

DEVELOP THE PYTHON SCRIPT

Develop a Python Script

Team ID	PNT2022TMID54322
Project Name	Signs with Smart Connectivity for Better Road Safety

PYTHON SCRIPT

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

#Provide your IBM Watson Device Credentials

```
organization = "efr0if"
```

```
deviceType = "rasberrypi"
```

```
deviceId = "123"
```

```
authMethod = "token"
```

```
authToken = "12345678"
```

#Intialize GPIO

```
def myCommandCallback(command):
```

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

```
    status=command.data['command']
```

```
    if status=="lighton":
```

```
        print("led is on")
```

```
    elif status=="lightoff":
```

```
        print("led 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)
```

```
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()
```