

Develop a python script

Project Name	Industry-specific intelligent fire management system
Team ID	PNT2022TMID50107
Date	17-Sep-2022

Develop a python script:

Program:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "qo7yo9"

deviceType = "Temperature"

deviceId = "12345"

authMethod = "token"

authToken = "*b7czg15vpe"

# Initialize GPIO

def myCommandCallback(cmd):

    print("Command received: %s" % cmd.data['command'])

    status=cmd.data['command']

    if status=="sprinkleron":
```

```

print ("Sprinkler is on")

elif status == "sprinkleroff":

print ("Sprinkler is off")

elif status == "exhaustfanon":

print ("Exhaust Fan ON")

elif status == "exhaustfanoff":

print ("Exhaust Fan 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

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```
temp=random.randint(0,100)

flame_level=random.randint(0,100)

gas_level = random.randint(0,100)

data = { 'Temperature' : temp, 'Flame_Level' : flame_level, 'Gas_Level' :
gas_level }

#print data

def myOnPublishCallback():

print ("Published Temperature = %s C" % temp, "Flame_Level = %s %" %
flame_level,

"Gas_Level = %s %" %gas_level ,"to IBM Watson")

success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,

on_publish=myOnPublishCallback)

if not success:

print("Not connected to IoT")

time.sleep(1)

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud

deviceCli.disconnect()
```

Output:

Published Temperature = 4 C Flame_Level = 78 % Gas_Level = 30 %

Published Temperature = 12 C Flame_Level = 23 % Gas_Level = 16 %

Published Temperature = 76 C Flame_Level = 45% Gas_Level = 88 %

Published Temperature = 102 C Flame_Level = 67 % Gas_Level = 34 %

Command received: sprinkleroff

Sprinkler is off

Command received: exhaustfanoff

Exhaust Fan OFF

Command received: sprinkleron

Sprinkler is on

Published Temperature = 93 C Flame_Level = 77 % Gas_Level = 43 %

Command received: exhaustfanon

Exhaust Fan ON

Published Temperature = 18 C Flame_Level = 37 % Gas_Level = 88 %

Published Temperature = 61 C Flame_Level = 53 % Gas_Level = 65 %

Published Temperature = 95 C Flame_Level = 76 % Gas_Level = 90 %

Published Temperature = 56 C Flame_Level = 14 % Gas_Level = 27 %

Published Temperature = 34 C Flame_Level = 33 % Gas_Level = 51 %

Published Temperature = 9 C Flame_Level = 56 % Gas_Level = 80 %

Published Temperature = 42 C Flame_Level = 51 % Gas_Level = 18 %