()

deviceCli.connect()

while True:


      temp=random.randint(0,40)
      Humid=random.randint(0,100)
      moist=random.randint(0,40)
      data = { 'temperature' : temp, 'humidity': Humid, 'soil_moisture':moist
}

      def myOnPublishCallback():
         print ("Published Temperature = %s C" % temp, "Humidity = %s
%%" % Humid, "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 IoTF")
      time.sleep(10)

      deviceCli.commandCallback = myCommandCallback


deviceCli.disconnect()
```

PYTHON CODE CONNECTED WITH IBM:-