DEVELOP THE PYTHON SCRIPT

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Project Name	IoT Based Smart Crop Protection System for Agriculture

PROGRAM

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "uue9b6"
deviceType = "NodeMCu"
deviceId = "12345"
authMethod = "use-token-auth"
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")
 elif status == "motoroff":
 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 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(90,110)
   Humid=random.randint(60,100)
   data = { 'temp' : temp, 'Humid': Humid }
   #print data
   def myOnPublishCallback():
   print ("Published Temperature = %s C" % temp, "Humidity = %s %%" %
Humid, "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()
```